

A WEB-BASED TIMESHEET TOOL FOR THE DESIGN STUDIO

A Thesis

by

YOUNG-NO KIM

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

August 2005

Major Subject: Architecture

A WEB-BASED TIMESHEET TOOL FOR THE DESIGN STUDIO

A Thesis

by

YOUNG-NO KIM

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Approved by:

Chair of Committee,	Mark J. Clayton
Committee Members,	Robert E. Johnson
	Chanam Lee
Head of Department,	Philip J. Tabb

August 2005

Major Subject: Architecture

ABSTRACT

A Web-Based Timesheet Tool for the Design Studio (August 2005)

Young-No Kim, B.Eng., Hong-Ik University, Korea

Chair of Advisory Committee: Dr. Mark J. Clayton

This research is related to time management and the use of timesheets in architectural design education. It focuses on the role of Web-based timesheets in the architectural design studio. The main purpose of the research is to explore whether Web technology is helpful in increasing compliance with time documentation and can determine which student behaviors and habits can be observed with Web-based timesheets in architectural design education.

In time management, using timesheets is a common method to analyze time usage. However, a traditional timesheet is usually focused on the investigator's (teacher or employer) perspective. Therefore active participation is hardly expected and data analysis is not easily offered to participants as useful information in real time. To overcome the identified problems, Web technology may be useful.

For this research, a pilot software tool was developed and tested in design studios at several grade levels. Research was focused on empirical observation to determine which student work patterns and behaviors can be observed with a Web-based timesheet tool.

The Web-based timesheet tool was successfully fielded in the design studio and

the utility of the Web-based timesheet tool was observed. By analyzing the collected data from the experiments with this Web-based timesheet tool, it was possible to observe various work patterns and behaviors and to develop insights in the students' design process. Analysis of log data gave interesting insights into students' work patterns and design behaviors. Web technology was helpful in increasing the value of the timesheet in architectural design education.

DEDICATION

To my family and our Lord

ACKNOWLEDGEMENTS

I would like to thank the students and instructors of Texas A&M University who actively participated in the research experiment. I am especially indebted to Dr. Mark J. Clayton who took care of all the details and provided a tremendous amount of support and guidance. I also would like to thank my advisory committee: Dr. Robert Johnson and Dr. Chanam Lee, without whose guidance this research would never have found the right direction.

Lastly, I would like to thank my wife whose patient love enabled me to complete this study and my parents for continually supporting me in whatever I have chosen or will choose to do in my life.

TABLE OF CONTENTS

	Page
ABSTRACT	iii
DEDICATION.....	v
ACKNOWLEDGEMENTS	vi
TABLE OF CONTENTS	vii
LIST OF FIGURES.....	ix
LIST OF TABLES.....	x
 CHAPTER	
I INTRODUCTION.....	1
Research Overview	1
Background	1
Problems.....	2
Research Objectives	3
II LITERATURE REVIEW	5
Time Management.....	5
Design Process	7
Design Activities	9
Web Technology and Data-driven Web Sites	13
III RESEARCH DESIGN	17
Research Method.....	17
Software Development	17
Experiment	18
Questionnaire	19
Scope and Limitation	19

CHAPTER	Page
IV SOFTWARE DESIGN	21
Type of System.....	21
Database Design.....	21
User Model.....	23
User Interface Design.....	25
V DATA ANALYSIS.....	34
Collected Data.....	34
Observations.....	37
VI CONCLUSIONS.....	46
Contributions.....	46
Further Discussion.....	47
REFERENCES.....	49
APPENDIX A INFORMATION SHEET TO STUDENTS	51
APPENDIX B EXPERIMENT QUESTIONNAIRE	52
APPENDIX C IRB DOCUMENTATION AND CONSENT FORM	54
APPENDIX D CODES OF WEB-BASED TIMESHEET TOOL	57
VITA.....	110

LIST OF FIGURES

FIGURE	Page
1 Communication Flow in Data-driven Web Site	15
2 Structure of Database Tables	23
3 Structure of User Model	24
4 Screenshot of ‘Login’ Page	25
5 Screenshot of ‘New Account’ Page	26
6 Screenshot of ‘Status’ Page	27
7 Screenshot of ‘Input’ Page	28
8 Screenshot of ‘Analysis’ Page	29
9 Screenshot of Step 1 of ‘Class Setting’ Page	31
10 Screenshot of Step 2 of ‘Class Setting’ Page	31
11 Screenshot of Step 3 of ‘Class Setting’ Page	32
12 Total Time Expenditure of Studio 305	39
13 Total Time Expenditure of Studio 405	40
14 Total Time Expenditure of Studio 607	40
15 Time Use Comparison by Design Categories	41
16 Time Use Pattern	43

LIST OF TABLES

TABLE	Page
1 Tables in Web Timesheet Database	22
2 Design Studios That Participated in the Experiment.....	34
3 Participation in the Experiment.....	35
4 Questionnaire Results.....	36
5 Time Expenditure Comparison.....	38
6 Frequency Table of Access by Time.....	44

CHAPTER I

INTRODUCTION

Research Overview

This research is related to time management and the use of timesheets in architectural design education. It focuses on the role of a Web-based timesheet tool in the architectural design studio. The main purpose of the research is to explore whether Web technology is helpful in increasing compliance with time documentation and can determine which student behaviors and habits can be observed with a Web-based timesheet tool in architectural design education.

Background

Generally, the end products of most classes on campus are term papers, while the end products of design courses are final design projects. The processes, products and methods of feedback differ greatly from one to another [1]. The design class in architecture school is called "design studio." In design studios, students are required to make a graphic presentation of a project for final evaluation. Usually architecture students spend much more time on design studio than other classes [1]. However, are they spending time efficiently? Other questions regarding students' time use in design studio include "How hard do they really work?", "What do they work on?", and "Is

This thesis follows the style and format of *International Journal of Architectural Computing*.

their time allotment for design adequate?" These questions have rarely been asked. The need for empirical research to enrich understanding of time use in architectural design is apparent.

To successfully complete a building design and construction project, architects, engineers and constructors must meet high levels of performance with regard to productivity, timeliness, quality and others [2]. Time management is an important skill that is crucial in the professional world but notoriously ignored by students [3]. The significant role of time management has already received considerable attention in many disciplines. In the architecture field, however, time management has hardly received serious attention regardless of its needs, importance, and usefulness [4]. Recently several researchers and practitioners have directed attention to time management in the AEC (Architecture, Engineering, and Construction) fields. Helmer introduced time handling skills in his book, *Time Management for Engineers and Constructors* [5]. Anthony suggested how important time management is in architectural education and recommended how to handle time at architecture schools to avoid the "all-nighter syndrome" [1]. Clayton surveyed time expended by category in architectural design studios [6].

Problems

Usually, the purpose of traditional timesheets is focused on the investigator's perspective such as teachers in the academy or employers in the profession [7]. There is little concern for actual participants such as students or employees. As a result,

responsibility for timesheets is perceived to be an intrusion or at best a disagreeable chore. It is not always reasonable to expect active participation [8]. Filling out the timesheet may be considered a tiresome job for participants. In some cases, participants turn in many days of timesheets at a time, which can decrease the accuracy and validity of data. With traditional paper-based timesheets, gathered data requires additional work to be analyzed and processed into information that can give useful information to participants. Useful information includes statistical information, trend lines, comparisons to milestones and benchmarks, and comparisons to peers. Another concern is the sample size of participants who have contributed time records. In quantitative studies, a small sample size is an important problem, which limits predictive power.

Web technology has enormous potential to overcome these deficiencies. Automation of analytical steps can give useful information in real-time and perhaps increase motivation of participants to be active. A Web-based tool also may be able to collect information regarding students' behaviors and habits. Time and data stamps of each record may provide patterns as to how students use the tool and lend indirect insight into the accuracy of data submitted. Especially Web-based tools make data gathering possible without limitations of location. Web technology is expected to help increase sample size dramatically [9].

Research Objectives

To resolve the described problems, Web technology has been suggested to

increase the utility of timesheets. In my research, a Web-based timesheet tool was developed and implemented in architectural design studios to explore the viability of the software. The objective is to discover whether Web technology is helpful in increasing the value of timesheets and whether student work patterns and design behaviors can be observed with a Web-based timesheet tool. Specific research objectives are as follows:

- Develop a Web- based timesheet tool for a pilot study
- Test the software in an architectural design studio
- Observe advantages and disadvantages of the pilot tool
- Explore which student work patterns and behaviors can be observed with a Web-based timesheet tool in design studio
- Explore how Web technology can be helpful in increasing the value of timesheets in design studios

CHAPTER II

LITERATURE REVIEW

Time Management

In architecture schools, many students pursue very unhealthy lifestyles with respect to their physical well-being [10]. Students generally work hard in short periods just before a due date. This pattern has been labeled with several terms by researchers, such as the "fast and binge pattern" [6] and the "all-nighter syndrome" [1]. Students often appeal for more time toward the end of the design project. Students usually put off work until the last moment even if instructors extend due dates. After graduation, they often work professionally with the same time habits. Anthony suggests that the poor habits that students develop in school translate into poor habits by professionals [1]. Time management should be considered to be an important topic in school.

Many researchers and practitioners agree on the importance of time management in education and practice. In the architectural domain, however, time management has hardly received serious attention regardless of the need for it and its usefulness [4]. Several researchers and practitioners became aware of issues related to time management in the AEC field. Time and cost constraints on the design process have been identified as an important area for research [11]. Anthony mentioned importance of time use habits in architectural education [1]. In the book, *Time Management for Engineers and Constructors*, Helmer offers solutions to the problem of why it is that engineers who pride themselves on logical thinking and efficiency are

not more successful in time management and he provides practical, easy-to-follow steps for keeping projects on schedule [5]. Clayton attempted to quantify and generalize how time is expended in architectural design [6]. A study undertaken by the American Institute of Architecture Students provides both a snapshot of the architecture studio in current times and a critique [10]. From a series of interviews, focus groups and discussions the authors reached several conclusions. Although studio is the most important and even dominant part of architectural education, it is inadequate in preparing young architects for practice and may even foster negative habits and experiences. Recently Mann also presented heuristic suggestions that offer students and professionals guidance in recognizing and understanding their problems and developing effective time use strategies [8].

In Clayton's research, he collected timesheets from architecture students, and attempted to quantify and generalize how time is expended in architectural design [6]. Clayton identified several behavior patterns of students in design studio through the research. In his research, students were given the responsibility to record and classify their time based on Asimow's theory of design process [12]. The categories used in the research were Research, Analysis, Synthesis, Evaluation, Documentation and Presentation. Students submitted the timesheets using a standard Microsoft Excel spreadsheet. In other case, timesheets have been submitted on paper and have then been coded into spreadsheets.

Managing our time does not mean that we should reduce the amount of time that we devote to each task. Instead, we need to apply the appropriate amount of time to

each task in relation to its relative importance [5]. The key to time management is not to spend more hours on the project but to work more effectively within the time allotted [1]. Furthermore as Clayton observed, many students may balance their work poorly across days and weeks. Many students meet time commitments for a semester but through a pattern of procrastination followed by overwork.

We can make judgments about whether we are spending time on the right things when we observe how we are spending our time. The first step of time management is to keep a log of tasks [13]. The common way is to record a timesheet [8]. Analysis of timesheets that records design activities can help to characterize what designers do and in what patterns they do it [6].

Design Process

There are many models that attempt to describe designing. However, no single model of designing has achieved consensus among theorists for all design situations. Each model inevitably simplifies this highly complex, creative activity [14]. Some of these models are:

- **Linear Design Models** - The linear model describes designing in the simplest terms: each strategy is done once and always in the same order. This model neglects that design often requires in repeating cycles or iterations. The simplest design model describes designing as a movement among three activities: analysis-synthesis-evaluation [15].
- **Cyclic Design Model** - Designers experience the cyclical nature of their work

when their work cycles through many iterations and versions before the final design is completed. A cyclic process might involve developing one idea, building it to try it out, observing changes that need to be made, making those changes and evaluating the new product. Then the cycle repeats itself. The act of repeating these steps is an iteration in the product design cycles [14].

- **Spiraling Design Cycle Model** - This improved cyclic model shows the evolution of ideas as they move through iterations of design strategies in a given order. This model is more complicated than the Cyclic Design Model in the attempt to show the evolution of a design idea as spiraling and converging towards a solution [16].
- **Dialectical Design Model** - A dialectical process involves the development or evolving of an idea or product by a back-and-forth movement between two opposing ideas, forces or models of behavior [17].

Theorists in design process have suggested a variety of models. One of the oldest formalized models emphasizes a cycle of analysis, synthesis and evaluation [12]. An analysis-synthesis-evaluation model underlies many of the other models. It retains a conceptual clarity and logic that is suggestive of natural fact and is a consensus starting point for understanding the design process.

Therefore, each design activity in this research is categorized based upon Asimow's theory of the design process. The categories used in the research are 'Research', 'Analysis', 'Synthesis', 'Evaluation', 'Documentation' and 'Presentation':

- **Research:** Gathering general knowledge that does not specifically relate to a particular project.
- **Analysis:** Exploring the design requirements, the program, and the context of the problem.
- **Synthesis:** Inventing forms and potential solutions
- **Evaluation:** Comparing and judging alternative designs.
- **Documentation:** Presenting the design for use in presentation.
- **Presentation:** Preparing and delivering an oral presentation such as a design review.

Generally, design should follow the Analysis-Synthesis-Evaluation pattern, both as a general trend and as a cycle. Analysis activities should be “front-loaded” and then perhaps should spike occasionally in later weeks. Synthesis, as the most demanding part of design, should be slightly back-loaded to the process since it is dependent upon the information gathered in analysis. Evaluation should follow peaks of synthesis activity and should receive a noticeable portion of hours [6].

Design Activities

For this research, six design categories have been chosen and mentioned in the previous section. When students submit a timesheet, choosing one of the design categories by oneself could cause errors in classification of the design activity due to the misunderstanding of design categories. To reduce errors in selecting design

categories by students, design activity in design studio has been identified and summarized through literature reviews. *Architect's Handbook of Professional Practice* [18] and *Architecture 101* [19] were reviewed and summarized for establishing the design activity list for the pilot tool.

AIA Handbook

- 1 Planning
 - 1.1 Economic feasibility analysis
 - 1.2 Programming analysis
- 2 Contractual framework
 - 2.1 Schematic design
 - 2.2 Design development
 - 2.3 Construction document
 - 2.4 Bidding or negotiation
 - 2.5 Construction contract administration
- 3 Design process
 - 3.1 Analysis
 - 3.1.1 Programming
 - 3.1.1.1 Developing charts
 - 3.1.1.2 Bubble diagrams
 - 3.1.1.3 Sketching
 - 3.1.2 Site analysis
 - 3.1.3 Zoning analysis
 - 3.1.4 Building code compliance
 - 3.1.5 Documentation of existing conditions
 - 3.1.6 Scheduling
 - 3.1.7 Establishing budgets/cost analysis
 - 3.1.8 Construction industry practice
 - 3.1.9 Design precedents
 - 3.2 Synthesis

- 3.2.1 Establishing design goals
- 3.2.2 Evolving a design concept
 - 3.2.2.1 Plan concept
 - 3.2.2.2 The selection of a geometric form
 - 3.2.2.3 A decision to mass the building vertically or horizontally
 - 3.2.2.4 The use of an organizing element
- 3.3 Evaluation
 - 3.3.1 Consulting with experts

Architecture 101

- 1 Reading the journals and magazines
- 2 Receiving criticism from colleagues or faculty
- 3 Reviewing and discussing with colleagues or faculty
 - 3.1 About architectural design
 - 3.2 About interior design
 - 3.3 About structural design
 - 3.4 About mechanical design
 - 3.5 About site development
 - 3.6 About acoustics
 - 3.7 About lightings
 - 3.8 About electrical systems
 - 3.9 About plumbing systems
 - 3.10 About fire protection systems
- 4 Developing schedule
- 5 Making portfolio
- 6 The program
 - 6.1 Information gathering (primary data, secondary data, construction cost, building codes and standards, accessibility)
 - 6.2 Analysis and interpretation of information (site analysis, zoning, diagramming)
 - 6.3 Concept development

- 6.4 Building code analysis
- 7 Design
 - 7.1 Making study models
 - 7.2 Exploring alternatives
 - 7.3 Applying building codes and standards
 - 7.4 Selecting building materials
- 8 Documentation
 - 8.1 Drawing
 - 8.2 Modeling

Through these literature views, the following design activities were identified and applied at the input step in the pilot tool:

Research

Reading books, journals or magazines
General study and information gathering
Taking classes (Architecture classes except for design studio)

Analysis

Meetings with clients
Developing schedules
Documentation of existing conditions
Site information gathering
Site information analysis
Space programming
Establishing design goals

Synthesis

Sketching, zoning, or diagramming
Evolving design concepts
Making study models

Evaluation

Reviewing and discussing with colleagues and faculties
Checking building codes
Checking structural and mechanical problems
Budgets and cost analysis

Documentation

Making final drawings (plan, section, elevation. etc)
Making final models
Documentations (reports, etc)
Panel and board jobs
Publishing portfolios

Presentation

Interim presentations
Final presentations

Web Technology and Data-driven Web Sites

Many people use the terms Internet and World Wide Web (WWW) interchangeably, but in fact the two terms are not synonymous. The Internet and the Web are two separate but related things [20]. The Internet, a network of networks, allows for communication across a variety of different types of computer systems. It is a networking infrastructure. It connects millions of computers together globally, forming a network in which any computer can communicate with any other computer as long as they are both connected to the Internet. The Internet is literally a system of equipment, cables, and software that interconnects other networks and computers around the world [21].

There are many ways to access information on the Internet, such as FTP (file Transfer Protocol), SMTP (Simple Mail Transfer Protocol), HTTP (Hypertext Transfer Protocol) and Telnet, which is a terminal emulation program to connect a PC (Personal Computer) to a server on the network. The World Wide Web is essentially a subset of the Internet [22]. The Web is the most popular way of accessing information on the Internet nowadays. The Web uses the HTTP (Hypertext Transfer Protocol), one of the languages spoken over the Internet, to transmit data. Web services use HTTP to allow applications to communicate and use the Web to share information. The Web utilizes browsers, such as Internet Explorer or Netscape, to access Web documents called Web pages that may be written using Hypertext Markup Language (HTML) and linked to each other via hyperlinks. Web documents can also contain graphics, sounds, text and video [23].

Web technology has many useful features such as synchronous or asynchronous communication, online search, hypermedia, multimodal, archival, interactivity, and knowledge representation [23]. These features have been applied to develop a suggested pilot tool of a Web-based timesheet.

The original PC networks were based on file sharing architectures, where the server downloads files from the shared location to the desktop environment [24]. The requested user job is then run (including logic and data) in the desktop environment. File sharing architectures work if shared usage is low, update contention is low, and the volume of data to be transferred is low. As a result of the limitations of file sharing architectures, the client/server architecture emerged. This approach introduced a

database server to replace the file server. Using a relational database management system (DBMS), which is a collection of programs that enables you to store, modify, and extract information from a database [20]. User queries could be answered directly.

The diagram in Figure 1 shows the three layers that are behind the functioning of a typical data-driven Web site. Web programming language mediates communication between user's Web browser and database. Users can use any type of common Web browser, such as Internet Explorer, Netscape, or FireFox to access data-driven Web sites. All data are saved in a database and data manipulation and responses to users occur in Web pages that contain programming scripts

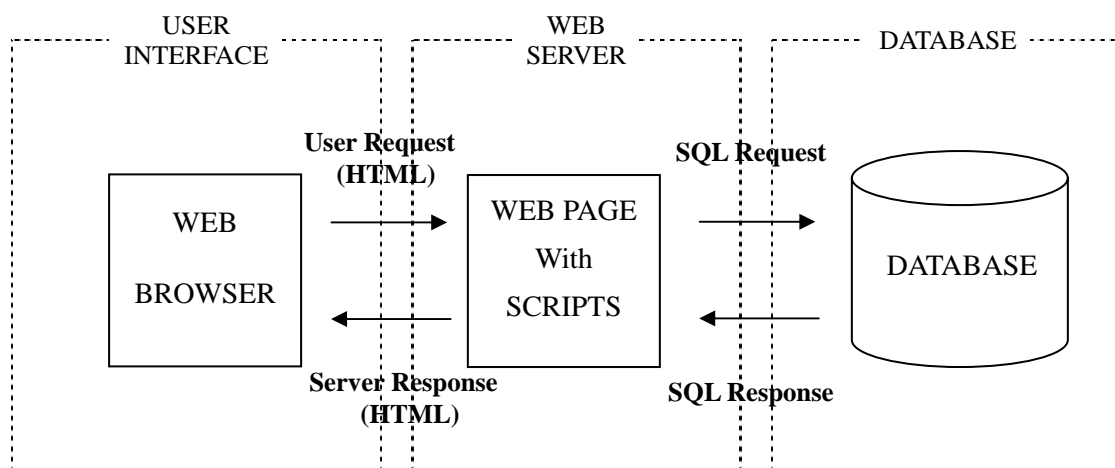


Figure 1. Communication Flow in Data-driven Web Site

If a user opens a specific Web page in the Web browser, the Web server responds with the data and information that are described in the Web page. In case a

selected Web page needs data from the database, the Web server requests sets of records from the database using SQL (Structured Query Language). Record sets received from the database are manipulated into the form that is defined in the Web pages. Then the Web server sends the output back to the user in HTML (Hypertext Markup Language) format.

CHAPTER III

RESEARCH DESIGN

Research Method

The research has been conducted with qualitative and quantitative methods. A pilot tool was developed and tested in several design studios. Data was gathered and analyzed to find out which students' work patterns and design behaviors can be observed with the pilot tool. After experiments, a questionnaire was used to gather participants' demographic information, familiarity with technology, and reviews for the pilot tool. Quantitative methods were used to present descriptive statistics as examples of what people can do with this tool.

Software Development

To develop the Web-based timesheet software, development involved the following steps:

- Identify required components of the tool through literature reviews. Before starting actual software development, the required components were identified through literature reviews to prepare the essential content of the pilot tool. Student activities in design studio have been reviewed to give choices to students when they submit a timesheet. The design process has been reviewed to determine design categories to analyze student activities.

- Identify technical methods that are necessary for developing Web-based software such as type of server, programming language and database.
- Develop a user model to identify the users for whom the software is being developed, their needs, behaviors and responsibilities. The user model has been described with a diagram and explained in detail in the next chapter. The user model was done through discussions with architecture class instructors, students and experienced experts in developing Web applications.
- Develop user interfaces to define the various tasks of users and function of software.
- Program pilot software based on previously gathered information
- Test and review pilot software. This procedure was conducted with several volunteer students and experienced experts in developing Web applications.
- Debug, update, and finalize the pilot tool

Experiment

Four design studios were selected in three grade levels: one design studio (Studio 305) at the junior level, another design studio (Studio 405) at the senior level and two design studios (Studio 605 and 607) at the graduate level. Selection was determined by volunteers and was not random.

Before starting the experiment, each studio instructor registered into the system and input a studio schedule, design phases, time expectation for students' time usage in each design phase, and categories. For students, information sheets and presentations

were given when starting the experiment.

Three design studios (Studio 305, 405, and 607) were assigned to use a timesheet tool that has functions of interactive real-time feedback, statistical comparison and visual data presentation. One design studio (Studio 605) was assigned to use a simple timesheet that has a time report function only.

Students were asked to report time usage at least twice a week using the pilot tool during the duration of the project. During the experiment, students' time use data and system access data, such as login and submission date and time, were recorded into a database on a secure server.

Questionnaire

A post-experiment questionnaire was used to collect data about participants' perspectives on using a Web-based timesheet tool. The questionnaire (Appendix A) consisted of five parts - general information, familiarity with technology, attitude about time management before experiment and after experiment, and reviews of experiment. The questionnaire responses from the students were analyzed and used to supplement observation of time use data that were collected using the pilot tools.

Scope and Limitation

- Design process categories of Research, Analysis, Synthesis, Evaluation, Documentation, and Presentation were used to categorize time use data for comparison.

- Defining the ideal design process and ideal time use in each design category is a controversial problem. Instructors suggested ideal design process as a class guideline to students, but expectations vary greatly from one instructor to another. Students are highly dependent on their design instructors throughout the entire preparation process [1]. The time use expectations of each instructor, therefore, were used and compared as students' goals in each design studio.
- Due to the low participation rate in the experiments, the sample size was not big enough to provide strongly generalizable results. The research is focused on empirical observation of how the pilot tool can be helpful to overcome the problems and present descriptive statistics of gathered data as examples of what people can do with the tool.

CHAPTER IV

SOFTWARE DESIGN

Type of System

Currently there are two main popular Web servers available, Apache server by Apache Server Foundation on the UNIX system and IIS (Internet Information Services) server by Microsoft on the Windows system. In the UNIX system, generally PERL (Practical Extraction and Report Language) and PHP (Hypertext Processor) are used and ASP (Active Server Pages) is used in the Windows system as a programming language. Various brands of database are being used such as MS Access database, MY-SQL server, MS-SQL servers, or Oracle databases. Each database has its own features and characteristics. Usually database selection is based on the size of data, the number of users, and the amount of accessing traffic [20].

In the College of Architecture at Texas A&M University, a Windows system is used for network services. Therefore, IIS server, ASP programming language and an MS Access database were selected to develop the pilot tool.

Database Design

The database used in the research is a MS Access database. All information and data given to users is stored on the database. There are several tables that contain unique information. Each table consists of fields and records. Tables designed for Web-

based timesheet database are described in Table 1.

Table 1. Tables in Web Timesheet Database

Table Name	Description and fields
timesheet	When a user submit the time data, user identifier number, time use data submission time, data, activity identifier number, and duration of activity are saved on this table.
designActivity	The table contains activity identifier number, activity name, and activity category identifier
timeCatagory	Categories used in the research were defined in this table.
project	Project related information is stored in this table. It consists of project name, instructor name, project phase names and schedules
timeExpectation	Time use expectation of each class is stored in this table by instructors.
user	User information is stored on this table. It consists of use name, email address, login ID, password and user access level.
accessLog	When a user enters the system, user login data are saved in this table. It contains user identifier number, login date and time, IP (Internet Protocol) address, and etc.

Figure 2 shows the structure of tables in the timesheet database system. Relational databases save data and define how data is related or how it will be extracted from the database. As a result, the same database can be viewed in many different ways. An important feature of relational systems is that a single database can be spread across several tables. [20] In the design of the timesheet database, some fields in the tables have been joined to avoid memory overuse, which could occur by repeating large records in a table.

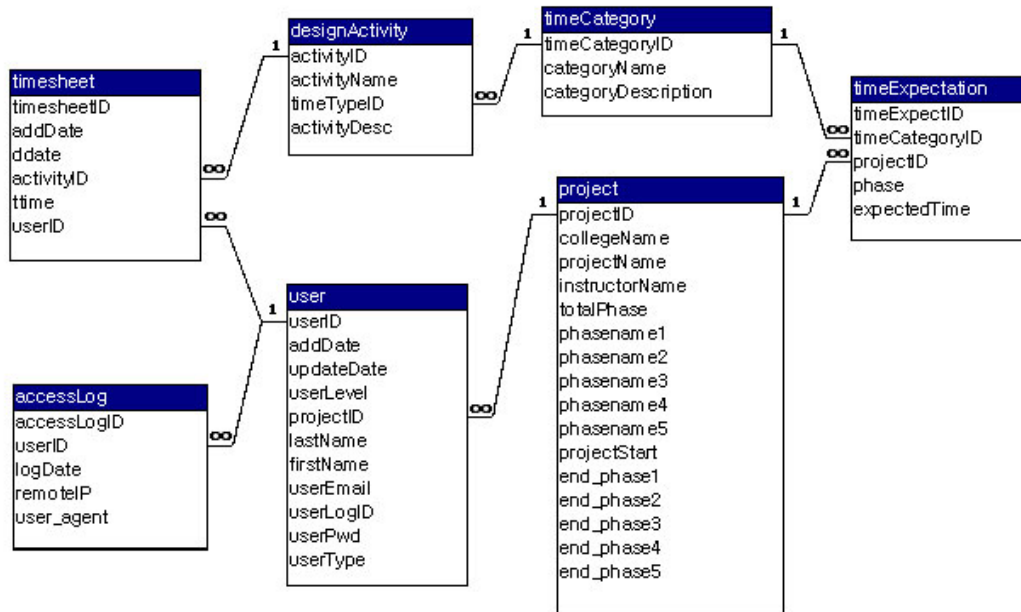


Figure 2. Structure of Database Tables

Each table makes use of an identifier (field names ending with “ID”) that is a key field uniquely identifying each record. Each time entry is recorded in the ‘timesheet’ table. An entry is associated with only one person and one activity. Each activity is categorized in the ‘designActivity’ table with a category that is defined in the ‘timeCategory’ table. Each user is associated with a ‘project’ and an ‘accessLog’ table.

User Model

Three user groups have been identified: student user group, instructor user group and administrator. Student and instructor groups are required to open an account

first. New account requests need approval by an administrator. In the approval process, class and project assignment are confirmed. After login, a user is forwarded to his or her own page. The structure of the user model is diagrammed in Figure 3. Each user interface page will be discussed in the next section.

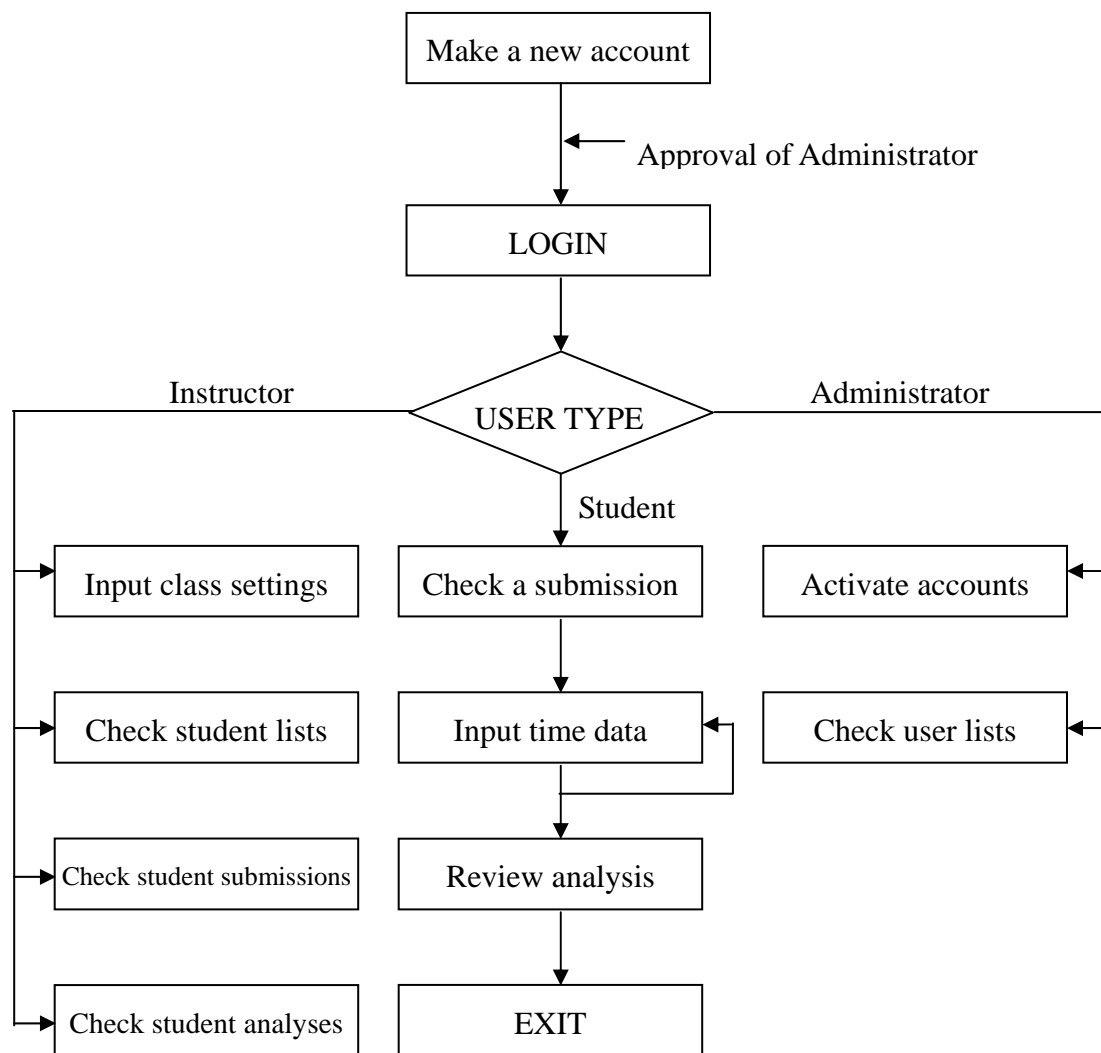


Figure 3. Structure of User Model

User Interface Design

The Web-based timesheet tool has four user interfaces: common interface, student interface, instructor interface, and administrator interface. Source codes of each page have been attached in APPENDIX D. The common interface consists of a 'Login' page and 'New Account' page. The 'Login' page is the first page all users access when they come to the Web site. The page contains notice and information from the investigator. When a user logs in, the user identifier number, access data and time, and IP (Internet Protocol) are stored on the 'accessLog' table in the database. Figure 4 shows a screenshot of the 'Login' page.

WEB BASED TIME SHEET

NOTICE

The lights in the architecture buildings are never turned off.
 Architecture students work hard, but "Are you working efficiently?"
 "Time is Money", Time management is essential in architecture and all other fields.

The first step in time management is "Gathering and analyzing Time sheet data"

Generally, the time analysis results are released **in the end of project** (Traditional method)
 In this project, All of participant will get the time analysis results **in real time**. (Proposed method)

It is a time to check and evaluate your time uses.

Please, click the link, "[New Account]" and make your account first.

Thank you.

Young Kim, Graduate student College of Architecutre Texas A&M University - Sep. 8 2003

Login

User Name: **Password:** [\[New Account\]](#)

College of Architecture, Texas A&M University 2003 Question? mail to [master](#)

Figure 4. Screenshot of 'Login' Page

To access the system, all users have to first make an account. After submitting a new account, an administrator verifies user information such as class and project assignment and then activates the account. When information has been submitted, data are stored in the 'user' table in the database. Figure 5 shows a screenshot of the 'New Account' page.

WEB BASED TIME SHEET [LOGIN](#)

[INSTRUCTION](#)

Your account will be activated within 24 hours for security reasons.
Send an email to master (architime@tamu.edu), if you have a problem to log in after 24 hours.

[Login](#)

Project	<input type="text" value="Choose your design studio"/>
Last Name	<input type="text"/>
First Name	<input type="text"/>
E-Mail	<input type="text"/>
User ID	<input type="text"/>
Password	<input type="password"/>

Figure 5. Screenshot of 'New Account' Page

The student user interface consists of a ‘Submission Status’, ‘Submission’, and ‘Analysis’ page. The ‘Submission Status’ page is the first page students see just after log-in. Students can check their timesheet summary data, such as daily total time usage, and totals by design process categories. Figure 6 shows a screenshot of the ‘Status’ page.

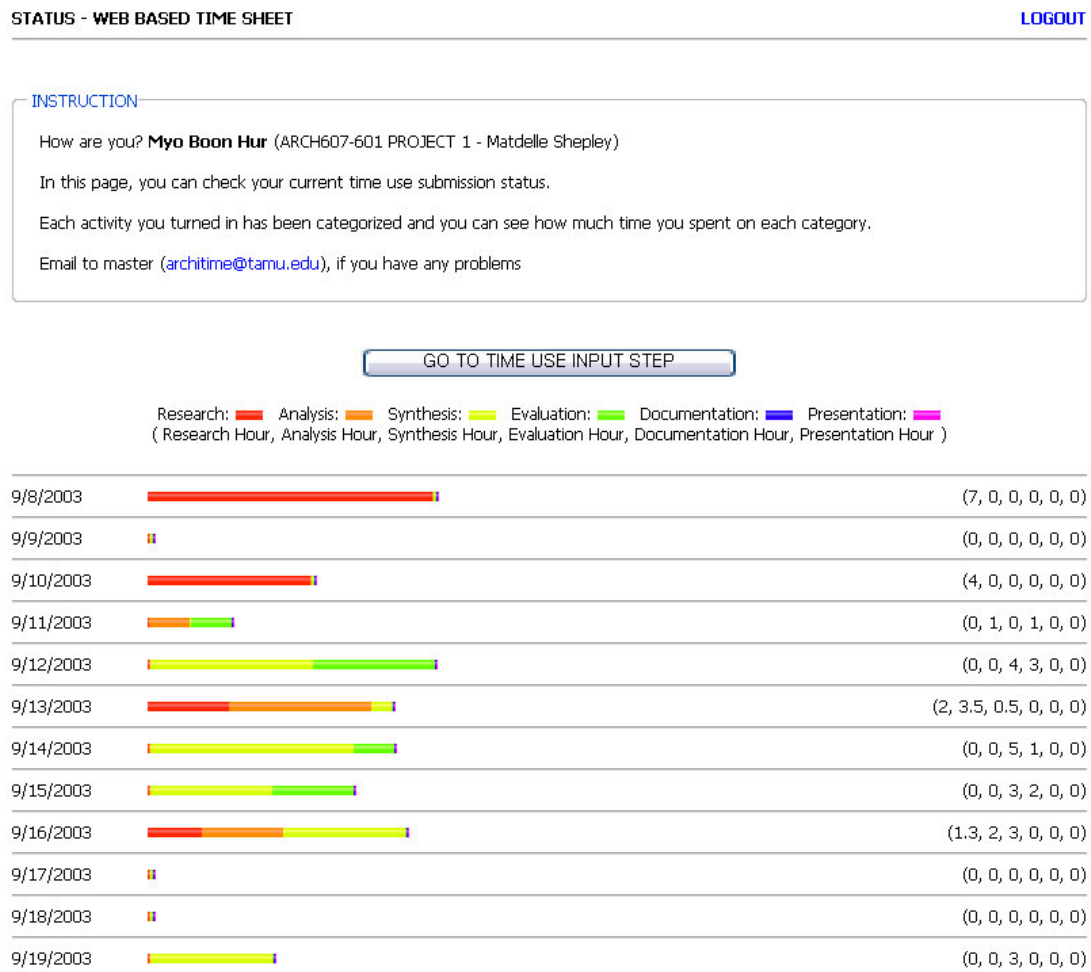


Figure 6. Screenshot of ‘Status’ Page

Upon clicking the button, 'GO TO TIME USE INPUT STEP', student is led to the next 'Input' page. Using this page, the student records time use data. The student can select multiple activities and durations. If a student needs to submit more than eight activities a day or turn in time usage for other dates, the student must click the button, 'SUBMIT & MORE' to store the data and obtain a fresh Input page. After finishing the submission, the button, 'SUBMIT AND EXIT' leads a student to Analysis page. Figure 7 shows a screenshot of the 'Input' page.

INPUT - WEB BASED TIME SHEET
INPUT STATUS LOGOUT

INSTRUCTION

- Please submit time sheets from start day to end of project, Thank you.
- **"SAVE & MORE"** : When you want to submit more than 8 activities a day or submit another day's time sheet.
- **"SAVE AND EXIT"** : When you want to submit and exit time sheet.

Email to master (archtime@tamu.edu), if you have problems to find a adequate activity or you need to add another activities on the list.

TIME SHEET

Name: Myo Boon Hur project: ARCH607-601 PROJECT 1 Date: Nov. 1 2003

Activity: Choose a design activity	Duration: 0 Hour 0 Min.
Activity: Choose a design activity	Duration: 0 Hour 0 Min.
Activity: Choose a design activity	Duration: 0 Hour 0 Min.
Activity: Choose a design activity	Duration: 0 Hour 0 Min.
Activity: Choose a design activity	Duration: 0 Hour 0 Min.
Activity: Choose a design activity	Duration: 0 Hour 0 Min.
Activity: Choose a design activity	Duration: 0 Hour 0 Min.
Activity: Choose a design activity	Duration: 0 Hour 0 Min.

College of Architecture, Texas A&M University 2003 Question? mail to master

Figure 7. Screenshot of 'Input' Page

The 'Analysis' page presents real-time statistical information to the student. A student can compare time use data with the class average and expectation of the instructor by design categories. Graphs show accumulated time statistics from the first date of a project to the date they choose. With this function, student can check their time use progress by date. Figure 8 shows a screenshot of the 'Statistic and Analysis' page. This is the last page in the student user interface.



Figure 8. Screenshot of 'Analysis' Page

The instructor user interface consists of 'Class Setting', 'Student List', 'Student Submission', and 'Student Data Statistic' pages. The 'Class setting' section accommodates three steps. Figure 9, Figure 10, and Figure 11 show the screenshot of each step in the 'Class Setting' section. Each project and class has a different design schedule. Therefore the first step of class setting is to input the number of design phases in the class design process. The second step is to define the title of each phase and store planned project schedules such as the starting date of a project, each date of the phases, and the ending date of the project. The last step in Class Setting is to input the time use expectation of the instructor with hours in the matrix of each design categories and phase. While inputting the time use expectation, instructors can see the total time and sub total in rows and columns by clicking the "CALCULATE" button. After finishing the setting, clicking 'UPDATE AND FINISH' stores all the data in the 'timeExpectation' table.

ADMIN MENU ADMIN. LOGOUT

Project: ARCH305-504

INSTRUCTIONS

Example:
Choose "3", if you have 3 steps of design process in your class during this project.

- Phase 1 : Concept Design
- Phase 2 : Design Development
- Phase 3 : Final Documentation

HOW MANY PHASES IN YOUR CLASS DESIGN PROCESS?

College of Architecture, Texas A&M University 2003 Question? mail to [master](#)

Figure 9. Screenshot of Step 1 of 'Class Setting' Page

ADMIN MENU ADMIN. LOGOUT

Project: ARCH405-504

INSTRUCTIONS

- Fill out "**name of each phase**" you are using, "**start date**", and "**end date**" of each phase.

PHASE 1 TITLE	PHASE 2 TITLE	PHASE 3 TITLE
<input type="text" value="research, analyses &"/>	<input type="text" value="preliminary design"/>	<input type="text" value="final presentation"/>

Project Start Date	End date of phase 1	End date of phase 2	End date of phase 3
<input type="text" value="10/1/2003"/>	<input type="text" value="10/15/2003"/>	<input type="text" value="11/12/2003"/>	<input type="text" value="12/8/2003"/>

College of Architecture, Texas A&M University 2003 Question? mail to [master](#)

Figure 10. Screenshot of Step 2 of 'Class Setting' Page

ADMIN MENU **ADMIN. LOGOUT**

Project: ARCH305-504

INSTRUCTIONS

- Please, fill out each field **in hours**.
- Email me (Young Kim, architme@tamu.edu) if you have any problems and questions

	Research, Programming & Design	Design development	Final Design	Total
RESEARCH	<input type="text" value="10"/>	<input type="text" value="5"/>	<input type="text" value="3"/>	18
ANALYSIS	<input type="text" value="8"/>	<input type="text" value="9"/>	<input type="text" value="6"/>	23
SYNTHESIS	<input type="text" value="14"/>	<input type="text" value="22"/>	<input type="text" value="15"/>	51
EVALUATION	<input type="text" value="2"/>	<input type="text" value="12"/>	<input type="text" value="10"/>	24
DOCUMENTATION	<input type="text" value="2"/>	<input type="text" value="6"/>	<input type="text" value="22"/>	30
PRESENTATION	<input type="text" value="4"/>	<input type="text" value="6"/>	<input type="text" value="4"/>	14
Total	40	60	60	160

College of Architecture, Texas A&M University 2003 Question? mail to [master](#)

Figure 11. Screenshot of Step 3 of 'Class Setting' Page

The 'Student List' page shows the current enrolled student list and information such as student names and email addresses. The 'Student Submission' page and the 'Student Analysis' page are almost the same as the student user interface. In the instructor user interface, however, instructors have a list box that contains the student list and can choose to see the data of the specific student.

The administrator user interface consists of 'New account' and 'User list' pages. In the 'New account' page, administrators can see the list of new account requests and can activate the new account. In the 'User list' page, administrators can check all users'

registration status and email them to note important messages.

CHAPTER V

DATA ANALYSIS

Collected Data

Four design studios were selected and the experiments were conducted within them. Project periods varied from one month to three months. Table 2 shows schedules, project periods and the duration of the selected design studios.

Table 2. Design Studios That Participated in the Experiment

Design Studio	Project Period	Duration (Days)
305	Sep. 8 ~ Oct. 8	30
405	Oct. 1 ~ Dec. 8	68
605	Sep. 8 ~ Dec. 8	89
607	Nov. 3 ~ Dec. 5	32

A total of 39 students were registered in the system and 17 students actually participated. As mentioned as a limitation in the research design chapter, this research focused on empirical observations to explore which work patterns and design behaviors could be observed with a Web-based timesheet tool. The data analysis also aimed to present descriptive statistics of gathered data as examples of what people can

do with the tool. Due to the low participation rate in the experiment, data used for observation in this research are limited to the data collected from students who reported more than 75% of timesheets for a project period. Detailed data for the participation and submission rate are described in Table 3.

Table 3. Participation in the Experiment

Design Studio	Registered students	Participated students	Students by Submission Rate		
			> 75%	< 75% and >50%	< 50% and >30%
305	11	4	2	0	2
405	13	6	4	0	2
605	9	3	0	1	2
607	6	4	4	0	0

The data also include various logs such as date and time stamps of each activity on the system and the user IP (Internet Protocol) address of each transaction. These were analyzed to observe students' work patterns and design behaviors in the design studios.

After finishing the experiment, students who used the Web-based timesheet tool were asked to answer a questionnaire (Appendix B.). Through the questionnaire, demographic information, familiarity with technology, attitudes for time management

before and after the experiment, and opinions for the tool were asked. The participant's answers to the questions of demographic information and familiarity with technology in the post-experimental questionnaire are tabulated in Table 4. Twelve students responded to the questionnaire. In the questionnaire, the questions asking familiarity with technology are based on 'Readiness Assessment' of Dr. Susan Pedersen in the Department of Education Technology, Texas A&M University.

Table 4. Questionnaire Results

Question	Rate for each answer			
General Information				
Gender	7 Females [58%]		5 Males [42%]	
Age	Less than 20 [0 / 0%]	21 to 25 [4 / 33%]	26 to 30 [6 / 50%]	More than 30 [2 / 17%]
Professional Experience	Less than 1yr. [7 / 58 %]	1yr. to 2 yr. [1 / 8%]	1yr. to 2yr. [2 / 17%]	More than 3yr. [2 / 17 %]
Familiarity with Technology				
Knowledge of Basic Computing	Level 1 [1 / 8%]	Level 2 [4 / 33%]	Level 3 [4 / 33%]	Level 4 [3 / 25%]
Knowledge of Web & Internet	Level 1 [0 / 0%]	Level 2 [5 / 42%]	Level 3 [4 / 33%]	Level 4 [3 / 25%]

Knowledge of Basic Computing

- Level 1 - I can use the computer to run a few specific, pre-loaded programs.
- Level 2 - I can set up my computer, load software, print, and use most of the operating system tools like the scrapbook, clock, notepad, find command, and trash can.
- Level 3 - I can customize my computer and peripheral devices like zip drives, backup drives, and sound system.
- Level 4 - I feel confident enough to train others in setting up and using a computer.

Knowledge of Web Browser Operation & Internet

- Level 1 - I do not use the Web.
- Level 2 - I use Web searching software and other Internet resources to locate important sources of information.
- Level 3 - I create my own HTML pages and lists of linked resources.
- Level 4 - I have taught others to create their own HTML pages and lists of linked resources.

There were more female participants than male. With regard to professional experience, one half of the participants did not have professional experience or had less than one year experience. Most students are familiar with using computers and the Internet. The attitudes and opinions about time management are discussed in the next section.

Observations

Type of timesheet: The Web-based timesheet tool was helpful to increase motivation for active participation. As shown in Table 3, participation rate in the design studio using a simple timesheet were lower relatively and most students quit participating before the completion of the project. In the questionnaire, also all students stated that they preferred to use a Web-based timesheet tool for turning in the timesheet. In questions asking about usefulness and functions of the tool, participants gave positive feedback. The average response point of the question asking whether the tool was easy to use was 4.17 in 5 point scales. The average response point of the question asking about graphic user interface for the pilot tool was 4.17. The average response point of the question asking helpfulness of feedback functions for the pilot tool was 3.75.

Time use expectations of instructors: Before starting the experiment, each studio instructor provided time use expectations for their students as a guideline. Expected time use for students varied dramatically by instructor. The highest

expectation was almost double the amount of the lowest expectation. If we consider a normal full time work commitment per week is forty hours, 37.3 hours of work for only one design studio indicates that the instructor expects students to spend nearly all of their academic effort on design work. In a class setting, the expectation of instructors for their students is an important standard in design evaluation. [1] The issue of instructors' time use expectations for their students could be an interesting topic for further research.

Table 5. Time Expenditure Comparison

Studio	Time Use Expectation	Students' average
305	37.3 hours / week	16.6 hours / week
405	13 hours / week	9.0 hours / week
605	39.2 hours / week	-
607	21.9 hours / week	26.4 hours / week

Total time usage: Comparison between the total time use of students and instructors' expectations in design studio of each grade level is shown in Figure 12, Figure 13, and Figure 14. Total time expenditure of students in higher grade level is closer and even higher than instructors' time use expectation. We can also see in Table 5 that the average time use per week of the graduate class is more than twice the time use per week of the junior and senior classes. A reasonable conclusion is that students

in the higher grade level work harder and more closely to the expectations of instructors than students in lower grade levels.

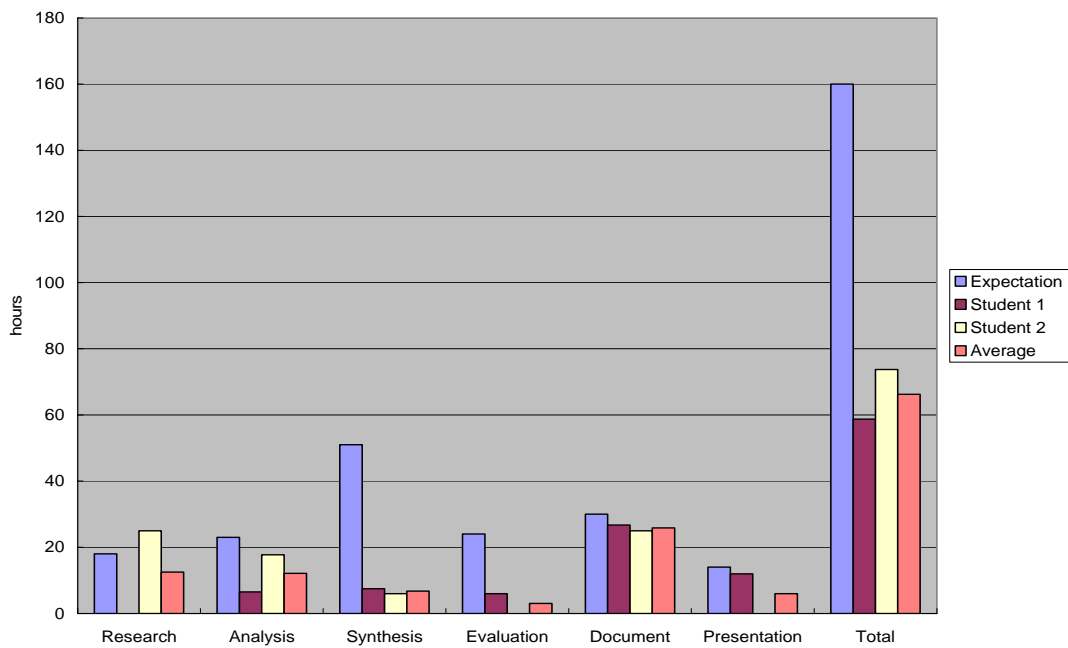


Figure 12. Total Time Expenditure of Studio 305

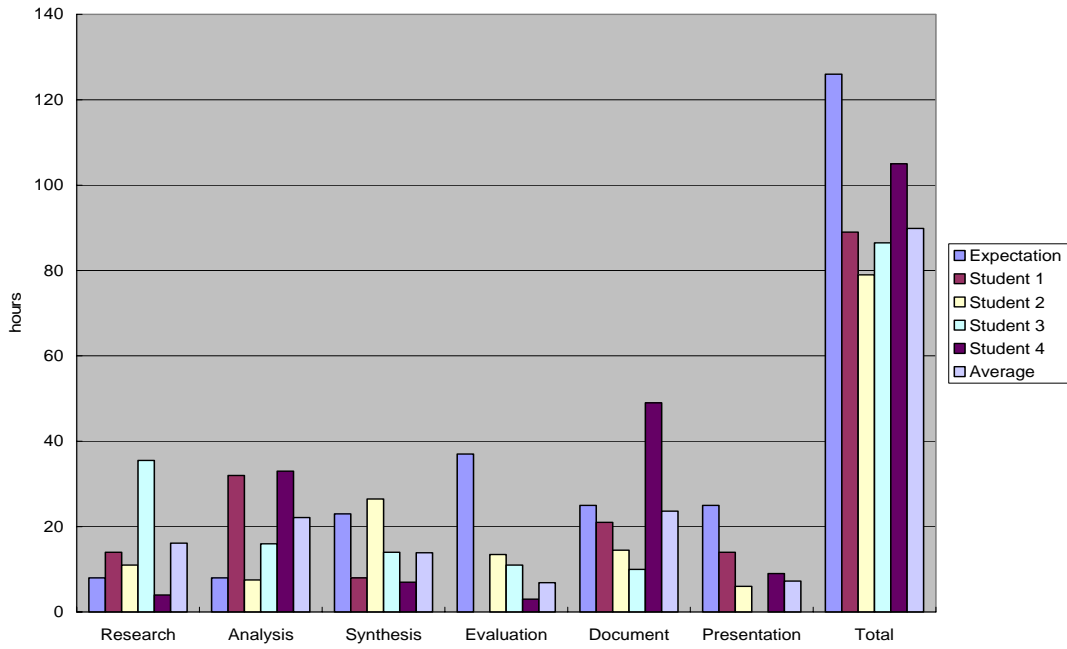


Figure 13. Total Time Expenditure of Studio 405

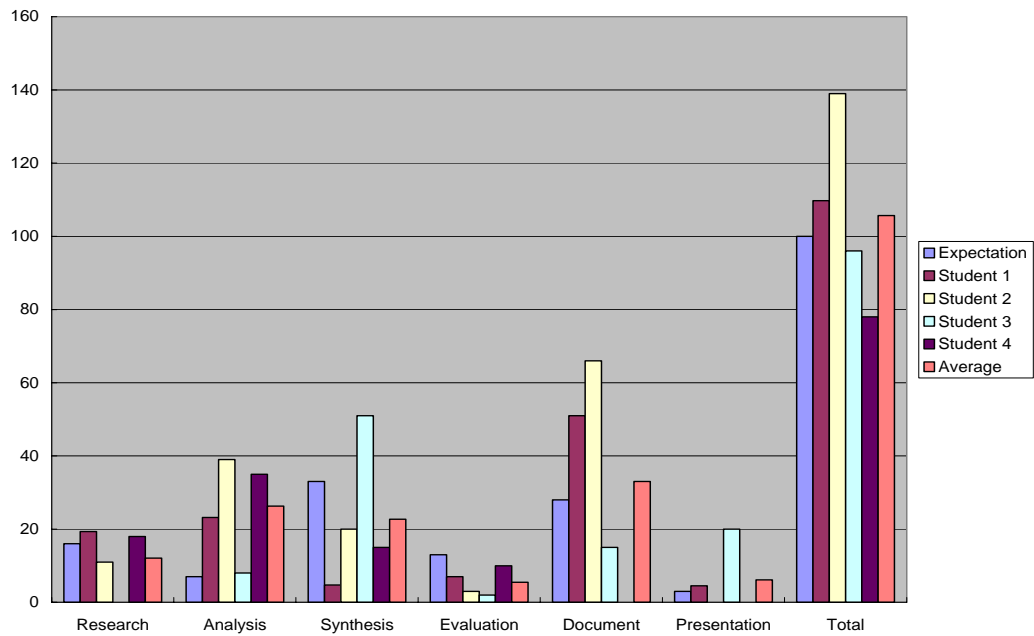


Figure 14. Total Time Expenditure of Studio 607

Analysis of design categories: As shown in Figure 15, students spent much time on Documentation, but very little time on Evaluation. This result is similar to the finding on the previous research [6]. Students nearly overlook the importance of evaluation in design and spend relatively too much time on documentation. Design studio instructors should perhaps add weight on the evaluation process and to find a way for students to save time on documentation. Alternatively a conscious, separate step for evaluating designs may not be an appropriate step in design process.

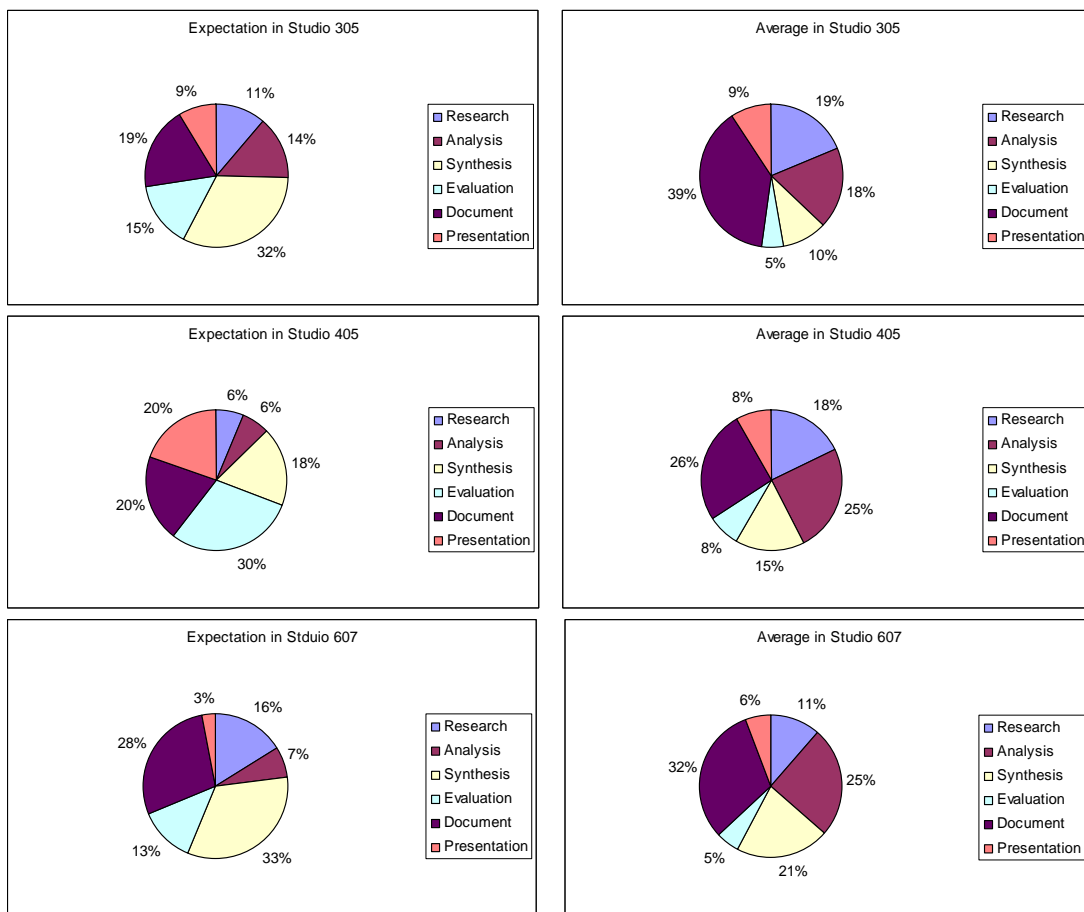


Figure 15. Time Use Comparison by Design Categories

Pattern of activities: By analyzing daily time use data, it was possible to reach further observations about how students perform their tasks. Figure 16 shows the time spent and graph by student in Studio 607. The heavy line is the average for all students in the studio. There were the interim review on November 15, studio group critiques on November 26 and December 6, and final presentation was on December 5. During the project, all design studio students went out to participate in the conference from November 19 to November 21 and November 27 and 28 were Thanksgiving holidays so there is no design activities during these period.

The high peak days are just before each due date such as interim review, group critique, and final presentation. The fast and binge pattern, which shows little effort until just before deadlines and was identified in previous research, can be also observed.

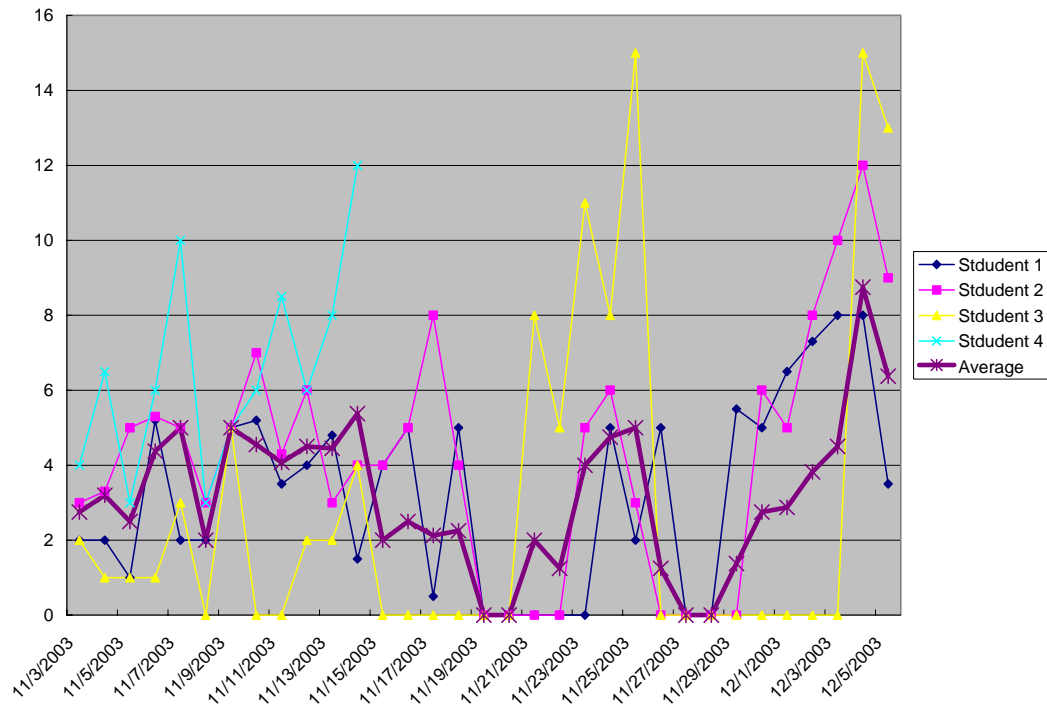


Figure 16. Time Use Pattern

Analysis of activity: There were 24 kinds of design activity identified for the experiment and 1283 time records were collected. In 1283 time records, nobody reported Documentation of existing conditions, which is classified as Analysis. There were only five records for ‘Checking building codes’, which is classified as Evaluation, four records for ‘Checking structural and mechanical problems’, and only one record for ‘Budget and cost analysis’, which is also classified as Evaluation. Commonly there were 132 records for ‘Making drawings’, which is classified as Documentation and 95 records for ‘Sketching, zoning, or diagramming’, which is classified as ‘Synthesis’.

Analysis of log data: Analyzing log data showed several patterns and behaviors of students. Analyzing IP (Internet Protocol) address can reveal the location of user access because each organization and ISP (Internet Service Provider) has their own IP address ranges. Furthermore, on campus IP address can distinguish whether a student used an architecture computer laboratory computer, university open access laboratory computer or a wireless LAN computer typically a notebook. Students accessed the system from various locations and at various times. There were a total 244 accesses by students. The IP addresses indicated that 67% of total accesses were at school (32%: notebook, 29%: computer lab at College of Architecture, 6%: university open access laboratory). 75% of accesses from 8AM to 12PM, 82% of accesses from 12PM to 5PM, 63% of accesses from 5PM to 9PM, 51% of accesses from 9PM to 3AM were recorded at school. Table 6 shows a frequency of access by time in detail.

Table 6. Frequency Table of Access by Time

	School	Home	Sub Total
8AM TO 12PM	41 [75%]	14 [25%]	55 [100%]
12PM TO 5PM	53 [82%]	12 [18%]	65 [100%]
5PM TO 9PM	27 [63%]	16 [37%]	43 [100%]
9PM TO 3AM	41 [51%]	40 [49%]	81 [100%]
Total	162 [67%]	82 [33%]	244 [100%]

Number of log-in-days: Analyzing log-in data could help check credibility by observing timesheet submission patterns. Students usually turned in timesheets once a week and were active in the beginning during the project period. One student in Studio 607 accessed the system only one day and turned in all data at once. This data may not be reliable as it may represent a reconstruction of time utilization.

CHAPTER VI

CONCLUSIONS

Contributions

By analyzing the collected data through the experiments with the Web-based timesheet tool, it was possible to observe various work patterns and design behaviors and to deliver insights in students' design process.

- Participation and timesheet submission rate data and reviews from post experiment questionnaire showed Web technology is helpful to increase the motivation for active participation.
- The issue of time use expectations of instructors for students has been identified and shows variability between instructors. It could be worthwhile to discuss in further detail because the expectations of the instructors are one of the important standards in design evaluation.
- With comparison between students' time use and inspectors' expectations, we could reason that students in higher grade level work harder and more closely to the expectations of instructors.
- Analysis of the design categories showed that student spend a lot of time on Documentation and very little time on Evaluation. This design behavior also has been identified in analyzing patterns of design activities. It may be appropriate to suggest how instructors in design studio could revise their teaching style and alter

their class exercises.

- Analyzing log data showed several patterns and behaviors in students. Students accessed the system in various locations and times. Web technology helped students access the system anytime and anywhere they wanted. This is expected to help increase sample size dramatically and thereby increase validity of data in future quantitative research.
- Lastly, analyzing log-in data could help check credibility by observing timesheet submission patterns. Students usually turned in timesheets once a week and were more active in the beginning. This is helpful to uncover problem points in the data, when they are submitted in a dubious manner such as large amount of inputs in a short period.

The Web-based timesheet tool was successfully implemented in the design studio and the feasibility of the Web-based timesheet tool was observed. Web technology was helpful in increasing the value of the function of the timesheet in architectural design education.

Further Discussion

This research conducted an empirical observation about the Web-based timesheet tool. It focused on which data can be collected and which work patterns and design behaviors can be observed with the Web-based timesheet tool. To determine student's work patterns and design behaviors, large numbers of participants and data

are essential to reach conclusion that will be supported by statistical evidence. The Web-based timesheet tool is expected to produce enough data to support definitive conclusions about students' patterns of work in relation to time. Other issues, such as the Web-based timesheet tool can be used for student evaluation in design, or how Web-based timesheet tool can affect students' time management of students, could be considered for future development and research.

REFERENCES

1. Anthony, K.H., *Design Juries on Trial: The Renaissance of the Design Studio*, Van Nostrand Reinhold, New York, 1991.
2. Oglesby, C., Parker, H., and Howell, G., *Productivity Improvement in Construction*, McGraw-Hill, New York, 1989.
3. Clayton, M.J., Data for Reflection, in, *Reinventing the Discourse: Proceedings of 21th Annual Conference of the Association for Computer-Aided Design in Architecture (ACADIA)*, Association for Computer Aided Design in Architecture, 2001, 142-151.
4. Soh, I., *The Acquisition and Analysis of Time management Perception in the Architectural Domain*, PhD Dissertation, Texas A&M University, 2003.
5. Helmer, R.G., *Time Management for Engineers and Constructors*, American Society of Civil Engineers, Reston, VA, 1998.
6. Clayton, M.J., Time for Design, *International Journal of Architectural Management Practice & Research*, 16, 18-31.
7. Mancini, M., *Time Management*, McGraw-Hill, New York, 2003.
8. Mann, T., *Time Management for Architects and Designers*, W. W. Norton & Company, New York, 2004.
9. Clayton, J. M. and Kim, Y. Finding Evidence for Design Process: Web-Based Timesheet for Architecture Students, *Proceedings of the 2005 ACSA Annual Meeting*, Association of Collegiate Schools of Architecture, Washington DC, 2005.
10. Koch, A., Schwennsen, K., Dutton, T. A., and Smith, D., *The Redesign of Studio Culture: A Report of the AIAS Studio Culture Task Force*, The American Institute of Architecture Students, Washington DC, 2002.
11. Savage, J. C., Miles, C., Moore, C., and Miles, J., The interaction of time and cost constraints on the design process, *Design Studies*, 19(2), 217-233.

12. Asimow, M., *Introduction to Design*, Prentice-Hall Inc, Englewood Cliffs, NJ,1962.
13. Garrat, S., Time Management, *Architects Journal*, 181(3), 69-70.
14. Design in the Classroom: <http://ditc.missouri.edu> [June 10, 2005].
15. Lawson, B., *How Designers Think*, Butterworth Architecture, Oxford, UK, 1990.
16. Frye, El., *Engineering Problem Solving*, Trustees of Dartmouth College, Hanover, New York, 1997.
17. Schon, D. *The Reflective Practitioner: How Professionals Think in Action*, Basic Books, New York, 1985.
18. David, H., *The Architect's Handbook of Professional Practice*, American Institute of Architects Press, Washington DC, 1994.
19. Pressman, A., *Architecture 101: Guide to the Design Studio*, John Wiley & Sons, New York, 1993.
20. Webopedia: <http://www.Webopedia.com/> [June 10, 2005]
21. Doherty, P., *Cyberplaces: The Internet Guide for Architects, Engineers & Contractors*, R. S. Means, Kingston, MA, 1997.
22. Mambretti, C., *Internet Technology for Schools*, MacFarland & Company, Inc., Jefferson, NC, 1999.
23. Web Feature Matrix: <http://mason.gmu.edu/~ndabbagh/wblg/matrix1.htm> [June 10, 2005]
24. Software Technology Roadmap: Client/Server Software Architectures-An Overview: http://www.sei.cmu.edu/str/descriptions/clientserver_body.html [June 10, 2005]

APPENDIX A

INFORMATION SHEET TO STUDENTS

Web Based Time Sheet in Design Studio

Young-No Kim (architime@tamu.edu)
 MS 3137 Department of Architecture
 Texas A&M University
 College Station TX. 77843-3137

Architecture students work hard. They spend lots of time on design projects. But “How hard do they really work? And “What do they work on?” The purpose of this research is to analyze time usage of architecture students in the design studio, find out how they spend times on which process in design, and figure out effectiveness of web technology at design studio.

Students turn in time sheets on the web based on listed architecture design activities during the whole period of project. They choose one of design activities and submit time use for each activity on daily base.

Each design activity is categorized based upon Asimow’s theory of the design process. The categories used in the research are ‘Research’, ‘Analysis’, ‘Synthesis’, ‘Evaluation’, ‘Documentation’ and ‘Presentation’.

- Research: Gathering general knowledge that does not specifically relate to a particular project.
- Analysis: Exploring the design requirements, the program, and the context of the problem.
- Synthesis: Involving inventing forms.
- Evaluation: Comparing and judging alternative designs.
- Documentation: Predominantly concerned with representing the design for use in presentation.
- Presentation: The preparation of an oral presentation and the actual delivery of the presentation such as a design review.

Through this online time sheets application, students can check design process and manage their time use by themselves. Instructor can check and review students’ time use and design progress, and figure out students neglect on which parts in design process.

Web Based Time Sheet Application

Instruction

- Make an account at <http://architime.net> (Account will be activated after approval of administrator for security reasons)
- Turn in daily time use for all design activities during the period of class project.
- Let me know (architime@tamu.edu) if you have any problems or questions.

APPENDIX B

EXPERIMENT QUESTIONNAIRE

QUESTIONNAIRE

Web-Based Time Sheet in Design Studio

The purpose of this questionnaire is to review the experiment, "Web Based Time Sheet in Design Studio". Please circle the item that represents your answer. Thank you for your participation in the research study.

General information

1. Gender :
 - a. Female
 - b. Male

2. Course :
 - a. Arch305
 - b. Arch405
 - c. Arch605
 - d. Arch607

3. Age :
 - a. Less than 20
 - b. 21 ~ 25
 - c. 26 ~ 30
 - d. more than 30

3. Professional experience (including internship) :
 - a. Less than 1yr.
 - b. 1yr. ~ 2yr.
 - c. 2yr. ~ 3yr.
 - d. more than 3yr.

Familiarity with technology

1. Knowledge of Basic Computing
 - Level 1 - I can use the computer to run a few specific, pre-loaded programs.
 - Level 2 - I can set up my computer, load software, print, and use most of the operating system tools like the scrapbook, clock, notepad, find command, and trash can.
 - Level 3 - I can customize my computer and peripheral devices like zip drives, backup drives, and sound system.
 - Level 4 - I feel confident enough to train others in setting up and using a computer.

2. Knowledge of Web Browser Operation & Internet
 - Level 1 - I do not use the Web.
 - Level 2 - I use Web searching software and other Internet resources to locate important sources of information.
 - Level 3 - I create my own HTML pages and lists of linked resources.
 - Level 4 - I have taught others to create their own HTML pages and lists of linked resources.

Before experiment

1. Have you ever received formal/informal education in time management for architectural design?

Very little	1	2	3	4	5	Very much
-------------	---	---	---	---	---	-----------

2. Have you ever employed time sheets in architectural design?

Very little	1	2	3	4	5	Very much
-------------	---	---	---	---	---	-----------

If you have had such experiences, please describe them.

(_____)

3. How confident are you in predicting how much time is required to complete architectural tasks?

Very unconfident	1	2	3	4	5	Very confident
------------------	---	---	---	---	---	----------------

4. How important is time management to an architect?
 Very little 1 2 3 4 5 Very much

After experiment

1. How much did you learn about time management from the experiment?
 Very little 1 2 3 4 5 Very much
2. How confident are you in predicting how much time is required to complete architectural tasks?
 Very little 1 2 3 4 5 Very much
3. How important is time management to an architect?
 Very little 1 2 3 4 5 Very much

Reviews for experiment

1. Was it easy to use the software during the experiment?
 Very difficult 1 2 3 4 5 Very easy
1. Do you think Web Based Time Sheet was helpful in analyzing your design habit and procedure?
 Not helpful 1 2 3 4 5 Very helpful
2. Do you think the software was helpful in increasing your awareness of importance of time management in architecture design?
 Not helpful 1 2 3 4 5 Very helpful
3. Do you think the software was helpful to your time management in architectural design?
 Not helpful 1 2 3 4 5 Very helpful
4. Evaluate each feature of pilot program
- Graphs and result data were easy to read and understand.
 Disagree 1 2 3 4 5 Agree
 - Selecting one of the design activities was easy and clear.
 Disagree 1 2 3 4 5 Agree
 - Feedback data helped me to understand my design procedure and design habit.
 Disagree 1 2 3 4 5 Agree
5. If you need to utilize the time sheet again, which method do you prefer to use?
- Paper Based Time Sheet* – Recording the time use on paper that is easy to carry anywhere but requires analysis of the data by yourself.
 - Paper Time Sheet and Spread Sheet Program*– Recording the time use on paper and then using a spread sheet program (like EXCEL) to analyze data
 - Web Based Time Sheet* – Inputting the time use online and obtaining analysis data that includes comparison with other people's.

APPENDIX C

IRB DOCUMENTATION AND CONSENT FORM



Date September 5, 2003

Office of Research Compliance

MEMORANDUM

Administration and
Special ProgramsAcademy for
Advanced
Telecommunication
and Learning
TechnologiesInstitute for
Scientific ComputationLaboratory Animal
Resources and ResearchMicroscopy and
Imaging CenterOffice of
Business Administration

Office of Graduate Studies

Office of Sponsored Projects

Texas A&M University
Research ParkTO: Mr. Young-No Kim
Dept. of Architecture
MS 3137FROM: Dr. E. Murl Bailey, CIP, Advisor
Institutional Review Board
MS 1112

SUBJECT: IRB Protocol Review

Title: Web-Based Time-Sheet in Design Studio

Protocol Number: 2003-0377

Review Category: Exempt from Full Review

Approval Date: September 4, 2003 to September 3, 2004

The approval determination was based on the following Code of Federal Regulations
<http://ohrp.osophs.dhhs.gov/humansubjects/guidance/45cfr46.htm>

_____ 46.101(b)(1)	_____ 46.101(b)(4)
✓ _____ 46.101(b)(2)	_____ 46.101(b)(5)
_____ 46.101(b)(3)	_____ 46.101(b)(6)

Remarks:

None

Texas A&M
University

1112 TAMU

IRB Administration Building

College Station, Texas

77843-1112

979.845.8585
FAX 979.862.4176

The Institutional Review Board – Human Subjects in Research, Texas A&M University has reviewed and approved the above referenced protocol. Your study has been approved for one year. As the principal investigator of this study, you assume the following responsibilities:

Renewal: Your protocol must be re-approved each year in order to continue the research. You must also complete the proper renewal forms in order to continue the study after the initial approval period.

Adverse events: Any adverse events or reactions must be reported to the IRB immediately.

Amendments: Any changes to the protocol, such as procedures, consent/assent forms, addition of subjects, or study design must be reported to and approved by the IRB.

Informed Consent/Assent: All subjects should be given a copy of the consent document approved by the IRB for use in your study.

Completion: When the study is complete, you must notify the IRB office and complete the required forms.

PART 46.101 PROTECTION OF HUMAN SUBJECTS

46.101

(a) Except as provided in paragraph (b) of this section, this policy applies to all research involving human subjects conducted, supported or otherwise subject to regulation by any Federal Department or Agency which takes appropriate administrative action to make the policy applicable to such research. This includes research conducted by Federal civilian employees or military personnel, except that each Department or Agency head may adopt such procedural modifications as may be appropriate from an administrative standpoint. It also includes research conducted, supported, or otherwise subject to regulation by the Federal Government outside the United States.

(1) Research that is conducted or supported by a Federal Department or Agency, whether or not it is regulated as defined in 46.102(e), must comply with all sections of this policy.

(2) Research that is neither conducted nor supported by a Federal Department or Agency but is subject to regulation as defined in 46.102(e) must be reviewed and approved, in compliance with 46.101, 46.102, and 46.107 through 46.117 of this policy, by an Institutional Review Board (IRB) that operates in accordance with the pertinent requirements of this policy.

(b) Unless otherwise required by Department or Agency heads, research activities in which the only involvement of human subjects will be in one or more of the following categories are exempt from this policy:¹

(1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:

(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

(3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if:

(i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) Federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

(5) Research and demonstration projects which are conducted by or subject to the approval of Department or Agency heads, and which are designed to study, evaluate, or otherwise examine:

(i) Public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

(6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture.

Informed Consent

I understand that I am being asked to participate in the research study, *Web Based Time Sheet in Design Studio*. This study is being conducted for a master thesis of Mr. Young-No Kim. The purpose of the study is to figure out effectiveness of time sheet as a web based tool in design studio

I am a student who has enrolled in one of architectural design courses (ARCH305, ARCH405, ARCH605 or ARCH607). I understand that I am one of approximately 30 students studying same major who will voluntarily participate in the study. I understand that I will not receive any compensation or credit for participating in this study. I will benefit by gaining experience in time management. I also understand that my course instructor will not know whether I participate in this study or not.

I understand that I will fill out time sheet at the design studio, computer labs of the College of Architecture or my own individual space. There will not be any risks or discomforts to me in the experiments. The experiment does not have a time limitation to complete

I understand that all my responses will be confidential. I will turn in daily time use for design project on the web. It will take five to ten minutes twice or three times a week during the period of class project. My time usage input will be kept in a secured database. This database will also record who logs in when, how long and how often. This data will be used to construct limitations in current research and suggestions for future research. All of my responses will be stored in a secure location for five years and then will be destroyed.

I understand that I may refuse or skip to answer any questions without adverse consequence. I realize that I am free to withdraw my consent and to discontinue participation in the experiments at any time. I understand that the investigator will answer any questions that I have regarding procedures during the experiment.

I have been offered an answer to any inquiries concerning the procedures of this study. If I have more questions, I may contact one of the following persons:

Principal Investigator
Young-No Kim
MS3137 Department of Architecture
Texas A&M University
College station, TX. 77843-3137
(979)458-3414, ynkim@tamu.edu

Advisor of Investigator
Mark J. Clayton
MS3137 Department of Architecture
Texas A&M University
College station, TX. 77843-3137
(979)845-1222, mark-clayton@tamu.edu

I understand that this research study has been reviewed and approved by the Institutional Review Board -Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects' rights, I can contact the Institutional Review Board through Dr. Michael W. Buckley, Director of Support Services, Office of Vice President for Research at (979) 458-4067."

I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.
I have been given a copy of this consent form.

Signature of Participant

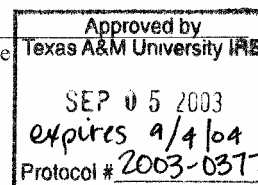
Printed Name

Date

Signature of Investigator

YOUNG-NO KIM
Printed Name

Date



APPENDIX D

CODES OF WEB-BASED TIMESHEET TOOL

[INDEX.ASP]

```

<html>
<head>
<title>login</title>
<link rel="stylesheet" href="include/windows.css">
</head>

<body oncontextmenu="return false">
<div align="center">
  <center><table width="80%" cellspacing="0" cellpadding="0" height="100%" style="background-
color: #FFFFFF" >
    <tr>
      <td valign="top">
        <table width="100%">
          <tr>
            <td><b>WEB-BASED TIME SHEET</b></td>
            <td align="right">&nbsp;</td>
          </tr>
        </table>
        <hr><br><br>
        <fieldset>
          <legend>NOTICE</legend>
          <table border="0" cellpadding="15" cellspacing="0" style="border-collapse:
collapse" bordercolor="#111111" width="95%" id="AutoNumber1" height="100">
            <tr>
              <td width="100%" valign="top">
                The lights in the architecture buildings are never turned off.<br>
                Architecture students work hard, but "Are you working
efficiently?"<br>
                "Time is Money", Time management is essential in architecture and all
other fields. <br>
                <br>
                The first step in time management is "Gathering and analyzing Time
sheet data"<br><br>
                Generally, the time analysis results are released <br>in the end of
project</b> (Traditional method)<br>
                In this project, All of participant will get the time analysis results <br>in
real time</b>. (Proposed method)<br><br>
                It is a time to check and evaluate your time uses.<br><br>
                <br>Please, click the link, "<a href="account_new.asp"
onmouseover="javascript:window.status="";return true"><b>[New Account]</b></a>" and make your
account first.</b><br><br>
                Thank you.<br><br>
                <b>Young Kim</b>, Graduate student College of Architecutre Texas
A&M University - Sep. 8 2003

```

```

        </td>
      </tr>
    </table>
  </fieldset><br>
  <br>
  <br>
  <form action="login_check.asp" method="post">
    <fieldset>
      <legend>Login</legend>
      <table border="0" cellpadding="0" cellspacing="0" style="border-collapse:
collapse" bordercolor="#111111" width="95%" id="AutoNumber1" height="50">
        <tr>
          <td align="right">
            <b>User Name:&nbsp;</b></td>
          <td>
            <input type="text" name="userLogID" size="20"></td>
          <td align="right">
            <b>Password:&nbsp;</b></td>
          <td>
            <input type="password" name="userPwd" size="20"></td>
          <td align="center">
            <input type="submit" value="Login">
          </td>
          <td align="center">
            <a href="account_new.asp"
onmouseover="javascript:window.status="";return true"><b>[New Account]</b></a>
          </td>
        </tr>
      </table>
    </fieldset>
  </form>
  <br><br><hr>
  <table width="100%">
    <tr>
      <td>College of Architecture, Texas A&M University 2003</td>
      <td align="right">Question? mail to <a href="mailto:architime@tamu.edu"> master
    </td></tr>
  </table>
</div>
</body>
</html>

```

[LOGIN_CHECK.ASP]

```

<!--#include file="include/db_open.inc"-->
<%
  response.buffer=true

```

```

userLogID=request("userLogID")
userPwd=request("userPwd")

mySQL="SELECT * FROM user WHERE userLogID='" & userLogID & "' AND userPwd='" &
userPwd & "'"
set rsUser=Conn.execute(mySQL)
if not rsUser.eof then
    userID = rsUser("userID")
    remoteIP = Request.ServerVariables("REMOTE_ADDR")
    user_agent = Request.ServerVariables("HTTP_USER_AGENT")
end if
if not rsUser.eof then
    UID = rsUser("userID")
    if rsUser("userLevel") > 100 then
%>
<!--#include file="include/db_close.inc"-->
<%
        response.redirect "admin.asp?UID=" & UID
    else
%>
<!--#include file="include/db_close.inc"-->
<%
        response.redirect "status.asp?UID=" & UID
    end if
else
%>
<!--#include file="include/db_close.inc"-->
<%
        response.redirect "index.asp"
    end if
%>

```

[ACCOUNT_NEW.ASP]

```

<!--#include file="include/db_open.inc"--><html>
<head>
<title>New Account</title>
<link rel="stylesheet" href="include/windows.css">
<script Language="JavaScript"><!--
function FrontPage_Form1_Validator(theForm)
{
if (theForm.projectID.selectedIndex < 0)
{
    alert("Please select one of the \"project\" options.");
    theForm.projectID.focus();
    return (false);
}

if (theForm.projectID.selectedIndex == 0)
{
    alert("The first \"project\" option is not a valid selection. Please choose one of the other options.");
    theForm.projectID.focus();
}
}

```

```

    return (false);
}

if (theForm.lastName.value == "")
{
    alert("Please enter a value for the \"Last Name\" field.");
    theForm.lastName.focus();
    return (false);
}

if (theForm.firstName.value == "")
{
    alert("Please enter a value for the \"First Name\" field.");
    theForm.firstName.focus();
    return (false);
}

if (theForm.userEmail.value == "")
{
    alert("Please enter a value for the \"Email\" field.");
    theForm.userEmail.focus();
    return (false);
}

if (theForm.userLogID.value == "")
{
    alert("Please enter a value for the \"User ID\" field.");
    theForm.userLogID.focus();
    return (false);
}

if (theForm.userPwd.value == "")
{
    alert("Please enter a value for the \"Password\" field.");
    theForm.userPwd.focus();
    return (false);
}
return (true);
}
//--></script>
</head>

<body oncontextmenu="return false">
<div align="center">
    <center><table width="80%" cellspacing="0" cellpadding="0" height="100%" style="background-
color: #FFFFFF">
        <tr>
            <td valign="top">
                <table width="100%">
                    <tr>
                        <td>

```

```

        <b>WEB-BASED TIME SHEET</b></td>
    <td align="right">
        <a href="index.htm" onmouseover="javascript:window.status=";return
true">LOGIN</a></td>
    </tr>
</table>
<hr><p>
<br>
<br>
</p>
<fieldset>
<legend>INSTRUCTION</legend>
<table border="0" cellpadding="0" cellspacing="0" style="border-collapse: collapse"
bordercolor="#111111" width="95%" id="AutoNumber1" height="100">
    <tr>
        <td width="100%" valign="top" align="center">
            <br>
            <br>
            Your account will be activated within 24 hours for security
reasons.<br>
            <br>
            Send an email to master (<a
href="mailto:architime@tamu.edu">architime@tamu.edu</a>), if you have a problem to log in after 24
hours. </td>
        </tr>
    </table>
</fieldset> <br>
<br>
<fieldset>
<legend>Login</legend>
<center>
<form method="post" action="account_new_exe.asp" name="FrontPage_Form1"
onsubmit="return FrontPage_Form1_Validator(this)">
    <table width="600" border="0" cellspacing="0" cellpadding="0" height="162">
        <tr>
            <td width="150" valign="top" height="19">
                <b>Project</b> </td>
            <td width="450" height="19">
                <!--Webbot bot="Validation" S-Display-Name="project" B-Value-
Required="TRUE" B-Disallow-First-Item="TRUE" --><select NAME="projectID">
                    <option VALUE selected>Choose your design studio</option>
                <%
                    mySQL = "SELECT * FROM project ORDER BY collegeName,
projectName "
                    set rsProject=Conn.Execute(mySQL)
                    do until rsProject.EOF
                %>
                    <option
VALUE="<%=rsProject("projectID")%>"><%=rsProject("projectName")%>
(<%=rsProject("instructorName")%>)</option>
                <%

```

```

        rsProject.movenext
    loop
%></select> </td>
</tr>
<tr>
    <td width="150" valign="top" height="18">
        <b>Last Name</b> </td>
    <td width="450" height="18">
        <!--Webbot bot="Validation" S-Display-Name="Last Name" B-
Value-Required="TRUE" --><input type="text" name="lastName" size="50" style="font-size: 9pt;
width: 254"> </td>
    </tr>
<tr>
    <td width="150" valign="top" height="18">
        <b>First Name</b> </td>
    <td width="450" height="18">
        <!--Webbot bot="Validation" S-Display-Name="First Name" B-
Value-Required="TRUE" --><input type="text" name="firstName" size="50" style="font-size: 9pt;
width: 254"> </td>
    </tr>
<tr>
    <td width="150" valign="top" height="18">
        <b>E-Mail</b> </td>
    <td width="450" height="18">
        <!--Webbot bot="Validation" S-Display-Name="Email" B-Value-
Required="TRUE" --><input type="text" name="userEmail" size="50" style="font-size: 9pt; width:
254"> </td>
    </tr>
<tr>
    <td width="150" valign="top" height="34">
        <br>
        <b>User ID</b> </td>
    <td width="450" height="34">
        <br>
        <!--Webbot bot="Validation" S-Display-Name="User ID" B-Value-
Required="TRUE" --><input type="text" name="userLogID" size="50" style="font-size: 9pt; width:
254"> </td>
    </tr>
<tr>
    <td width="150" valign="top" height="18">
        <b>Password</b> </td>
    <td width="450" height="18">
        <!--Webbot bot="Validation" S-Display-Name="Password" B-Value-
Required="TRUE" --><input type="password" name="userPwd" size="50" style="font-size: 9pt; width:
254"> </td>
    </tr>
<tr>
    <td width="100" valign="top" height="37">&nbsp;  </td>
    <td width="500" height="37">
        <br>
        <input type="submit" value="Create" name="submit"> </td>

```



```

                </tr>
            </table>
        </form>
    </center></fieldset> </td>
</tr>
</table>
</center></div>
</body>
</html>
<!--#include file="include/db_close.inc"-->

```

[ACCOUNT_NEW_EXE.ASP]

```

<!--#include file="include/db_open.inc"-->
<%
    addDate = Now()
    projectID = request("projectID")
    lastName = request("lastName")
    firstName = request("firstName")
    userEmail = request("userEmail")
    userLogID = request("userLogID")
    userPwD = request("userPwD")

    mySQL = "INSERT INTO user (addDate, projectID, lastName, firstName, userEmail, userLogID,
userPwD) VALUES ("
    mySQL = mySQL & addDate & "," & projectID & "," & lastName & "," & firstName & "," &
userEmail & "," & userLogID & "," & userPwD & ")"
    set reTemp=Conn.execute(mySQL)
    'response.write (mySQL)

    response.redirect "account_made.asp"
%>
<!--#include file="include/db_close.inc"-->
<%
    'response.redirect "../default.htm"
%>

```

[STATUS.ASP]

```

<!--#include file="include/db_open.inc"-->
<html>
<head>
<link rel="stylesheet" href="include/windows.css">
<title>Time Sheet</title>
</head>

<body oncontextmenu="return false">
<%
    UID = request("UID")
    mySQL="SELECT * FROM user WHERE userID=" & UID & ""
    set rsUser=Conn.execute(mySQL)

    temp = rsUser("ProjectID")

```

```

mysql = "SELECT * FROM targetHour WHERE ProjectID=" & temp &""
rsTarget=Conn.Execute(mysql)

temp = rsUser("ProjectID")
mysql = "SELECT * FROM Project WHERE ProjectID=" & temp &""
rsProject=Conn.Execute(mysql)
%>
<center>
  <table width="80%" cellspacing="0" cellpadding="0" height="100%" style="background-color:
#FFFFFF">
    <tr>
      <td valign="top">
        <table border="0" cellpadding="0" cellspacing="0" width="100%">
          <tr>
            <td>
              <b>STATUS - WEB-BASED TIME SHEET</b></td>
            <td align="right">
              <% if rsUser("userLevel") > 100 then%><b><a
href="admin.asp?UID=<%=rsUser("userID")%>" onmouseover="javascript:window.status=";return
true">ADMIN.</a></b><% end if%>&nbsp;<b><a href="index.asp"
onmouseover="javascript:window.status=";return true">LOGOUT</a></b></td>
            </tr>
          </table>
        <hr>
        Date: <%=date()%>
        <br><br>
        <fieldset>
          <legend>INSTRUCTION</legend>
          <table border="0" cellpadding="15" cellspacing="0" bordercolor="#111111"
width="95%" id="AutoNumber1" height="100">
            <tr>
              <td width="100%" valign="top">
                How are you?
                <b><%=rsUser("firstName")%>&nbsp;<%=rsUser("lastName")%></b>
                (<%=rsProject("projectName")%> - <%=rsProject("instructorName")%>)<br><br>

                In this page, you can check your current time use submission
                status.<br><br>

                Each activity you turned in has been categorized and you can see how much
                time you spent on each category.<br><br>

                Email to master (<a
href="mailto:architime@tamu.edu">architime@tamu.edu</a>), if you have any problems
              </td>
            </tr>
          </table>
        </fieldset><br>
        <br>
      </td>
    </tr>
  </table>
  <FORM METHOD=get ACTION="input.asp">

```



```

targetUser = UID

Do until targetDate = DateAdd("d", 1, end_project)

    sumR = 0
    sumA = 0
    sumS = 0
    sumE = 0
    sumD = 0
    sumP = 0

    mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate,
tblActivity.timeTypeID " _
        & "FROM tblActivity INNER JOIN timesheet ON tblActivity.activityID =
timesheet.activityID " _
        & "WHERE timesheet.userID=" & targetUser & " AND timesheet.ddate=#" &
targetDate & "# "
    set rsTemp=Conn.execute(mySQL)

    if not rsTemp.eof then

        do until rsTemp.eof
            Select Case rsTemp("timeTypeID")
                Case 1
                    sumR = sumR + rsTemp("ttime")
                Case 2
                    sumA = sumA + rsTemp("ttime")
                Case 3
                    sumS = sumS + rsTemp("ttime")
                Case 4
                    sumE = sumE + rsTemp("ttime")
                Case 5
                    sumD = sumD + rsTemp("ttime")
                Case 6
                    sumP = sumP + rsTemp("ttime")
                Case else
            End Select
            rsTemp.movenext
        loop
    end if

    GsumR = sumR * 30
    GsumA = sumA * 30
    GsumS = sumS * 30
    GsumE = sumE * 30
    GsumD = sumD * 30
    GsumP = sumP * 30

    sumR = round(sumR, 1)
    sumA = round(sumA, 1)
    sumS = round(sumS, 1)

```

```

sumE = round(sumE, 1)
sumD = round(sumD, 1)
sumP = round(sumP, 1)
%>

<table border="0" cellpadding="0" cellspacing="0" width="100%">
<tr>
<td width="100">
<%=targetDate%>
</td>
<td align="left">
<table border="0" cellpadding="0" cellspacing="0" width="100%">
<tr>
<td align="left">

<table border="0" cellpadding="0" cellspacing="0">
<tr>
<td>" height="7"></td>
<td>" height="7"></td>
<td>" height="7"></td>
<td>" height="7"></td>
<td>" height="7"></td>
<td>" height="7"></td>
</tr>
</table>
</td>
<td align="right"><%=sumR%>, <%=sumA%>, <%=sumS%>,
<%=sumE%>, <%=sumD%>, <%=sumP%></td>
</tr>
</table>
</td>
</tr>
</table>
<hr>
<%
targetDate = DateAdd("d", 1, targetDate)

Loop
%>
</td>
</tr>
</table>
</center>
</body>
</html>

```

```
<!--#include file="include/db_close.inc"-->
```

[INPUT.ASP]

```
<!--#include file="include/db_open.inc"-->
```

```
<html>
```

```
<head>
```

```
<link rel="stylesheet" href="include/windows.css">
```

```
<title>Time Sheet</title>
```

```
</head>
```

```
<body oncontextmenu="return false">
```

```
<%
```

```
UID = request.querystring("UID")
```

```
mySQL="SELECT * FROM user WHERE userID=" & request("UID")
```

```
set rsUser=Conn.execute(mySQL)
```

```
projectID = rsUser("projectID")
```

```
mySQL = "SELECT * FROM project WHERE projectID=" & projectID & ""
```

```
set rsProject=Conn.Execute(mySQL)
```

```
%>
```

```
<div align="center">
```

```
<center><table width="80%" cellpadding="0" cellspacing="0" height="100%" style="background-color: #FFFFFF">
```

```
<tr>
```

```
<td valign="top">
```

```
<table border="0" cellpadding="0" cellspacing="0" width="100%">
```

```
<tr>
```

```
<td>
```

```
<b>INPUT - WEB-BASED TIME SHEET</b></td>
```

```
<td align="right">
```

```
<%if rsUser("userLevel") > 100 then%><b><a
```

```
href="admin.asp?UID=<%=rsUser("userID")%>" onmouseover="javascript:window.status=";return
```

```
true">ADMIN.</a></b>&nbsp;&nbsp;<%end if%><%if rsUser("userLevel") = 100 then%><b><a
```

```
href="status.asp?UID=<%=rsUser("userID")%>" onmouseover="javascript:window.status=";return
```

```
true">INPUT STATUS</a>&nbsp;&nbsp;<%end if%><b><a href="index.asp"
```

```
onmouseover="javascript:window.status=";return true">LOGOUT</a></b></td>
```

```
</tr>
```

```
</table>
```

```
<hr>
```

```
Date: <%=date()%>
```

```
<br><br>
```

```
<fieldset>
```

```
<legend>INSTRUCTION</legend>
```

```
<table border="0" cellpadding="15" cellspacing="0" bordercolor="#111111"
```

```
width="95%" id="AutoNumber1" height="100">
```

```
<tr>
```

```
<td width="100%" valign="top">
```

```
<UL>
```

```
<LI> Please submit time sheets from start day to end of project, Thank
```

```
you.<br>
```



```

        <option>30</option>
        <option>35</option>
        <option>40</option>
        <option>45</option>
        <option>50</option>
        <option>55</option>
    </select>&nbsp; Min.
</td>
</tr>
<tr>
<td align="right">
    <b>Activity:&nbsp;  </b>

    <select NAME="activity2">
    <option VALUE="0" selected>Choose a design activity</option>
    <%
        mySQL = "SELECT * FROM tblActivity ORDER BY activityID "
        set rsTemp=Conn.Execute(mySQL)
        do until rsTemp.EOF
    %>
    <option
VALUE="<%=rsTemp("activityID")%>"><%=rsTemp("activityName")%></option>
    <%
        rsTemp.movenext
        loop
    %></select>
</td>
<td align="right">
    <b>&nbsp;  &nbsp;  Duration:&nbsp;  </b>

    <select size="1" name="hour2">
    <option>0</option>
    <option>1</option>
    <option>2</option>
    <option>3</option>
    <option>4</option>
    <option>5</option>
    <option>6</option>
    <option>7</option>
    <option>8</option>
    <option>9</option>
    <option>10</option>
    <option>11</option>
    <option>12</option>
    <option>13</option>
    <option>14</option>
    <option>15</option>
    <option>16</option>
    <option>17</option>
    <option>18</option>
    <option>19</option>

```

```

        <option>20</option>
        <option>21</option>
        <option>22</option>
        <option>23</option>
        <option>24</option>
    </select>&nbsp;Hour <select size="1" name="min2">
    <option>0</option>
    <option>5</option>
    <option>10</option>
    <option>15</option>
    <option>20</option>
    <option>25</option>
    <option>30</option>
    <option>35</option>
    <option>40</option>
    <option>45</option>
    <option>50</option>
    <option>55</option>
    </select>&nbsp;Min.
</tr>
<tr>
    <td align="right">
        <b>Activity:&nbsp;</b>

        <select NAME="activity3">
        <option VALUE="0" selected>Choose a design activity</option>
        <%
            mySQL = "SELECT * FROM tblActivity ORDER BY activityID "
            set rsTemp=Conn.Execute(mySQL)
            do until rsTemp.EOF
            %>
        <option
VALUE="<%=rsTemp("activityID")%>"><%=rsTemp("activityName")%></option>
        <%
            rsTemp.movenext
            loop
            %></select>
    </td>
    <td align="right">
        <b>&nbsp;&nbsp;&nbsp;Duration:&nbsp;</b>

        <select size="1" name="hour3">
        <option>0</option>
        <option>1</option>
        <option>2</option>
        <option>3</option>
        <option>4</option>
        <option>5</option>
        <option>6</option>
        <option>7</option>
        <option>8</option>

```

```

        <option>9</option>
        <option>10</option>
        <option>11</option>
        <option>12</option>
        <option>13</option>
        <option>14</option>
        <option>15</option>
        <option>16</option>
        <option>17</option>
        <option>18</option>
        <option>19</option>
        <option>20</option>
        <option>21</option>
        <option>22</option>
        <option>23</option>
        <option>24</option>
        </select>&nbsp;Hour <select size="1" name="min3">
        <option>0</option>
        <option>5</option>
        <option>10</option>
        <option>15</option>
        <option>20</option>
        <option>25</option>
        <option>30</option>
        <option>35</option>
        <option>40</option>
        <option>45</option>
        <option>50</option>
        <option>55</option>
        </select>&nbsp;Min.
    </td>
</tr>
<tr>
<td align="right">
    <b>Activity:&nbsp;</b>
    <select NAME="activity4">
    <option VALUE="0" selected>Choose a design activity</option>
    <%
        mySQL = "SELECT * FROM tblActivity ORDER BY activityID "
        set rsTemp=Conn.Execute(mySQL)
        do until rsTemp.EOF
    %>
    <option
VALUE="<%=rsTemp("activityID")%>"><%=rsTemp("activityName")%></option>
    <%
        rsTemp.movenext
    loop
    %></select>
</td>
<td align="right">

```



```

        <option>24</option>
        </select>&nbsp;Hour <select size="1" name="min6">
        <option>0</option>
        <option>5</option>
        <option>10</option>
        <option>15</option>
        <option>20</option>
        <option>25</option>
        <option>30</option>
        <option>35</option>
        <option>40</option>
        <option>45</option>
        <option>50</option>
        <option>55</option>
        </select>&nbsp;Min.
    </td>
</tr>
<tr>
    <td align="right">
        <b>Activity:&nbsp;</b>

        <select NAME="activity7">
        <option VALUE="0" selected>Choose a design activity</option>
        <%
            mySQL = "SELECT * FROM tblActivity ORDER BY activityID "
            set rsTemp=Conn.Execute(mySQL)
            do until rsTemp.EOF
        %>
        <option
VALUE="<%=rsTemp("activityID")%>"><%=rsTemp("activityName")%></option>
        <%
            rsTemp.movenext
            loop
        %></select>
    </td>
    <td align="right">
        <b>&nbsp;&nbsp;&nbsp;Duration:&nbsp;</b>

        <select size="1" name="hour7">
        <option>0</option>
        <option>1</option>
        <option>2</option>
        <option>3</option>
        <option>4</option>
        <option>5</option>
        <option>6</option>
        <option>7</option>
        <option>8</option>
        <option>9</option>
        <option>10</option>
        <option>11</option>

```



```

        <option>12</option>
        <option>13</option>
        <option>14</option>
        <option>15</option>
        <option>16</option>
        <option>17</option>
        <option>18</option>
        <option>19</option>
        <option>20</option>
        <option>21</option>
        <option>22</option>
        <option>23</option>
        <option>24</option>
    </select>&nbsp;Hour <select size="1" name="min7">
    <option>0</option>
    <option>5</option>
    <option>10</option>
    <option>15</option>
    <option>20</option>
    <option>25</option>
    <option>30</option>
    <option>35</option>
    <option>40</option>
    <option>45</option>
    <option>50</option>
    <option>55</option>
    </select>&nbsp;Min.
    </td>
</tr>
<tr>
<td align="right">
    <b>Activity:&nbsp;</b>
    <select NAME="activity8">
    <option VALUE="0" selected>Choose a design activity</option>
    <%
    mySQL = "SELECT * FROM tblActivity ORDER BY activityID "
    set rsTemp=Conn.Execute(mySQL)
    do until rsTemp.EOF
    %>
    <option
    VALUE="<%=rsTemp("activityID")%>"><%=rsTemp("activityName")%></option>
    <%
    rsTemp.movenext
    loop
    %></select>
    </td>
<td align="right">
    <b>&nbsp;&nbsp;&nbsp;Duration:&nbsp;</b>
    <select size="1" name="hour8">

```

```

<option>0</option>
<option>1</option>
<option>2</option>
<option>3</option>
<option>4</option>
<option>5</option>
<option>6</option>
<option>7</option>
<option>8</option>
<option>9</option>
<option>10</option>
<option>11</option>
<option>12</option>
<option>13</option>
<option>14</option>
<option>15</option>
<option>16</option>
<option>17</option>
<option>18</option>
<option>19</option>
<option>20</option>
<option>21</option>
<option>22</option>
<option>23</option>
<option>24</option>
</select>&nbsp;Hour <select size="1" name="min8">
<option>0</option>
<option>5</option>
<option>10</option>
<option>15</option>
<option>20</option>
<option>25</option>
<option>30</option>
<option>35</option>
<option>40</option>
<option>45</option>
<option>50</option>
<option>55</option>
</select>&nbsp;Min.
</td>
</tr>
</table>
</center>
</fieldset>
</form>
<br><br><hr>
<table width="100%">
<tr>
<td>College of Architecture, Texas A&M University 2003</td>
<td align="right">Question? mail to <a
href="mailto:architime@tamu.edu">master</a></td>

```

```

                </tr>
            </table>
        </td>
    </tr>
</table>
</center></div>
</body>

</html>
<!--#include file="include/db_close.inc"-->

```

[INPUT_EXE.ASP]

```

<!--#include file="include/db_open.inc"-->
<%
    mm=request("mm")
    dd=request("dd")
    yy=request("yy")
    frmSubmit=request("frmSubmit")
    ddate = mm & "/" & dd & "/" & yy
    UID = request("UID")

    activity1=request("activity1")
    activity2=request("activity2")
    activity3=request("activity3")
    activity4=request("activity4")
    activity5=request("activity5")
    activity6=request("activity6")
    activity7=request("activity7")
    activity8=request("activity8")

    hour1=request("hour1")
    hour2=request("hour2")
    hour3=request("hour3")
    hour4=request("hour4")
    hour5=request("hour5")
    hour6=request("hour6")
    hour7=request("hour7")
    hour8=request("hour8")

    min1=request("min1")
    min2=request("min2")
    min3=request("min3")
    min4=request("min4")
    min5=request("min5")
    min6=request("min6")
    min7=request("min7")
    min8=request("min8")

    min1 = min1 / 60
    min2 = min2 / 60
    min3 = min3 / 60

```

```

min4 = min4 / 60
min5 = min5 / 60
min6 = min6 / 60
min7 = min7 / 60
min8 = min8 / 60

```

```

ttime1 = hour1 + min1
ttime2 = hour2 + min2
ttime3 = hour3 + min3
ttime4 = hour4 + min4
ttime5 = hour5 + min5
ttime6 = hour6 + min6
ttime7 = hour7 + min7
ttime8 = hour8 + min8

```

```

if not activity1="0" or activity1="11" or activity1="51" or activity1="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity1 & "," & ttime1 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

```

```

if not activity2="0" or activity2="11" or activity2="51" or activity2="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity2 & "," & ttime2 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

```

```

if not activity3="0" or activity3="11" or activity3="51" or activity3="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity3 & "," & ttime3 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

```

```

if not activity4="0" or activity4="11" or activity4="51" or activity4="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity4 & "," & ttime4 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

```

```

if not activity5="0" or activity5="11" or activity5="51" or activity5="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity5 & "," & ttime5 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

```

```

if not activity6="0" or activity6="11" or activity6="51" or activity6="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity6 & "," & ttime6 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

```

```

if not activity7="0" or activity7="11" or activity7="51" or activity7="101" then
    mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
    mySQL = mySQL & now & "," & ddate & "," & activity7 & "," & time7 & "," & UID & ")"
    set reTemp=Conn.execute(mySQL)
end if

if not activity8="0" or activity8="11" or activity8="51" or activity8="101" then
    mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
    mySQL = mySQL & now & "," & ddate & "," & activity8 & "," & time8 & "," & UID & ")"
    set reTemp=Conn.execute(mySQL)
end if

'response.write (frmSubmit)

mySQL="SELECT * FROM user WHERE userID=" & UID & ""
set rsUser=Conn.execute(mySQL)

'response.write(frmSubmit)
if frmSubmit = "SUBMIT & MORE" then
    %>
    <!--#include file="include/db_close.inc"-->
    <%
    response.redirect "input.asp?UID=" & UID
else
    if rsUser("userType") = 1 then
        %>
        <!--#include file="include/db_close.inc"-->
        <%
        response.redirect "output.asp?UID=" & UID
    else
        %>
        <!--#include file="include/db_close.inc"-->
        <%
        response.redirect "index.htm"
    end if
end if
%>

[OUTPUT_EXE]
<!--#include file="include/db_open.inc"-->
<html>
<head>
<link rel="stylesheet" href="include/windows.css">
<title>Time Sheet</title>
</head>
<body oncontextmenu="return false">
<%
MYsumR = 0
MYsumR_H = 0
MYsumR_M = 0
CLASSsumR = 0

```

CLASSsumR_H = 0
CLASSsumR_M = 0
INSTsumR = 0
INSTsumR_H = 0
INSTsumR_M = 0

MYsumA = 0
MYsumA_H = 0
MYsumA_M = 0
CLASSsumA = 0
CLASSsumA_H = 0
CLASSsumA_M = 0
INSTsumA = 0
INSTsumA_H = 0
INSTsumA_M = 0

MYsumS = 0
MYsumS_H = 0
MYsumS_M = 0
CLASSsumS = 0
CLASSsumS_H = 0
CLASSsumS_M = 0
INSTsumS = 0
INSTsumS_H = 0
INSTsumS_M = 0

MYsumE = 0
MYsumE_H = 0
MYsumE_M = 0
CLASSsumE = 0
CLASSsumE_H = 0
CLASSsumE_M = 0
INSTsumE = 0
INSTsumE_H = 0
INSTsumE_M = 0

MYsumD = 0
MYsumD_H = 0
MYsumD_M = 0
CLASSsumD = 0
CLASSsumD_H = 0
CLASSsumD_M = 0
INSTsumD = 0
INSTsumD_H = 0
INSTsumD_M = 0

MYsumP = 0
MYsumP_H = 0
MYsumP_M = 0
CLASSsumP = 0
CLASSsumP_H = 0

```

CLASSsumP_M = 0
INSTsumP = 0
INSTsumP_H = 0
INSTsumP_M = 0

UID = request("UID")

mySQL="SELECT * FROM user WHERE userID=" & UID & ""
set rsUser=Conn.execute(mySQL)

if request("targetUser")="" then
    targetUser = request("UID")
else
    targetUser = request("targetUser")
end if

mySQL="SELECT * FROM user WHERE userID=" & targetUser & ""
set rsTargetUser=Conn.execute(mySQL)

projectID = rsTargetUser("projectID")
mySQL = "SELECT * FROM project WHERE projectID=" & projectID & ""
set rsproject=Conn.Execute(mySQL)
projectStart = rsproject("projectStart")

mm = request("mm")
dd = request("dd")
yy = request("yy")

targetDate = mm & "/" & dd & "/" & yy

if mm="" or dd="" or yy="" then
    targetDate = date
end if

mySQL="SELECT * FROM targetHour WHERE projectID=" & rsproject("projectID")
set rsTargetHour=Conn.execute(mySQL)

if DateDiff("d", projectStart, targetDate) >= 0 AND DateDiff("d", targetDate, rsproject("endofp1")) >=0
then
    Diff1 = DateDiff("d", projectStart, rsproject("endofp1"))
    Diff2 = DateDiff("d", projectStart, targetDate)

    if not rsTargetHour("rp1")=0 then
        INSTsumR = rsTargetHour("rp1") / Diff1
        INSTsumR = INSTsumR * Diff2
        INSTsumR_H = INSTsumR
        INSTsumR_H = round(INSTsumR_H, 1)
    end if

    if not rsTargetHour("ap1")=0 then

```

```

    INSTsumA = rsTargetHour("ap1") / Diff1
    INSTsumA = INSTsumA * Diff2
    INSTsumA_H = INSTsumA
    INSTsumA_H = round(INSTsumA_H, 1)
end if

if not rsTargetHour("sp1")=0 then
    INSTsumS = rsTargetHour("sp1") / Diff1
    INSTsumS = INSTsumS * Diff2
    INSTsumS_H = INSTsumS
    INSTsumS_H = round(INSTsumS_H, 1)
end if

if not rsTargetHour("ep1")=0 then
    INSTsumE = rsTargetHour("ep1") / Diff1
    INSTsumE = INSTsumE * Diff2
    INSTsumE_H = INSTsumE
    INSTsumE_H = round(INSTsumE_H, 1)
end if

if not rsTargetHour("dp1")=0 then
    INSTsumD = rsTargetHour("dp1") / Diff1
    INSTsumD = INSTsumD * Diff2
    INSTsumD_H = INSTsumD
    INSTsumD_H = round(INSTsumD_H, 1)
end if

if not rsTargetHour("pp1")=0 then
    INSTsumP = rsTargetHour("pp1") / Diff1
    INSTsumP = INSTsumP * Diff2
    INSTsumP_H = INSTsumP
    INSTsumP_H = round(INSTsumP_H, 1)
end if
end if

if DateDiff("d", rsproject("endofp1"), targetDate) > 0 AND DateDiff("d", targetDate,
rsproject("endofp2")) >=0 then
    Diff1 = DateDiff("d", rsproject("endofp1"), rsproject("endofp2"))
    Diff2 = DateDiff("d", rsproject("endofp1"), targetDate)

    if not rsTargetHour("rp2")=0 then
        INSTsumR = rsTargetHour("rp2") / Diff1
        INSTsumR = INSTsumR * Diff2
        INSTsumR = INSTsumR + rsTargetHour("rp1")
    else
        INSTsumR = rsTargetHour("rp1")
    end if
    INSTsumR_H = INSTsumR
    INSTsumR_H = round(INSTsumR_H, 1)

    if not rsTargetHour("ap2")=0 then

```



```

    INSTsumA = rsTargetHour("ap2") / Diff1
    INSTsumA = INSTsumA * Diff2
    INSTsumA = INSTsumA + rsTargetHour("ap1")
else
    INSTsumA = rsTargetHour("ap1")
end if
INSTsumA_H = INSTsumA
INSTsumA_H = round(INSTsumA_H, 1)

if not rsTargetHour("sp2")=0 then
    INSTsumS = rsTargetHour("sp2") / Diff1
    INSTsumS = INSTsumS * Diff2
    INSTsumS = INSTsumS + rsTargetHour("sp1")
else
    INSTsumS = rsTargetHour("sp1")
end if
INSTsumS_H = INSTsumS
INSTsumS_H = round(INSTsumS_H, 1)

if not rsTargetHour("ep2")=0 then
    INSTsumE = rsTargetHour("ep2") / Diff1
    INSTsumE = INSTsumE * Diff2
    INSTsumE = INSTsumE + rsTargetHour("ep1")
else
    INSTsumE = rsTargetHour("ep1")
end if
INSTsumE_H = INSTsumE
INSTsumE_H = round(INSTsumE_H, 1)

if not rsTargetHour("dp2")=0 then
    INSTsumD = rsTargetHour("dp2") / Diff1
    INSTsumD = INSTsumD * Diff2
    INSTsumD = INSTsumD + rsTargetHour("dp1")
else
    INSTsumD = rsTargetHour("dp1")
end if
INSTsumD_H = INSTsumD
INSTsumD_H = round(INSTsumD_H, 1)

if not rsTargetHour("pp2")=0 then
    INSTsumP = rsTargetHour("pp2") / Diff1
    INSTsumP = INSTsumP * Diff2
    INSTsumP = INSTsumP + rsTargetHour("pp1")
else
    INSTsumP = rsTargetHour("pp1")
end if
INSTsumP_H = INSTsumP
INSTsumP_H = round(INSTsumP_H, 1)

end if

```

```

if DateDiff("d", rsproject("endofp2"), targetDate) > 0 AND DateDiff("d", targetDate,
rsproject("endofp3")) >=0 then
    Diff1 = DateDiff("d", rsproject("endofp2"), rsproject("endofp3"))
    Diff2 = DateDiff("d", rsproject("endofp2"), targetDate)

    if not rsTargetHour("rp3")=0 then
        INSTsumR = rsTargetHour("rp3") / Diff1
        INSTsumR = INSTsumR * Diff2
        INSTsumR = INSTsumR + rsTargetHour("rp1") + rsTargetHour("rp2")
    else
        INSTsumR = + rsTargetHour("rp1") + rsTargetHour("rp2")
    end if
    INSTsumR_H = INSTsumR
    INSTsumR_H = round(INSTsumR_H, 1)

    if not rsTargetHour("ap3")=0 then
        INSTsumA = rsTargetHour("ap3") / Diff1
        INSTsumA = INSTsumA * Diff2
        INSTsumA = INSTsumA + rsTargetHour("ap1") + rsTargetHour("ap2")
    else
        INSTsumA = + rsTargetHour("ap1") + rsTargetHour("ap2")
    end if
    INSTsumA_H = INSTsumA
    INSTsumA_H = round(INSTsumA_H, 1)

    if not rsTargetHour("sp3")=0 then
        INSTsumS = rsTargetHour("sp3") / Diff1
        INSTsumS = INSTsumS * Diff2
        INSTsumS = INSTsumS + rsTargetHour("sp1") + rsTargetHour("sp2")
    else
        INSTsumS = + rsTargetHour("sp1") + rsTargetHour("sp2")
    end if
    INSTsumS_H = INSTsumS
    INSTsumS_H = round(INSTsumS_H, 1)

    if not rsTargetHour("ep3")=0 then
        INSTsumE = rsTargetHour("ep3") / Diff1
        INSTsumE = INSTsumE * Diff2
        INSTsumE = INSTsumE + rsTargetHour("ep1") + rsTargetHour("ep2")
    else
        INSTsumE = + rsTargetHour("ep1") + rsTargetHour("ep2")
    end if
    INSTsumE_H = INSTsumE
    INSTsumE_H = round(INSTsumE_H, 1)

    if not rsTargetHour("rp3")=0 then
        INSTsumD = rsTargetHour("dp3") / Diff1
        INSTsumD = INSTsumD * Diff2
        INSTsumD = INSTsumD + rsTargetHour("dp1") + rsTargetHour("dp2")
    else
        INSTsumD = + rsTargetHour("dp1") + rsTargetHour("dp2")
    end if

```

```

end if
INSTsumD_H = INSTsumD
INSTsumD_H = round(INSTsumD_H, 1)

if not rsTargetHour("pp3")=0 then
  INSTsumP = rsTargetHour("pp3") / Diff1
  INSTsumP = INSTsumP * Diff2
  INSTsumP = INSTsumP + rsTargetHour("pp1") + rsTargetHour("pp2")
else
  INSTsumP = + rsTargetHour("pp1") + rsTargetHour("pp2")
end if
INSTsumP_H = INSTsumP
INSTsumP_H = round(INSTsumP_H, 1)

end if

if rsproject("phaseStep") > 3 then
if DateDiff("d", rsproject("endofp3"), targetDate) > 0 AND DateDiff("d", targetDate,
rsproject("endofp4")) >=0 then
  Diff1 = DateDiff("d", rsproject("endofp3"), rsproject("endofp4"))
  Diff2 = DateDiff("d", rsproject("endofp3"), targetDate)

  if not rsTargetHour("rp4")=0 then
    INSTsumR = rsTargetHour("rp4") / Diff1
    INSTsumR = INSTsumR * Diff2
    INSTsumR = INSTsumR + rsTargetHour("rp1") + rsTargetHour("rp2") + rsTargetHour("rp3")
  else
    INSTsumR = + rsTargetHour("rp1") + rsTargetHour("rp2") + rsTargetHour("rp3")
  end if
  INSTsumR_H = INSTsumR
  INSTsumR_H = round(INSTsumR_H, 1)

  if not rsTargetHour("ap4")=0 then
    INSTsumA = rsTargetHour("ap4") / Diff1
    INSTsumA = INSTsumA * Diff2
    INSTsumA = INSTsumA + rsTargetHour("ap1") + rsTargetHour("ap2") + rsTargetHour("ap3")
  else
    INSTsumA = + rsTargetHour("ap1") + rsTargetHour("ap2") + rsTargetHour("ap3")
  end if
  INSTsumA_H = INSTsumA
  INSTsumA_H = round(INSTsumA_H, 1)

  if not rsTargetHour("sp4")=0 then
    INSTsumS = rsTargetHour("sp4") / Diff1
    INSTsumS = INSTsumS * Diff2
    INSTsumS = INSTsumS + rsTargetHour("sp1") + rsTargetHour("sp2") + rsTargetHour("sp3")
  else
    INSTsumS = + rsTargetHour("sp1") + rsTargetHour("sp2") + rsTargetHour("sp3")
  end if
  INSTsumS_H = INSTsumS
  INSTsumS_H = round(INSTsumS_H, 1)

```

```

if not rsTargetHour("ep4")=0 then
  INSTsumE = rsTargetHour("ep4") / Diff1
  INSTsumE = INSTsumE * Diff2
  INSTsumE = INSTsumE + rsTargetHour("ep1") + rsTargetHour("ep2") + rsTargetHour("ep3")
else
  INSTsumE = + rsTargetHour("ep1") + rsTargetHour("ep2") + rsTargetHour("ep3")
end if
INSTsumE_H = INSTsumE
INSTsumE_H = round(INSTsumE_H, 1)

if not rsTargetHour("dp4")=0 then
  INSTsumD = rsTargetHour("dp4") / Diff1
  INSTsumD = INSTsumD * Diff2
  INSTsumD = INSTsumD + rsTargetHour("dp1") + rsTargetHour("dp2") + rsTargetHour("dp3")
else
  INSTsumD = + rsTargetHour("dp1") + rsTargetHour("dp2") + rsTargetHour("dp3")
end if
INSTsumD_H = INSTsumD
INSTsumD_H = round(INSTsumD_H, 1)

if not rsTargetHour("pp4")=0 then
  INSTsumP = rsTargetHour("pp4") / Diff1
  INSTsumP = INSTsumP * Diff2
  INSTsumP = INSTsumP + rsTargetHour("pp1") + rsTargetHour("pp2") + rsTargetHour("pp3")
else
  INSTsumP = + rsTargetHour("pp1") + rsTargetHour("pp2") + rsTargetHour("pp3")
end if
INSTsumP_H = INSTsumP
INSTsumP_H = round(INSTsumP_H, 1)

end if
end if

if rsproject("phaseStep") > 4 then
if DateDiff("d", rsproject("endofp4"), targetDate) > 0 AND DateDiff("d", targetDate,
rsproject("endofp5")) >=0 then
  Diff1 = DateDiff("d", rsproject("endofp4"), rsproject("endofp5"))
  Diff2 = DateDiff("d", rsproject("endofp4"), targetDate)

  if not rsTargetHour("rp5")=0 then
    INSTsumR = rsTargetHour("rp5") / Diff1
    INSTsumR = INSTsumR * Diff2
    INSTsumR = INSTsumR + rsTargetHour("rp1") + rsTargetHour("rp2") + rsTargetHour("rp3") +
rsTargetHour("rp4")
  else
    INSTsumR = + rsTargetHour("rp1") + rsTargetHour("rp2") + rsTargetHour("rp3") +
rsTargetHour("rp4")
  end if
  INSTsumR_H = INSTsumR
  INSTsumR_H = round(INSTsumR_H, 1)

```

```

if not rsTargetHour("ap5")=0 then
    INSTsumA = rsTargetHour("ap5") / Diff1
    INSTsumA = INSTsumA * Diff2
    INSTsumA = INSTsumA + rsTargetHour("ap1") + rsTargetHour("ap2") + rsTargetHour("ap3") +
rsTargetHour("ap4")
else
    INSTsumA = + rsTargetHour("ap1") + rsTargetHour("ap2") + rsTargetHour("ap3") +
rsTargetHour("ap4")
end if
INSTsumA_H = INSTsumA
INSTsumA_H = round(INSTsumA_H, 1)

if not rsTargetHour("sp5")=0 then
    INSTsumS = rsTargetHour("sp5") / Diff1
    INSTsumS = INSTsumS * Diff2
    INSTsumS = INSTsumS + rsTargetHour("sp1") + rsTargetHour("sp2") + rsTargetHour("sp3") +
rsTargetHour("sp4")
else
    INSTsumS = + rsTargetHour("sp1") + rsTargetHour("sp2") + rsTargetHour("sp3") +
rsTargetHour("sp4")
end if
INSTsumS_H = INSTsumS
INSTsumS_H = round(INSTsumS_H, 1)

if not rsTargetHour("ep5")=0 then
    INSTsumE = rsTargetHour("ep5") / Diff1
    INSTsumE = INSTsumE * Diff2
    INSTsumE = INSTsumE + rsTargetHour("ep1") + rsTargetHour("ep2") + rsTargetHour("ep3") +
rsTargetHour("ep4")
else
    INSTsumE = + rsTargetHour("ep1") + rsTargetHour("ep2") + rsTargetHour("ep3") +
rsTargetHour("ep4")
end if
INSTsumE_H = INSTsumE
INSTsumE_H = round(INSTsumE_H, 1)

if not rsTargetHour("dp5")=0 then
    INSTsumD = rsTargetHour("dp5") / Diff1
    INSTsumD = INSTsumD * Diff2
    INSTsumD = INSTsumD + rsTargetHour("dp1") + rsTargetHour("dp2") + rsTargetHour("dp3") +
rsTargetHour("dp4")
else
    INSTsumD = + rsTargetHour("dp1") + rsTargetHour("dp2") + rsTargetHour("dp3") +
rsTargetHour("dp4")
end if
INSTsumD_H = INSTsumD
INSTsumD_H = round(INSTsumD_H, 1)

if not rsTargetHour("pp5")=0 then
    INSTsumP = rsTargetHour("pp5") / Diff1

```

```

        INSTsumP = INSTsumP * Diff2
        INSTsumP = INSTsumP + rsTargetHour("pp1") + rsTargetHour("pp2") + rsTargetHour("pp3") +
rsTargetHour("pp4")
    else
        INSTsumP = + rsTargetHour("pp1") + rsTargetHour("pp2") + rsTargetHour("pp3") +
rsTargetHour("pp4")
    end if
    INSTsumP_H = INSTsumP
    INSTsumP_H = round(INSTsumP_H, 1)

```

```

end if
end if

```

```

mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate, tblActivity.timeTypeID " _
& "FROM tblActivity INNER JOIN timesheet ON tblActivity.activityID = timesheet.activityID " _
& "WHERE timesheet.userID=" & targetUser & " AND (((timesheet.ddate)>=#" & projectStart & "#" And
(timesheet.ddate)<=#" & targetDate & "#)) AND tblActivity.timeTypeID=1 "
set rsMType1=Conn.execute(mySQL)

```

```

do until rsMType1.eof
    MYsumR = MYsumR + rsMType1("ttime")
rsMType1.movenext
loop

```

```

mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate, tblActivity.timeTypeID,
project.projectID " _
& "FROM project INNER JOIN ([user] INNER JOIN (tblActivity INNER JOIN timesheet ON
tblActivity.activityID = timesheet.activityID) " _
& "ON user.userID = timesheet.userID) ON project.projectID = user.projectID " _
& "WHERE project.projectID=" & projectID & " AND (((timesheet.ddate)>=#" & projectStart & "#" And
(timesheet.ddate)<=#" & targetDate & "#)) AND tblActivity.timeTypeID=1 "
set rsCType1=Conn.execute(mySQL)

```

```

countCLASSsumR = 0
do until rsCType1.eof
    if not rsCType1("ttime") = 0 and not rsCType1("userID") = temp then
        countCLASSsumR = countCLASSsumR + 1
    end if
    CLASSsumR = CLASSsumR + rsCType1("ttime")
    temp = rsCType1("userID")
rsCType1.movenext
loop
if not CLASSsumR < 1 and not countCLASSsumR < 1 then
    CLASSsumR = CLASSsumR / countCLASSsumR
end if

```

```

mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate, tblActivity.timeTypeID " _
& "FROM tblActivity INNER JOIN timesheet ON tblActivity.activityID = timesheet.activityID " _

```

```
& "WHERE timesheet.userID=" & targetUser & " AND (((timesheet.ddate)>=#" & projectStart & "# And
(timesheet.ddate)<=#" & targetDate & "#)) AND tblActivity.timeTypeID=2"
set rsMType2=Conn.execute(mySQL)
```

```
do until rsMType2.eof
    MYsumA = MYsumA + rsMType2("ttime")
rsMType2.movenext
loop
```

```
mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate, tblActivity.timeTypeID,
project.projectID " _
& "FROM project INNER JOIN ([user] INNER JOIN (tblActivity INNER JOIN timesheet ON
tblActivity.activityID = timesheet.activityID) " _
& "ON user.userID = timesheet.userID) ON project.projectID = user.projectID " _
& "WHERE project.projectID=" & projectID & " AND (((timesheet.ddate)>=#" & projectStart & "# And
(timesheet.ddate)<=#" & targetDate & "#)) AND tblActivity.timeTypeID=2"
set rsCType2=Conn.execute(mySQL)
```

```
countCLASSsumA = 0
do until rsCType2.eof
    if not rsCType2("ttime") = 0 and not rsCType2("userID") = temp then
        countCLASSsumA = countCLASSsumA + 1
    end if
    CLASSsumA = CLASSsumA + rsCType2("ttime")
    temp = rsCType2("userID")
rsCType2.movenext
loop
if not CLASSsumA < 1 and not countCLASSsumA < 1 then
    CLASSsumA = CLASSsumA / countCLASSsumA
end if
```

```
mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate, tblActivity.timeTypeID " _
& "FROM tblActivity INNER JOIN timesheet ON tblActivity.activityID = timesheet.activityID " _
& "WHERE timesheet.userID=" & targetUser & " AND (((timesheet.ddate)>=#" & projectStart & "# And
(timesheet.ddate)<=#" & targetDate & "#)) AND tblActivity.timeTypeID=3"
set rsMType3=Conn.execute(mySQL)
```

```
do until rsMType3.eof
    MYsumS = MYsumS + rsMType3("ttime")
rsMType3.movenext
loop
```

```
mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate, tblActivity.timeTypeID,
project.projectID " _
& "FROM project INNER JOIN ([user] INNER JOIN (tblActivity INNER JOIN timesheet ON
tblActivity.activityID = timesheet.activityID) " _
& "ON user.userID = timesheet.userID) ON project.projectID = user.projectID " _
& "WHERE project.projectID=" & projectID & " AND (((timesheet.ddate)>=#" & projectStart & "# And
(timesheet.ddate)<=#" & targetDate & "#)) AND tblActivity.timeTypeID=3"
set rsCType3=Conn.execute(mySQL)
```

```

countCLASSsumS = 0
do until rsCType3.eof
  if not rsCType3("ttime") = 0 and not rsCType3("userID") = temp then
    countCLASSsumS = countCLASSsumS + 1
  end if
  CLASSsumS = CLASSsumS + rsCType3("ttime")
  temp = rsCType3("userID")
rsCType3.movenext
loop
if not CLASSsumS < 1 and not countCLASSsumS < 1 then
  CLASSsumS = CLASSsumS / countCLASSsumS
end if

mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate, tblActivity.timeTypeID " _
& "FROM tblActivity INNER JOIN timesheet ON tblActivity.activityID = timesheet.activityID " _
& "WHERE timesheet.userID=" & targetUser & " AND (((timesheet.ddate)>=#" & projectStart & "# And
(timesheet.ddate)<=#" & targetDate & "#)) AND tblActivity.timeTypeID=4"
set rsMType4=Conn.execute(mySQL)

do until rsMType4.eof
  MYsumE = MYsumE + rsMType4("ttime")
rsMType4.movenext
loop

mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate, tblActivity.timeTypeID,
project.projectID " _
& "FROM project INNER JOIN ([user] INNER JOIN (tblActivity INNER JOIN timesheet ON
tblActivity.activityID = timesheet.activityID) " _
& "ON user.userID = timesheet.userID) ON project.projectID = user.projectID " _
& "WHERE project.projectID=" & projectID & " AND (((timesheet.ddate)>=#" & projectStart & "# And
(timesheet.ddate)<=#" & targetDate & "#)) AND tblActivity.timeTypeID=4"
set rsCType4=Conn.execute(mySQL)

countCLASSsumE = 0
do until rsCType4.eof
  if not rsCType4("ttime") = 0 and not rsCType4("userID") = temp then
    countCLASSsumE = countCLASSsumE + 1
  end if
  CLASSsumE = CLASSsumE + rsCType4("ttime")
  temp = rsCType4("userID")
rsCType4.movenext
loop
if not CLASSsumE < 1 and not countCLASSsumE < 1 then
  CLASSsumE = CLASSsumE / countCLASSsumE
end if

mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate, tblActivity.timeTypeID " _
& "FROM tblActivity INNER JOIN timesheet ON tblActivity.activityID = timesheet.activityID " _
& "WHERE timesheet.userID=" & targetUser & " AND (((timesheet.ddate)>=#" & projectStart & "# And
(timesheet.ddate)<=#" & targetDate & "#)) AND tblActivity.timeTypeID=5"
set rsMType5=Conn.execute(mySQL)

```



```

do until rsMType5.eof
    MYsumD = MYsumD + rsMType5("ttime")
rsMType5.movenext
loop

mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate, tblActivity.timeTypeID,
project.projectID " _
& "FROM project INNER JOIN ([user] INNER JOIN (tblActivity INNER JOIN timesheet ON
tblActivity.activityID = timesheet.activityID) " _
& "ON user.userID = timesheet.userID) ON project.projectID = user.projectID " _
& "WHERE project.projectID=" & projectID & " AND (((timesheet.ddate)>=#" & projectStart & "# And
(timesheet.ddate)<=#" & targetDate & "#)) AND tblActivity.timeTypeID=5"
set rsCType5=Conn.execute(mySQL)

countCLASSsumD = 0
do until rsCType5.eof
    if not rsCType5("ttime") = 0 and not rsCType5("userID") = temp then
        countCLASSsumD = countCLASSsumD + 1
    end if
    CLASSsumD = CLASSsumD + rsCType5("ttime")
    temp = rsCType5("userID")
rsCType5.movenext
loop
if not CLASSsumD < 1 and not countCLASSsumD < 1 then
    CLASSsumD = CLASSsumD / countCLASSsumD
end if
mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate, tblActivity.timeTypeID " _
& "FROM tblActivity INNER JOIN timesheet ON tblActivity.activityID = timesheet.activityID " _
& "WHERE timesheet.userID=" & targetUser & " AND (((timesheet.ddate)>=#" & projectStart & "# And
(timesheet.ddate)<=#" & targetDate & "#)) AND tblActivity.timeTypeID=6"
set rsMType6=Conn.execute(mySQL)

do until rsMType6.eof
    MYsumP = MYsumP + rsMType6("ttime")
rsMType6.movenext
loop

mySQL="SELECT timesheet.userID, timesheet.ttime, timesheet.ddate, tblActivity.timeTypeID,
project.projectID " _
& "FROM project INNER JOIN ([user] INNER JOIN (tblActivity INNER JOIN timesheet ON
tblActivity.activityID = timesheet.activityID) " _
& "ON user.userID = timesheet.userID) ON project.projectID = user.projectID " _
& "WHERE project.projectID=" & projectID & " AND (((timesheet.ddate)>=#" & projectStart & "# And
(timesheet.ddate)<=#" & targetDate & "#)) AND tblActivity.timeTypeID=6"
set rsCType6=Conn.execute(mySQL)

countCLASSsumP = 0
do until rsCType6.eof
    if not rsCType6("ttime") = 0 and not rsCType6("userID") = temp then
        countCLASSsumP = countCLASSsumP + 1
    end if
    CLASSsumP = CLASSsumP + rsCType6("ttime")
    temp = rsCType6("userID")
rsCType6.movenext
loop

```

```

end if
CLASSsumP = CLASSsumP + rsCType6("ttime")
temp = rsCType6("userID")
rsCType6.movenext
loop
if not CLASSsumP < 1 and not countCLASSsumP < 1 then
CLASSsumP = CLASSsumP / countCLASSsumP
end if
%>
<div align="center">
<center><table width="80%" cellspacing="0" cellpadding="0" height="100%" style="background-
color: #FFFFFF">
<tr>
<td valign="top">
<table border="0" cellpadding="0" cellspacing="0" width="100%">
<tr>
<td>
<b>ANALYSIS - WEB-BASED TIME SHEET</b></td>
<td align="right">
<%if rsUser("userLevel") > 100 then%><b><a
href="admin.asp?UID=<%=rsUser("userID")%>" onmouseover="javascript:window.status=";return
true">ADMIN.</a></b><%end if%>&nbsp;<b><a href="index.asp"
onmouseover="javascript:window.status=";return true">LOGOUT</a></b></td>
</tr>
</table>
</td>
</tr>
</table>
<hr>
<br><br>
<CENTER>
<form method="get" action="output.asp">
<p>
<br>
<select name="mm">
<%
if request("mm") = "" then
%>
<option value="<%=DatePart("m", date)%>"selected><%=MonthName(DatePart("m",
date),True)%></option>
<%
else
%>
<option
value="<%=request("mm")%>"selected><%=MonthName(request("mm"),True)%></option>
<%
end if
%>
<option value="1">Jan</option>
<option value="2">Feb</option>
<option value="3">Mar</option>
<option value="4">Apr</option>
<option value="5">May</option>
<option value="6">Jun</option>

```

```

        <option value="7">Jul</option>
        <option value="8">Aug</option>
        <option value="9">Sep</option>
        <option value="10">Oct</option>
        <option value="11">Nov</option>
        <option value="12">Dec</option>
    </select>
    <select name="dd">
    <%
    if request("dd") = "" then
    %>
        <option value="<%=DatePart("d", date)%>"selected><%=DatePart("d",
date)%></option>
    <%
    else
    %>
        <option value="<%=request("dd")%>"selected><%=request("dd")%></option>
    <%
    end if
    %>
    <option>1</option>
        <option>2</option>
        <option>3</option>
        <option>4</option>
        <option>5</option>
        <option>6</option>
        <option>7</option>
        <option>8</option>
        <option>9</option>
        <option>10</option>
        <option>11</option>
        <option>12</option>
        <option>13</option>
        <option>14</option>
        <option>15</option>
        <option>16</option>
        <option>17</option>
        <option>18</option>
        <option>19</option>
        <option>20</option>
        <option>21</option>
        <option>22</option>
        <option>23</option>
        <option>24</option>
        <option>25</option>
        <option>26</option>
        <option>27</option>
        <option>28</option>
        <option>29</option>
        <option>30</option>
        <option>31</option>

```

```

        </select>
        <select name="yy">
        <%
        if request("yy") = "" then
        %>
        <option value="<%=DatePart("yyyy", date)%>"selected><%=DatePart("yyyy",
date)%></option>
        <%
        else
        %>
        <option value="<%=request("yy")%"selected><%=request("yy")%"></option>
        <%
        end if
        %>
        <option>2003</option>
        <option>2004</option>
        <option>2005</option>
        </select>

        <%if rsUser("userLevel") > 100 then%>
        &nbsp;&nbsp;&nbsp;<select NAME="targetUser">
        <option VALUE="<%=rsTargetUser("userID")%">"
selected><%=rsTargetUser("firstName")%"&nbsp;&nbsp;<%=rsTargetUser("lastName")%"></option>
        <%
        mySQL = "SELECT * FROM user WHERE userLevel=100 AND projectID=" &
projectID & " ORDER BY lastName and firstName"
        set rsTemp=Conn.Execute(mySQL)
        do until rsTemp.EOF
        %>
        <option
VALUE="<%=rsTemp("userID")%">"><%=rsTemp("firstName")%"&nbsp;&nbsp;<%=rsTemp("lastName")%"
></option>
        <%
        rsTemp.movenext
        loop
        %>
        </select>
        <%else%>
        <input type="hidden" name = "targetUser" value="<%=rsTargetUser("userID")%">">
        <%end if%>

        &nbsp;&nbsp;&nbsp;<input type="submit" value="SHOW" name="submit"> <input
type="hidden" name = "UID" value="<%=UID%">">

        </form>
        </CENTER>
        <table border="0" cellpadding="0" cellspacing="0" bordercolor="#c0c0c0"
width="100%">
        <tr>
        <td width="100%" colspan="3" height="14" style="border-bottom-style:
solid; border-bottom-width: 1">

```

```

        &nbsp;   </td>
    </tr>

<%
IF NOT MYsumR=0 THEN
  MYsumR_H = MYsumR \ 1
  if MYsumR_H > MYsumR then
    MYsumR_H = MYsumR_H -1
  end if
  MYsumR_M = MYsumR - MYsumR_H
  IF NOT MYsumR_M=0 THEN
    MYsumR_M = MYsumR_M * 60
    MYsumR_M = MYsumR_M \1
  END IF
END IF

IF NOT CLASSsumR=0 THEN
  CLASSsumR_H = CLASSsumR \ 1
  if CLASSsumR_H > CLASSsumR then
    CLASSsumR_H = CLASSsumR_H -1
  end if
  CLASSsumR_M = CLASSsumR - CLASSsumR_H
  IF NOT CLASSsumR_M=0 THEN
    CLASSsumR_M = CLASSsumR_M * 60
    CLASSsumR_M = CLASSsumR_M \1
  END IF
END IF

MYsumR = MYsumR * 10
CLASSsumR = CLASSsumR * 10
INSTsumR = INSTsumR * 10
%>
    <tr>
        <td width="100%" colspan="3" height="14">
        </td>
    </tr>
    <tr>
        <td width="13%" rowspan="3" height="40">
            <b>Research</b></td>
        <td width="14%" valign="top" align="left" height="14">
            My time uses</td>
        <td width="73%" height="14">
            "
height="7"> (<%=MYsumR_H%>h <%=MYsumR_M%>m)</td>
        </tr>
    <tr>
        <td width="14%" valign="top" align="left" height="14">
            Class average</td>
        <td width="73%" height="14">

```

```

                "
height="7"> (<%=CLASSsumR_H%>h <%=CLASSsumR_M%>m)</td>
            </tr>
            <tr>
                <td width="14%" valign="top" align="left" height="12">
                    Expected</td>
                <td width="73%" height="12">
                    "
height="7"> (<%=INSTsumR_H%>h)</td>
            </tr>
            <tr>
                <td width="100%" colspan="3" height="14" style="border-bottom-style:
solid; border-bottom-width: 1">
                    &nbsp;  </td>
            </tr>

<%
IF NOT MYsumA=0 THEN
MYsumA_H = MYsumA \ 1
if MYsumA_H > MYsumA then
    MYsumA_H = MYsumA_H -1
end if
MYsumA_M = MYsumA - MYsumA_H
IF NOT MYsumA_M=0 THEN
    MYsumA_M = MYsumA_M * 60
    MYsumA_M = MYsumA_M \1
END IF
END IF

IF NOT CLASSsumA=0 THEN
CLASSsumA_H = CLASSsumA \ 1
if CLASSsumA_H > CLASSsumA then
    CLASSsumA_H = CLASSsumA_H -1
end if
CLASSsumA_M = CLASSsumA - CLASSsumA_H
IF NOT CLASSsumA_M=0 THEN
    CLASSsumA_M = CLASSsumA_M * 60
    CLASSsumA_M = CLASSsumA_M \1
END IF
END IF

MYsumA = MYsumA * 10
CLASSsumA = CLASSsumA * 10
INSTsumA = INSTsumA * 10
%>
            <tr>
                <td width="100%" colspan="3" height="14">
                </td>
            </tr>

```

```

<tr>
  <td width="13%" rowspan="3" height="40">
    <b>Analysis</b></td>
  <td width="14%" valign="top" align="left" height="14">
    My time uses</td>
  <td width="73%" height="14">
    "
height="7"> (<%=MYsumA_H%>h <%=MYsumA_M%>m)</td>
</tr>
<tr>
  <td width="14%" valign="top" align="left" height="14">
    Class average</td>
  <td width="73%" height="14">
    "
height="7"> (<%=CLASSsumA_H%>h <%=CLASSsumA_M%>m)</td>
</tr>
<tr>
  <td width="14%" valign="top" align="left" height="12">
    Expected</td>
  <td width="73%" height="12">
    "
height="7"> (<%=INSTsumA_H%>h)</td>
</tr>
<tr>
  <td width="100%" colspan="3" height="14" style="border-bottom-style:
solid; border-bottom-width: 1">
    &nbsp;&nbsp;&nbsp;</td>
</tr>

```

```

<%
IF NOT MYsumS=0 THEN
  MYsumS_H = MYsumS \ 1
  if MYsumS_H > MYsumS then
    MYsumS_H = MYsumS_H - 1
  end if
  MYsumS_M = MYsumS - MYsumS_H
  IF NOT MYsumS_M=0 THEN
    MYsumS_M = MYsumS_M * 60
    MYsumS_M = MYsumS_M \ 1
  END IF
END IF

IF NOT CLASSsumS=0 THEN
  CLASSsumS_H = CLASSsumS \ 1
  if CLASSsumS_H > CLASSsumS then
    CLASSsumS_H = CLASSsumS_H - 1
  end if
  CLASSsumS_M = CLASSsumS - CLASSsumS_H
  IF NOT CLASSsumS_M=0 THEN

```

```

        CLASSsumS_M = CLASSsumS_M * 60
        CLASSsumS_M = CLASSsumS_M \ 1
    END IF
END IF

MYsumS = MYsumS * 10
CLASSsumS = CLASSsumS * 10
INSTsumS = INSTsumS * 10
%>
<tr>
    <td width="100%" colspan="3" height="14">
    </td>
</tr>
<tr>
    <td width="13%" rowspan="3" height="40">
        <b>Synthesis</b></td>
    <td width="14%" valign="top" align="left" height="14">
        My time uses</td>
    <td width="73%" height="14">
        "
height="7"> (<%=MYsumS_H%>h <%=MYsumS_M%>m)</td>
    </tr>
    <tr>
        <td width="14%" valign="top" align="left" height="14">
            Class average</td>
        <td width="73%" height="14">
            "
height="7"> (<%=CLASSsumS_H%>h <%=CLASSsumS_M%>m)</td>
    </tr>
    <tr>
        <td width="14%" valign="top" align="left" height="12">
            Expected</td>
        <td width="73%" height="12">
            "
height="7"> (<%=INSTsumS_H%>h)</td>
    </tr>
</tr>
<tr>
    <td width="100%" colspan="3" height="14" style="border-bottom-style:
solid; border-bottom-width: 1">
        &nbsp;&nbsp;&nbsp;</td>
</tr>
<%
IF NOT MYsumE=0 THEN
MYsumE_H = MYsumE \ 1
if MYsumE_H > MYsumE then
    MYsumE_H = MYsumE_H - 1
end if
MYsumE_M = MYsumE - MYsumE_H
IF NOT MYsumE_M=0 THEN
    MYsumE_M = MYsumE_M * 60

```



```

        MYsumE_M = MYsumE_M \ 1
    END IF
END IF

IF NOT CLASSsumE=0 THEN
    CLASSsumE_H = CLASSsumE \ 1
    if CLASSsumE_H > CLASSsumE then
        CLASSsumE_H = CLASSsumE_H - 1
    end if
    CLASSsumE_M = CLASSsumE - CLASSsumE_H
    IF NOT CLASSsumE_M=0 THEN
        CLASSsumE_M = CLASSsumE_M * 60
        CLASSsumE_M = CLASSsumE_M \ 1
    END IF
END IF

MYsumE = MYsumE * 10
CLASSsumE = CLASSsumE * 10
INSTsumE = INSTsumE * 10
%>
<tr>
    <td width="100%" colspan="3" height="14">
    </td>
</tr>
<tr>
    <td width="13%" rowspan="3" height="40">
        <b>Evaluation</b></td>
    <td width="14%" valign="top" align="left" height="14">
        My time uses</td>
    <td width="73%" height="14">
        "
height="7"> (<%=MYsumE_H%>h <%=MYsumE_M%>m)</td>
    </tr>
<tr>
    <td width="14%" valign="top" align="left" height="14">
        Class average</td>
    <td width="73%" height="14">
        "
height="7"> (<%=CLASSsumE_H%>h <%=CLASSsumE_M%>m)</td>
    </tr>
<tr>
    <td width="14%" valign="top" align="left" height="12">
        Expected</td>
    <td width="73%" height="12">
        "
height="7"> (<%=INSTsumE_H%>h)</td>
    </tr>
<tr>
    <td width="100%" colspan="3" height="14" style="border-bottom-style:
solid; border-bottom-width: 1">
        &nbsp;</td>

```

```

</tr>
<%
IF NOT MYsumD=0 THEN
  MYsumD_H = MYsumD \ 1
  if MYsumD_H > MYsumD then
    MYsumD_H = MYsumD_H - 1
  end if
  MYsumD_M = MYsumD - MYsumD_H
  IF NOT MYsumD_M=0 THEN
    MYsumD_M = MYsumD_M * 60
    MYsumD_M = MYsumD_M \ 1
  END IF
END IF

IF NOT CLASSsumD=0 THEN
  CLASSsumD_H = CLASSsumD \ 1
  if CLASSsumD_H > CLASSsumD then
    CLASSsumD_H = CLASSsumD_H - 1
  end if
  CLASSsumD_M = CLASSsumD - CLASSsumD_H
  IF NOT CLASSsumD_M=0 THEN
    CLASSsumD_M = CLASSsumD_M * 60
    CLASSsumD_M = CLASSsumD_M \ 1
  END IF
END IF

MYsumD = MYsumD * 10
CLASSsumD = CLASSsumD * 10
INSTsumD = INSTsumD * 10
%>
<tr>
  <td width="100%" colspan="3" height="14">
</td>
</tr>
<tr>
  <td width="13%" rowspan="3" height="40">
    <b>Documentation</b></td>
  <td width="14%" valign="top" align="left" height="14">
    My time uses</td>
  <td width="73%" height="14">
    "
height="7"> (<%=MYsumD_H%>h <%=MYsumD_M%>m)</td>
</tr>
<tr>
  <td width="14%" valign="top" align="left" height="14">
    Class average</td>
  <td width="73%" height="14">
    "
height="7"> (<%=CLASSsumD_H%>h <%=CLASSsumD_M%>m)</td>
</tr>
<tr>

```

```

        <td width="14%" valign="top" align="left" height="12">
            Expected</td>
        <td width="73%" height="12">
            "
height="7"> (<%=INSTsumD_H%>h)</td>
    </tr>
    <tr>
        <td width="100%" colspan="3" height="14" style="border-bottom-style:
solid; border-bottom-width: 1">
            &nbsp;   </td>
    </tr>
    <%
IF NOT MYsumP=0 THEN
    MYsumP_H = MYsumP \ 1
    if MYsumP_H > MYsumP then
        MYsumP_H = MYsumP_H -1
    end if
    MYsumP_M = MYsumP - MYsumP_H
    IF NOT MYsumP_M=0 THEN
        MYsumP_M = MYsumP_M * 60
        MYsumP_M = MYsumP_M \1
    END IF
END IF

IF NOT CLASSsumP=0 THEN
    CLASSsumP_H = CLASSsumP \ 1
    if CLASSsumP_H > CLASSsumP then
        CLASSsumP_H = CLASSsumP_H -1
    end if
    CLASSsumP_M = CLASSsumP - CLASSsumP_H
    IF NOT CLASSsumP_M=0 THEN
        CLASSsumP_M = CLASSsumP_M * 60
        CLASSsumP_M = CLASSsumP_M \1
    END IF
END IF

MYsumP = MYsumP * 10
CLASSsumP = CLASSsumP * 10
INSTsumP = INSTsumP * 10
%>
    <tr>
        <td width="100%" colspan="3" height="14">
        </td>
    </tr>
    <tr>
        <td width="13%" rowspan="3" height="40">
            <b>Presentation</b></td>
        <td width="14%" valign="top" align="left" height="14">
            My time uses</td>
        <td width="73%" height="14">

```

```

                "
height="7"> (<%=MYsumP_H%>h <%=MYsumP_M%>m)</td>
            </tr>
            <tr>
                <td width="14%" valign="top" align="left" height="14">
                    Class average</td>
                <td width="73%" height="14">
                    "
height="7"> (<%=CLASSsumP_H%>h <%=CLASSsumP_M%>m)</td>
            </tr>
            <tr>
                <td width="14%" valign="top" align="left" height="12">
                    Expected</td>
                <td width="73%" height="12">
                    "
height="7"> (<%=INSTsumP_H%>h)</td>
            </tr>
            <tr>
                <td width="100%" colspan="3" height="14" style="border-bottom-style:
solid; border-bottom-width: 1">
                    &nbsp;  </td>
            </tr>
            <tr>
                <td width="100%" colspan="3" height="14">
                    </td>
            </tr>
            <tr>
                <td width="100%" colspan="3" height="1">
                    </td>
            </tr>
        </table>
    </td>
</tr>
</table>
</center></div>

</body>

</html>
<!--#include file="include/db_close.inc"-->

```

[OUTPUT_EXE.ASP]

```

<!--#include file="include/db_open.inc"-->
<%
    mm=request("mm")
    dd=request("dd")
    yy=request("yy")
    frmSubmit=request("frmSubmit")
    ddate = mm & "/" & dd & "/" & yy
    UID = request("UID")

```

```

activity1=request("activity1")
activity2=request("activity2")
activity3=request("activity3")
activity4=request("activity4")
activity5=request("activity5")
activity6=request("activity6")
activity7=request("activity7")
activity8=request("activity8")

```

```

hour1=request("hour1")
hour2=request("hour2")
hour3=request("hour3")
hour4=request("hour4")
hour5=request("hour5")
hour6=request("hour6")
hour7=request("hour7")
hour8=request("hour8")

```

```

min1=request("min1")
min2=request("min2")
min3=request("min3")
min4=request("min4")
min5=request("min5")
min6=request("min6")
min7=request("min7")
min8=request("min8")

```

```

min1 = min1 / 60
min2 = min2 / 60
min3 = min3 / 60
min4 = min4 / 60
min5 = min5 / 60
min6 = min6 / 60
min7 = min7 / 60
min8 = min8 / 60

```

```

ttime1 = hour1 + min1
ttime2 = hour2 + min2
ttime3 = hour3 + min3
ttime4 = hour4 + min4
ttime5 = hour5 + min5
ttime6 = hour6 + min6
ttime7 = hour7 + min7
ttime8 = hour8 + min8

```

```

if not activity1="0" or activity1="11" or activity1="51" or activity1="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, time, userID) VALUES ("
  mySQL = mySQL & now & ", " & ddate & ", " & activity1 & ", " & ttime1 & ", " & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

```

```

if not activity2="0" or activity2="11" or activity2="51" or activity2="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity2 & "," & ttime2 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

if not activity3="0" or activity3="11" or activity3="51" or activity3="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity3 & "," & ttime3 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

if not activity4="0" or activity4="11" or activity4="51" or activity4="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity4 & "," & ttime4 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

if not activity5="0" or activity5="11" or activity5="51" or activity5="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity5 & "," & ttime5 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

if not activity6="0" or activity6="11" or activity6="51" or activity6="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity6 & "," & ttime6 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

if not activity7="0" or activity7="11" or activity7="51" or activity7="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity7 & "," & ttime7 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

if not activity8="0" or activity8="11" or activity8="51" or activity8="101" then
  mySQL = "INSERT INTO timesheet (addDate, ddate, activityID, ttime, userID) VALUES ("
  mySQL = mySQL & now & "," & ddate & "," & activity8 & "," & ttime8 & "," & UID & ")"
  set reTemp=Conn.execute(mySQL)
end if

'response.write (frmSubmit)

mySQL="SELECT * FROM user WHERE userID=" & UID & ""
set rsUser=Conn.execute(mySQL)

'response.write(frmSubmit)
if frmSubmit = "SUBMIT & MORE" then
  %>
  <!--#include file="include/db_close.inc"-->

```

```
<%  
response.redirect "input.asp?UID=" & UID  
else  
if rsUser("userLevel") > 200 then  
  %>  
  <!--#include file="include/db_close.inc"-->  
  <%  
  response.redirect "output.asp?UID=" & UID  
else  
  %>  
  <!--#include file="include/db_close.inc"-->  
  <%  
  response.redirect "index.htm"  
end if  
end if  
%>
```

VITA

Name: Young-No Kim
Permanent Address: 609-9 YukSam-dong KangNam-gu Seoul Korea 135-081
Education: B.Eng. in Architecture, HongIk-University, Seoul Korea