

Graduation Checklist System

by

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CERTIFICATION OF APPROVAL

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Approved by,

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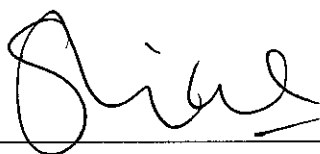
UNIVERSITI TEKNOLOGI PETRONAS

TRONOH, PERAK

December 2007

CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.



NURULIZZATULSHIMA LOKMAN

ABSTRACT

Graduation Checklist System (GCS) provides a computerize system to handle numerous amount of graduation checklist action used by students. GCS is more likely to be implemented because of web based popularity and good user's acceptance. This application has the unique ability used to update and maintain web applications without distributing and installing software on potentially thousands of client computers. That's why; web application is well accepted among the networking users. Besides that, the web interface places very few limits on client functionality. The methodology used to developing the systems based from the waterfall development model that consists of planning, knowledge acquisition and analysis, design, development and testing, and last but not least the system itself . From the studies that have been done, the author found that Web developers often use client-side scripting to add functionality, especially to create an interactive experience that does not require page reloading (which many users find disruptive). This research may also cover multiple programming languages such as JavaScript, PHP, and ASP that can be used in developing the web based system besides the study on database connection with the web application.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF STUDY

This system is mainly to build such a system arose from the need for innovative and automated graduation audit tools. The existing system had become cumbersome and outdated because ACS used manual approach where students have to fill in the information in certain form to check whether they meet the graduating status or not.

A Graduation Checklist is the process of evaluating and auditing course history to insure that students have met all the requirements of a degree. An audit is generated by submitting an application for graduation. The audit process will compare students completed courses to the program requirements indicated on student's graduation application. Requirements may include: general education courses, core curriculum, elective credits and subject results.

1.2 PROBLEM STATEMENT

1.2.1 Problem Identification

The idea to develop this project arises from the trouble faced by the ACS at every new semester where there will be difficulties for them to gather all expected graduates course checklist which is now normally used manual systems. Students usually have to download the checklist form from the UTP website and hand in personally to ACS staff during Registry Briefing. The ACS unit will receive hundreds of completed course checklist every semester. Due to this problem, they might forget or misplaced the form. This project will reduce the paper works and makes the system more efficient for the users as they could access the system from everywhere. It will help the users to know their graduating status by providing unlimited access places.

With this system being implemented later on, we can save so much time compared to conventional approach where we usually used to manually complete the checklist form.

1.2.2 Significance of Project

This project is an addition to the current graduation checklist method which currently manually done. Through this system, the university students will be able to perform the checklist online specifically. The usage of this technology eliminates the need for traveling and one can check their course completion and do the checklist activity anywhere and anytime within the comfort of their homes or hostels. Furthermore, it helps all university students to get full information regarding graduation process by fill in all necessary forms that need to be submitted to ensure the eligibility and fulfillment of requirement before yearly convocation.

1.3 OBJECTIVES AND SCOPE OF STUDY

1.3.1 The relevancy of The Project

The development of Graduation Checklist System (GCS) comprises of some objectives. These objectives are:

- To develop a computerize system to handle numerous amount of graduation checklist action used by ACS and students.
- To provide student with a complete course completion.
- To help student by checking their pending/not taken yet list subject.
- To verify the student status upon graduation.

1.3.2 Scope of Study

The scope of study of this project is focuses on graduation checklist. By the end of the development process, this system is expected to have following characteristics:

- Process the entire data to ensure expected graduate met the criteria of requirement before graduation.
- Afford incessantly operating hours
- Comprise the reliability of database to handle huge amount of data

1.3.3 Feasibility of the Project Within the Scope and Time Frame

Initial feasibility of the project can be evaluated through economic, technical and schedule factors.

- **Economic Feasibility**

This application supports feasibility in terms of economic by increasing effectiveness and productivity of existing graduation checklist method. By implement this systems, the graduation checklist process will be more efficient and lead to enhancing of its process.

- **Technical Feasibility**

This application can be implemented practically using available technology and expertise. The skills and information to develop this application is available on the Internet and other sources of information.

- **Schedule Feasibility**

The author has schedule to the time given according to the suggested milestone that can be viewed from the Final Year Project Guidelines.

CHAPTER 2

LITERATURE REVIEW AND THEORY

2.1 INTRODUCTION TO WEB BASED APPLICATION

The World Wide Web (known as "WWW" or "Web") is growing at a phenomenal rate. The current Web is largely based on file system technology, which can deal well with the resources that are primarily static. However, with the unprecedented growth of resources, it is no longer adequate to rely on this conventional file technology for organizing, storing and accessing large amount of information on the Web. Thus, many large Web sites today are turning to database technology to keep track of the increasing amount of data. Database technology has played a critical role in the information management field during the past years. It is believed that the integration of the Web and database technology will bring many opportunities for creating advanced information management applications (Feng and Lu 1998).

2.2 TECHNOLOGY IN HIGHER EDUCATION ACADEMIC ADVISEMENT

In recent years, the administration of academic advisement has undergone radical transformation as technological developments have altered the processes by which information is collected, stored, and accessed the systems by which communication is enabled and the structures by which transactions are conducted. Each technological innovation has challenged advising administrators to contemplate and implement alternative forms of services to students and the many other groups supported by colleges and universities. The changing landscape created by this technological revolution has provoked new ways of thinking about the delivery of services typically found in a college's advising services portfolio. The challenge to manage and support students has taken on new meaning "in light of relational and networked databases, prolific and assertive e-mails, Internet technology and other World Wide Web-based transactions, [as well as] information dissemination and on-line query servers" (Moneta, 1997). The intersection of technology with shifting missions for student recruitment and retention professionals requires significant changes in the management of academic advisement.

Senior enrollment services officers can no longer rely on traditional forms of advisement, service delivery, or retention. Historical practices within advising services have little place in a technologically driven, customer service-oriented environment in which face-to-face services may be replaced with computer screens and voice mail. The contemporary delivery of academic advisement will be increasingly in the form of distant and virtual contacts, less restrained by office hours and staff availability. Technological and consumer-influenced changes call for modification in both the forms and functions of academic advisement delivery. According to Moneta (1997), these shifts “further necessitate changes in management principles and methodologies that guide student affairs, and further require that student affairs administrators understand the factors underlying these challenges as well as the implications of applying technological developments to students affairs and its functions”.

Technological changes are both the result of, and stimulus for, alternative management practices. Several factors will determine the role that technology will play in the management of advising services. For example, the submission of a paper transcript to a college or university will soon be a relic of past practices, as online applications and electronic submission processes become the norm. Scanning devices will prescreen and categorize the applications, according to predefined institutional criteria. In the near future, the first time a human being looks at an academic degree audit may be after an initial batch of “red flags” have been identified. Likewise, electronic submission of college transcripts will enable direct entry of student information into the campus records system, without need for data-entry personnel. In theory, the outcome will be fewer staff, quicker response, lower cost, diminished errors, and instant access to academic information.

Throughout advising services, as with many other administrative units on postsecondary campuses, managers are expected to do more with less, and technological solutions have emerged as the perceived answer for concerns about productivity and cost. However, the benefits of replacing advising and advising-support personnel with technology to enhance

productivity and reduce overall costs have not yet materialized. In a human-resource environment like academic advisement, the qualities associated with human assistance make it difficult to determine gains and losses when technological applications serve in lieu of personal contact.

Campuses are also engaged in an accelerated adaptation of various technologies, with particular focus on installation and use of networked and Internet-based services, state-of-the-art telephone applications, and in-house video broadcast capability. World Wide Web access methods now allow for user-directed applications and interventions. Students, for example, can now review their transcripts, degree audits, and billing status, all from the comfort of their rooms, as students do at the University at Buffalo. Advising services staff are faced with these evolving challenges. Often, these situations are prompted by institution-wide initiatives that leave advising units “little choice to adapt, regardless of cost, competency, and convenience” (Moneta, 1997). In fact, conversion to uses of technology will inevitably increase efficiency and enhance user satisfaction, but the challenge will be to coordinate the pace and scope of technology in the human resources that compose the core of advising services.

Technological innovations have created an abundance of opportunities for new practices and enhanced services “frequently characterized as 'real-time,' 'student-centered,' and 'any time, any place’” (Moneta, 1997). For example, instead of seeking extended hours for academic advising, students can submit e-mail inquiries that are answered by peer, paraprofessional, or professional advisers, depending on the nature of the question and the level of expertise required. For example, the electronic triage system was installed at the University at Buffalo (UB) with the creation of the Student Response Center. The UB Student Response Center which comprises the customer service staffs from the former offices of Academic Advisement, Records and Registration, Student Financial Aid, Student Accounts, and Undergraduate Admissions to ensure that staffs are deployed where needed.

Likewise, current student-institution administrative transactions require innovative approaches and alternatives. Today's students are twenty-four-hour, seven-day-a-week customers who reject the disadvantages of traditional nine-to-five administrative practices. Technology provides extended access to information, interaction, and client-centered applications. Electronically, the campus has become a twenty-four-hour operation. Students, encumbered by classes, work, research, and other daytime obligations, are increasingly seeking access to academic support services at times most convenient to them. For undergraduates, in particular, the most convenient time is frequently well after midnight. At nonresidential institutions, such as Youngstown State University (YSU) in Ohio, students seek remote access from home and work. They have become increasingly resistant to on-campus visits for seemingly trivial interaction with advising personnel and clerical service providers. Students have come to expect, and prefer, that inconvenient trips to the downtown YSU campus for student orientation, academic advisement, course registration, bill paying, and even library services be reduced.

The technological environments on many campuses are evolving rapidly and comprise numerous elements:

- information dissemination,
- transactional interaction,
- communications applications, and
- educational technologies.

Technology-based information dissemination occurs through an ever-growing Web environment, CD-ROMs, automated phone response systems, and campus-managed listservs. On a networked campus, faculty and staff can enjoy instant and up-to-date access to student records. Fully integrated student information systems enable advisers to access admission profiles, academic records, demographic information, housing choices, and course selections stored in a single, universally accessible database, secured by password and authorization limits (Moneta, 1997).

Transactional interaction, defined by Moneta (1997) as “the conduct of a business activity as opposed to the simple transmission of information” has increased significantly with the advent of the Internet and the World Wide Web. Web pages can provide extraordinary access to campus online services and can eliminate the need for costly, time-sensitive paper-based forms and applications. For example, students from two very different institutions, the University at Buffalo (New York State's premier public center for graduate and professional education, as well as the state's largest and most comprehensive public university) and Youngstown State University (an open-access institution in northern Ohio that offers a broad range of certificate, associate, baccalaureate, and graduate programs) can take the following actions from their residence halls or off campus:

- update personal institutional data,
- change intended majors,
- generate alternative major degree-audit reports,
- request transcripts,
- complete student account transactions, and
- look up institutional e-mail addresses.

Every transactional activity has become a candidate for electronic interaction. As campuses are increasingly wired for high-speed Internet access, technology supporters identify more and more applications for conversion from office-centered services to technologically based student-centered services. At the University at Buffalo, transactions by phone remain popular and continue as a primary or backup process for advising questions, course registration, and grade inquiry. Likewise, at UB, the telephone remains a primary form of communication for students and academic and administrative departments, with auto-attendant systems replacing receptionists and phone operators.

No form of communication applications has had more impact on the college campus than e-mail. At many institutions, including the University at Buffalo, e-mail competes with the telephone as the first choice for person-to-person dialogue, and the volume of e-mail traffic has forced an increase in the institutional computing infrastructure. Electronic

access to anyone with an e-mail address coupled with the mass communications capacities of distribution lists and electronic “carbon copies” have altered work patterns and protocols. The ongoing implications of e-mail communication within academic advisement are varied and complex.

Educational technology has advanced well beyond the days of the overhead projector and cassette player. Classrooms are being augmented with learning centers that feature full Internet access, computer workstations at every desk, “smart boards” that print and download instructor notes, and the latest in audio, video, and teleconferencing capacities. Faculty are creating class home pages with links to information, the course syllabus, class notes, homework assignments, and other course-supporting elements. The boundaries of the classroom disappear when discussions continue outside of class, enabled by course listservs and online discussion groups. With a bit of imagination, courseware can provide an endless number of applications for advising services, as evidenced here at the University at Buffalo (Anderson, 2002). These days, technological applications developed for one venue frequently migrate to another. For example, information dissemination applications become public relations instruments serving a variety of administrative functions, including communication, advisement, and retention (Moneta, 1997). These and many other technological advances are fundamentally changing the way colleges and universities operate. The implications for the management and delivery of advising services are significant, as new paradigms are created with technology serving as an ever-important cornerstone.

CHAPTER 3

METHODOLOGY/PROJECT WORK

3.0 METHODOLOGY

3.1 Procedure Identification

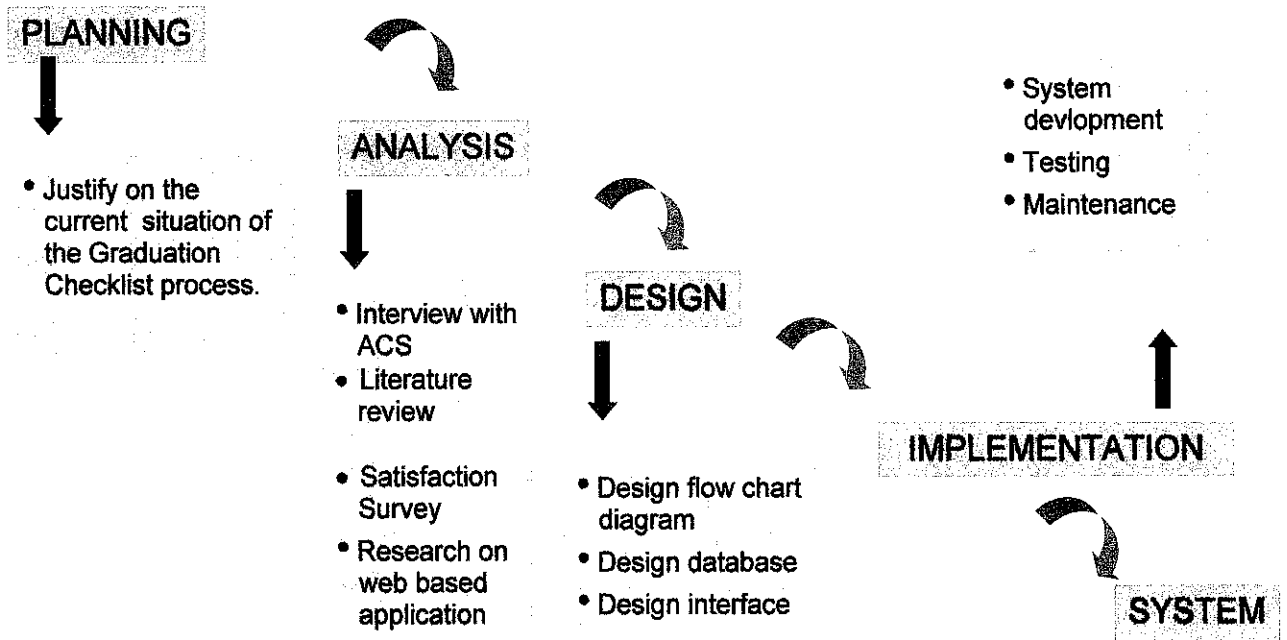


Figure 1: Waterfall Development-Based Model

The methodology that has been used in this project is the waterfall development-based where the process model is discrete development stages that are planning, analysis, design, implementation and testing. In principle, one stage must be complete before progress to the next stage is possible. In applying this development, there is iteration between stages. Further explanation of each stage to be related with this final year project can be further explained below:

- Planning and analysis

The application services, constraints and goals are established by doing research. Some of the methods research that has been done is:

- justify on the current situation of the Graduation Checklist process
- searching for relevant literature review to be included as the supporting information
- interview with ACS representative, Ms. Suhaidah to collect data and information regarding the process of graduation checklist
- satisfaction survey conducted to collect sufficient information from the users regarding the usage of current graduation checklist procedure (refer to chapter 4.1)

- System design

The systems design process partitions the requirements to the real application. In this part, the author established overall system architecture. The system design involved identifying and describing the fundamental software system abstractions and their relationship. The system then developed according to stages and units. First, flow chart diagram was developed and next the author designs the database and interface of the system by using defined storyboards.

- Implementation and testing

For this stage, the author implemented the development of the system. As defined in the later part, the system design is transformed into lines of programming code. The development of this system required a web server and database server to be installed and configured. For this stage, it consumed a longer period as much of the time has been allocated for developing the GCS. All the functions that managed to be completed will be tested with random data.

Overall, by applying this methodology, it contributed to several advantages to the author and the application proposed. The advantages are:

- Its ability to identify system requirements before programming begins: As this project has its time constraints, requirements involved managed to be defined properly so that there were only minor changes involved at the end.
- It minimized requirement changes as the project proceeds; with this advantage, the author was able to complete the entire task according to the time frame.

3.2 TOOLS/EQUIPMENT REQUIRED

These were the tools used throughout the project:

NO	ELEMENTS	TOOLS
1.	Website development	<ul style="list-style-type: none"> • Macromedia Dreamweaver MX • Adobe Photoshop • Apache Web Server • PHP • MySQL

Table 1: Tools and utilities

3.3 METHOD OF DATA GATHERING AND ANALYSIS

The purpose of the survey is to study on the relevancy of this project and the elicited information on the effectiveness of this GCS can possibly see or measure on how far the project is expected to meet its objectives and the proof to the problem statement defined. This survey also is to investigate user preference and requirement. It is an excellent way of obtaining either quantitative or qualitative data, since the user responses are written and can be tallied to illustrate user preferences. Questionnaires can only evaluate user's opinions about the relevancy of the GCS.

CHAPTER 4

RESULT AND DISCUSSION

4.1 REACTIONS TOWARDS THE IMPLEMENTATION GRADUATION CHECKLIST SYSTEM

The initial tendency this survey was conducted is to determine the benefits and drawbacks of the implementation of the system. The feedback from the respondent will help in determining level of satisfaction, problems and user preferences towards graduation processes. Those initially most favorable towards the idea argued that they would benefit from it. The target user group of this survey is UTP's students since the implementation of GCS is designed to be used in UTP where the student is the majority of the UTP community. Appendix 1 is the sample of the survey questions distributed to 20 reliable final year students. Figure 2 shows the result of the survey.

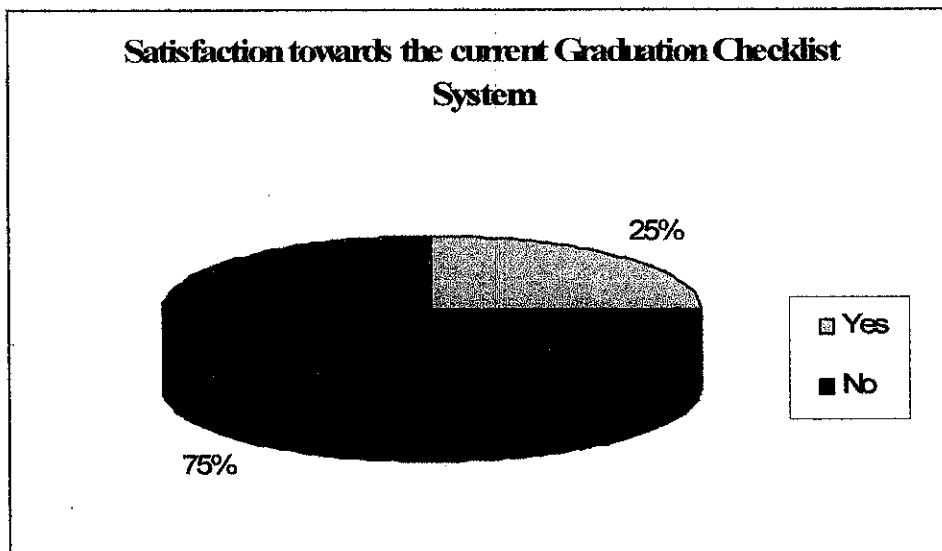


Figure 2: The survey result of student's satisfaction towards the current System

Figure 2 shows the percentage of student's satisfaction towards the current Graduation Checklist System. Most students said that it is the opportunity for them to accomplish the

checklist without wasting a lot of work forces in performs it manually. This is because GCS could be accessed through online which will effectively reduce the paper works.

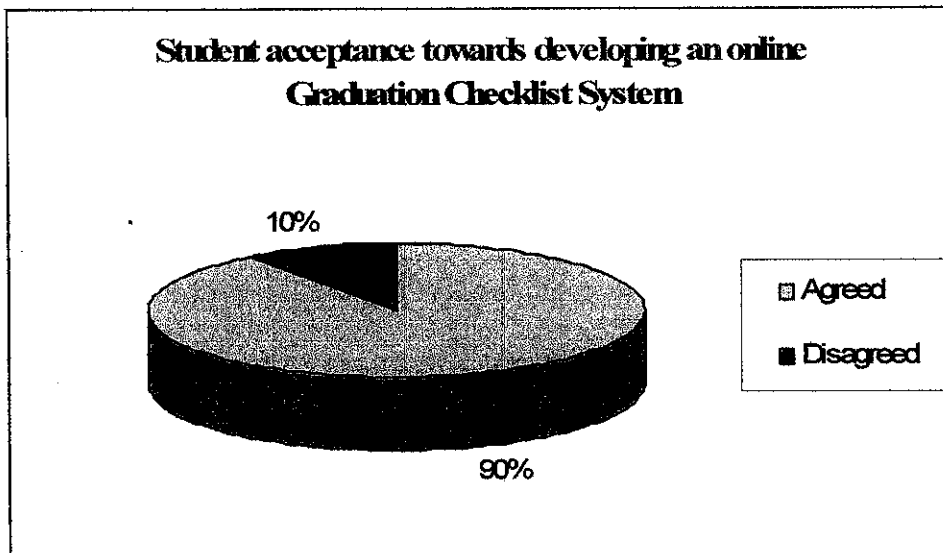


Figure 3: The survey result of users' acceptance towards the online graduation checklist systems

Based on Figure3, it shows that 90% of the total respondents think that and agreed that GCS will be useful if it is being implemented for them. They were very enthusiastic toward these implementations. Only a few, 10% from the total respondents think that it will be not useful to have the GCS. Based on the positive feedback it can be said that the creation of the GCS will fit the needs of university students and very much welcome.

4.1.1 Conclusion Derived from Questionnaires

After analyzing the survey data, the author found that the concept of implementing the Graduation Checklist System is well accepted by the users.

4.2 Apache HTTP Server

Apache supports a variety of features, many implemented as compiled modules which extend the core functionality. These can range from server-side programming language, support to authentication schemes. Some common language interfaces support mod_perl, mod_python, Tcl, and PHP. Popular authentication modules include mod_access, mod_auth, and mod_digest. A sample of other features include SSL and TLS support (mod_ssl), a proxy module, a useful URL rewriter (also known as rewrite engine implemented under mod_rewrite), custom log files (mod_log_config), and filtering support (mod_include and mod_ext_filter). Apache logs can be analyzed through a web browser using free scripts such as AWStats/W3Perl or Visitors.

Virtual hosting allows one Apache installation to serve many different actual websites. For example, one machine, with one Apache installation could simultaneously serve www.example.com, www.test.com , etc.

Apache features configurable error messages, DBMS-based authentication databases, and content negotiation. It is also supported by several graphical user interfaces (GUIs) which permit easier, more intuitive configuration of the server.

4.3 phpMyadmin

An administrator's tools of sort, phpMyAdmin is a PHP script meant for giving users the ability to interact with their MySQL databases. A 'raw' view of the data, tables and fields stored in the MySQL database is accessible through phpMyAdmin.

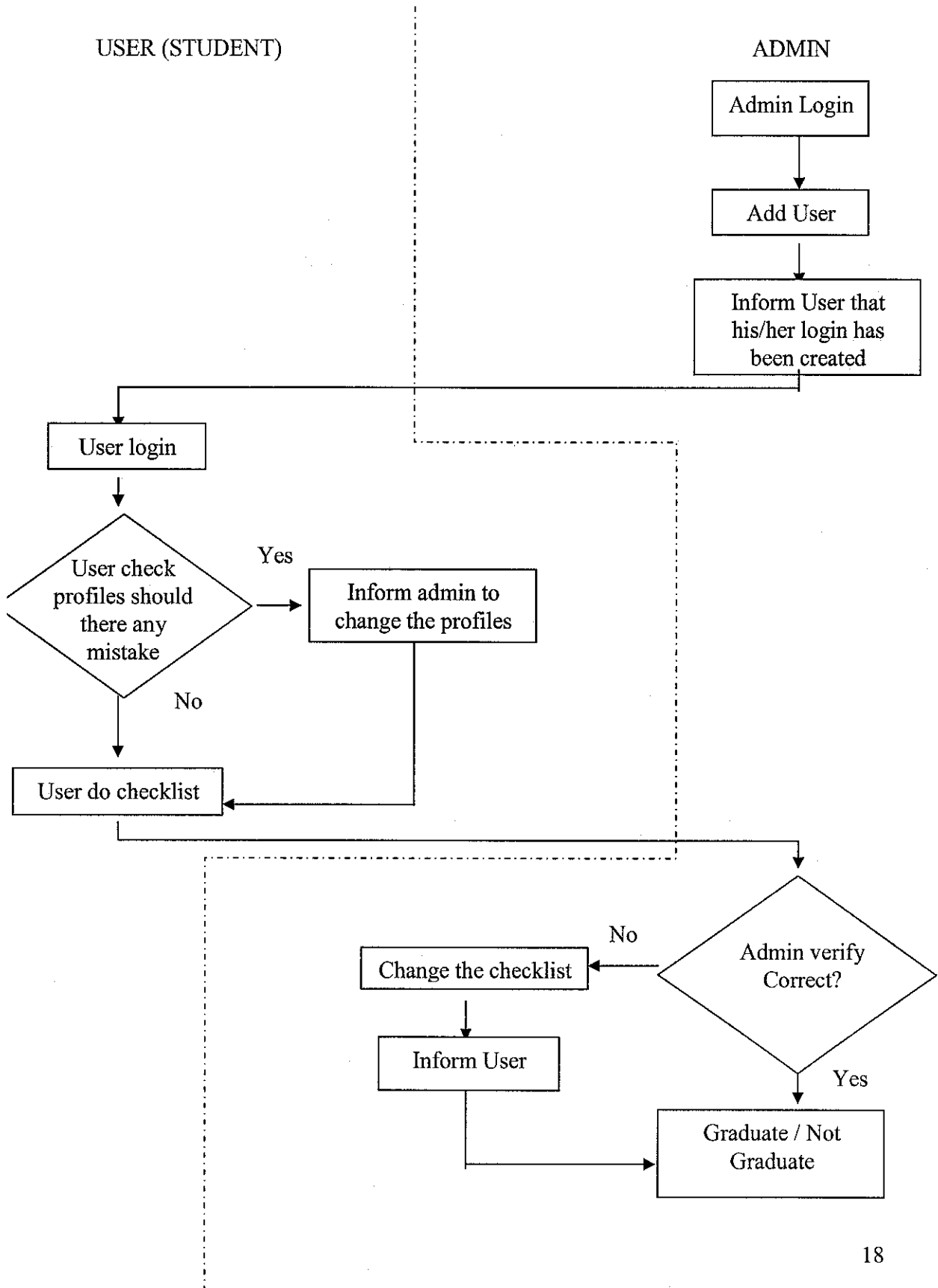
The phpMyAdmin program is handy for performing maintenance operations on tables, backing up information, editing things directly in the event that WordPress is not working.

Others phpMyAdmin capabilities:

- Create and drop databases
- Create, copy, drop, rename and alter tables
- Do table maintenance
- Delete, edit and add fields
- Execute any SQL-statement, even batch-queries
- My in MyISAM tables
- Using Query-by-example (QBE), create complex queries automatically connecting required tables
- Create PDF graphics of your Database layout
- Search globally in a database or a subset of it
- Transform stored data into any format using a set of predefined functions, like displaying BLOB-data as image or download-link
- Support InnoDB tables and foreign keys
- Support mysqli, the improved MySQL extension
- Communicate in 50 different languages

4.2 Application Structure

Figure 4 shows the Graduation Checklist System application structure:



This system consist two types of user which is the administrator and students. The administrator is the one who in charge of the overall system process where they assign the user ID to login and manage the information that has been submitted by user (student). While students need to have identification (ID) and password in order to access this systems and perform all the necessary tasks. Figure 4 shows that graduation checklist application structure in overall view. The administrator will create a profile for each expected graduate in order for them to access this system. After the user has been granted to access the system, user can now log in and verify the personal information (profiles) such as ID and course. Any correction can be made by informing the admin to changes the wrong information. Then user can proceed to do checklist and submit it. The admin will verify either the information submitted are correct or not. If it does not match the graduation criteria yet, the admin will inform user about their graduation status and list of pending subject. If user met all the criteria, the admin will send congratulation notification

4.5 SYSTEM DEVELOPMENT

4.5.1 System Flow

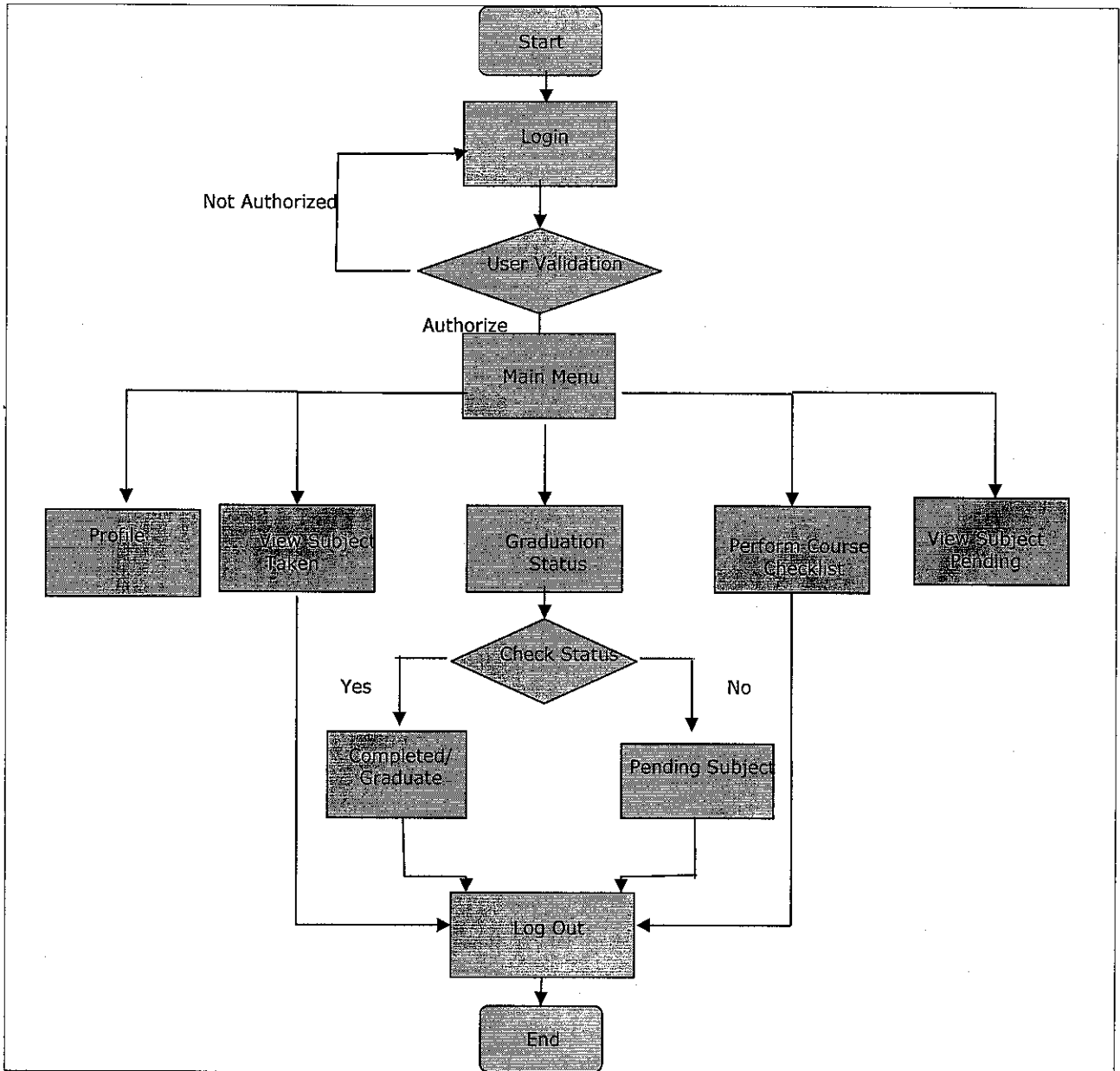


Figure 5: system flow

Figure 10 shows the system flow in Graduation Checklist System (GCS). The system will started with the log in page which only the validate user with correct password can connect into the system. After the validation process, the authorize user will be directed to the main page. In the main page, links to every other page for users navigate is provided on this page. The links consist of five menus which is view user profile, view subject taken, perform graduation checklist, view pending subject and view graduation status. The users can choose which page to be accessed. In the graduation status page, it will notify whether the students are graduated or not. If the students met the graduation criteria, the system will generate completed status while if the student does not fit the graduation requirement, the system will send the list of subject pending. At the end, the users need to log out from the system, in order to prevent any intruder to access the system afterward.

4.5.2 System Interface Design and Features

During the beginning of design phase, the interface of the website is being built. The first step was to build the story board in order to make sure all the functions are not left behind when the development of the system starts. The storyboards only illustrate not only the position and basic layout but also the link from one webpage to another webpage. After completed the designing of the layout, the HTML and the interface code using PHP control took place. Currently, the prototype of GCS is completed with the ability to update and retrieve data from the database.

- Login Page

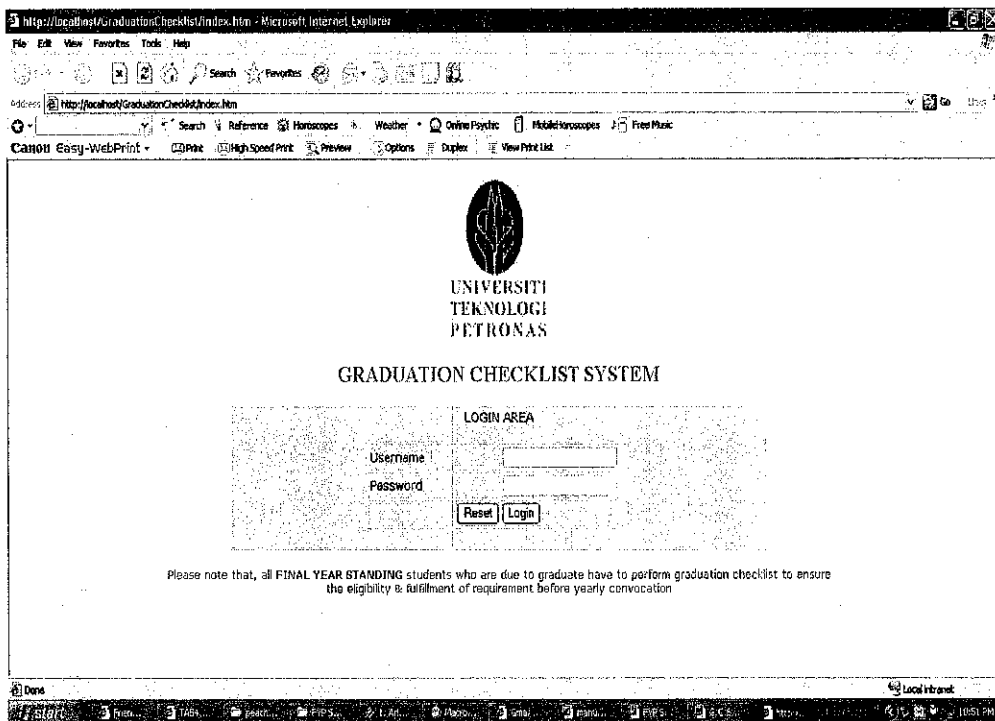


Figure 6: login page

In order to access the system, user has to login into the system using ID and password. This identification was provided by the administrator which has fully

authorization towards the system. User password also shall be unique for everyone and the student shall only login through his/her login user id only. Only authorized user with correct password is allowed to access the system.

- Main Page

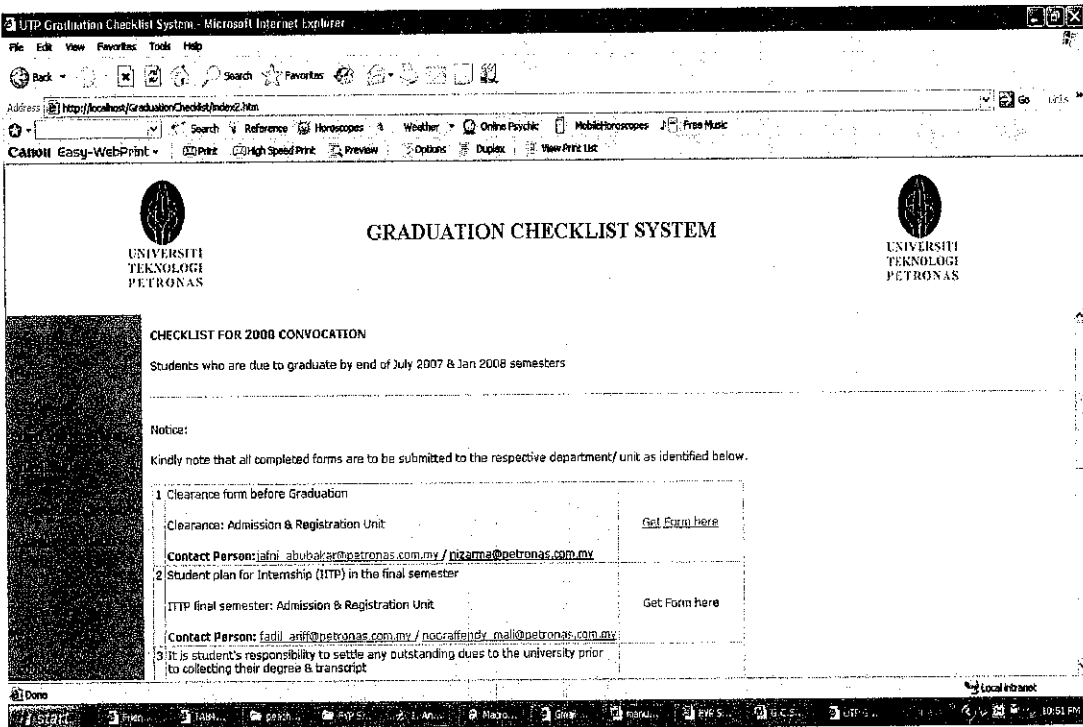


Figure 7: main page

After successfully login, all users will be directed to the main page. The links to every other page for users navigate is provided on this page. The users need to click to the intended page link and then system will automatically open the requested page. This page also provides information regarding graduation process. From here, users can download any necessary form that need to be submitted to ensure the eligibility and fulfillment of requirement before yearly convocation.

- Profile page

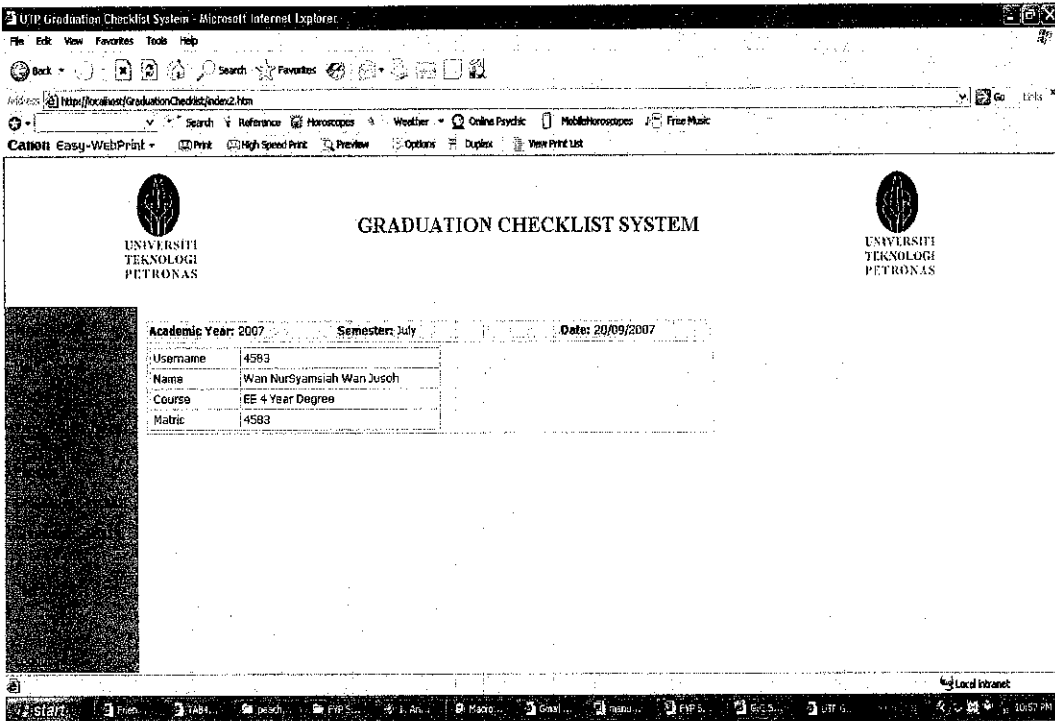


Figure 8: profile page

This page provides the user with their personal information. All necessary information provided were to ensure the validity of user personal information before continue doing the graduation checklist.

- Graduation checklist page

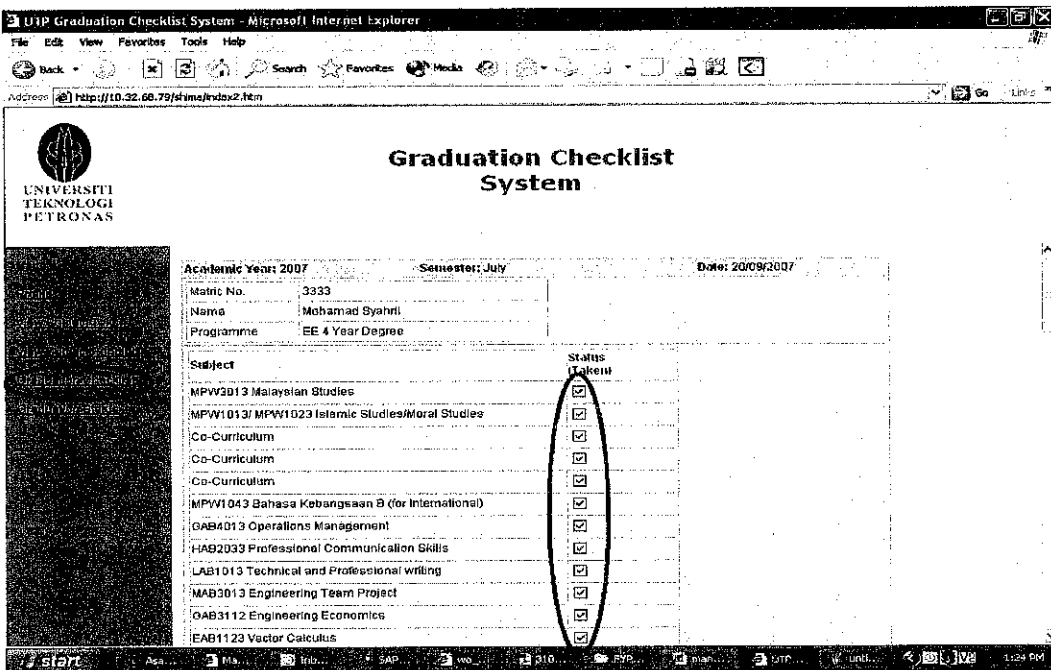


Figure 9: graduation checklist page

After checking the personal information, user can continue to do the checklist and submit the checklist. The checklist will be process and verify by the administrator in order to determine the user graduation status.

- Graduation status page

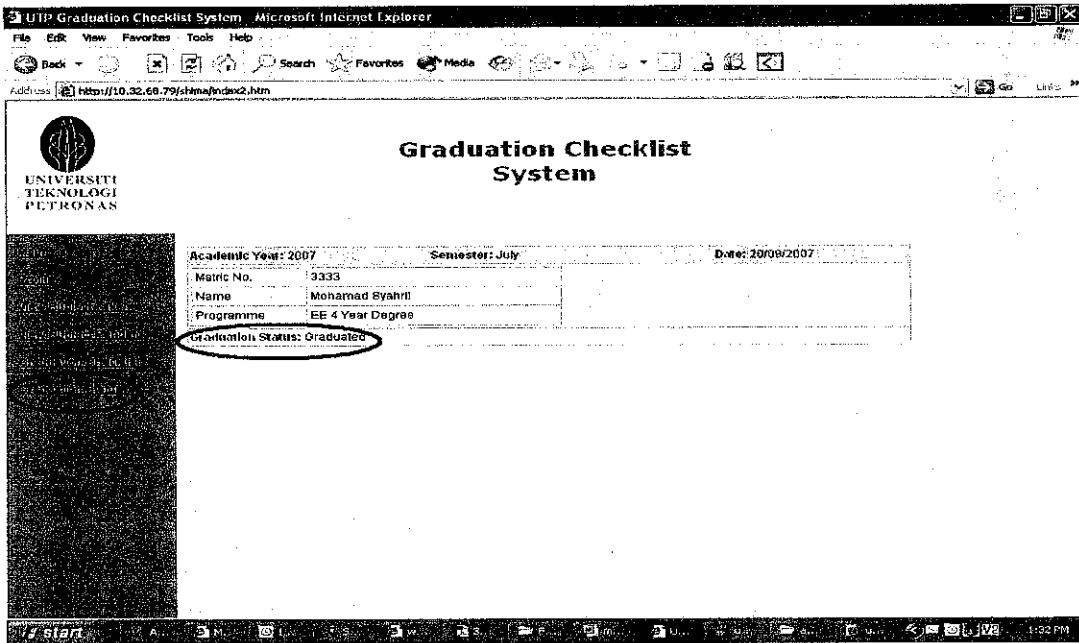


Figure 10: graduation status page

After the administrator had verified the graduation status, the user can now check the graduation status. If not graduated, then the system will display the pending and not-taken subject as reference to user. The graduation status was determined by the completed course taken.

- View subject taken

This page provides the user the detail information about subject taken. User can viewed all the list of subject that has been taken. This was to ensure that all the information is correct and the user can proceed to do the course checklist.

- View subject pending

All the information about the completed subject taken by the user will be compared to the graduation requirement to determine the compulsory pending subject. If the user graduation status not graduated, the system will display the pending and not-taken subject as a reference to user.

- User page

This page can be accessed only by the administrator. It provides three sub menus which are add user, view user and edit user. The administrator will create each of expected graduate GCS account. Then the user can log in to the system by the ID and password given and change it later for the security reason. The admin can also view each of the user account to ensure all necessary information is correct. In edit user section, after entering the user ID, the administrator will verified either the user graduated or not by checking all the completely subject taken are met to the graduation criteria. Then the admin will set the graduation status at the end of the page.

- Subject page

This page also can be accessed only by the administrator. It provides two sub menus which is view subject and edit subject for each course.

4.6 USER EVALUATION TESTING

In order to analyze the effectiveness of the proposed system among users, a survey was conducted. The purpose of conducting this survey is to study on the acceptance of users towards the new developed system. It is also to see or measure on how far the project meets its objectives.

4.6.1 Method of Data Gathering User and Analysis

In executing the survey, a total of 30 sheets of questionnaires were given to expected graduate to test and evaluate the GCS. The result of the survey will be discussed later in the reactions to the new developed website section.

4.6.2 Reactions to the new developed system

The sample of the survey questions can be viewed through Appendix 2. The results of the questionnaires are as follows:

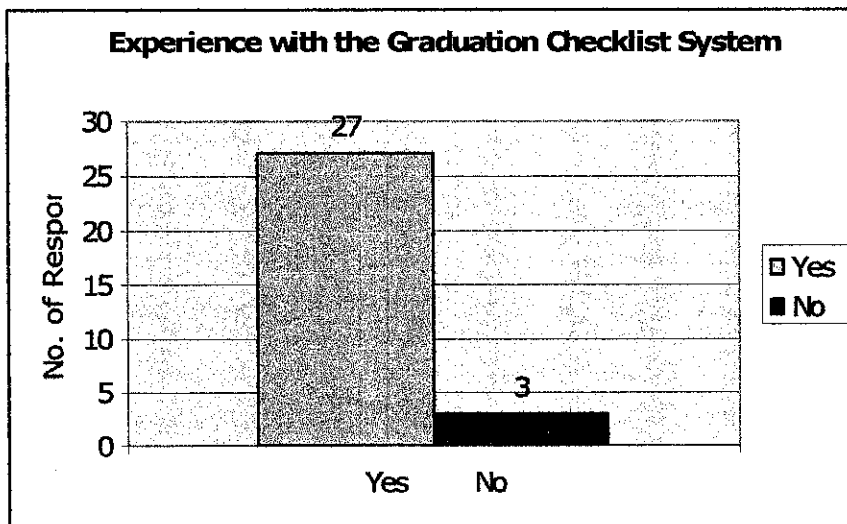


Figure 11: Experience with the Graduation Checklist System

Before completing the questionnaires, testers have first experienced the hands on the project first. From the system's testing experience, testers have been asked on their opinion whether the graduation checklist system can provide them the information of graduation process or not. Based on the Figure 11, 27 out of 30 testers agreed that the development of this system could give them valuable information as a new introduction to them.

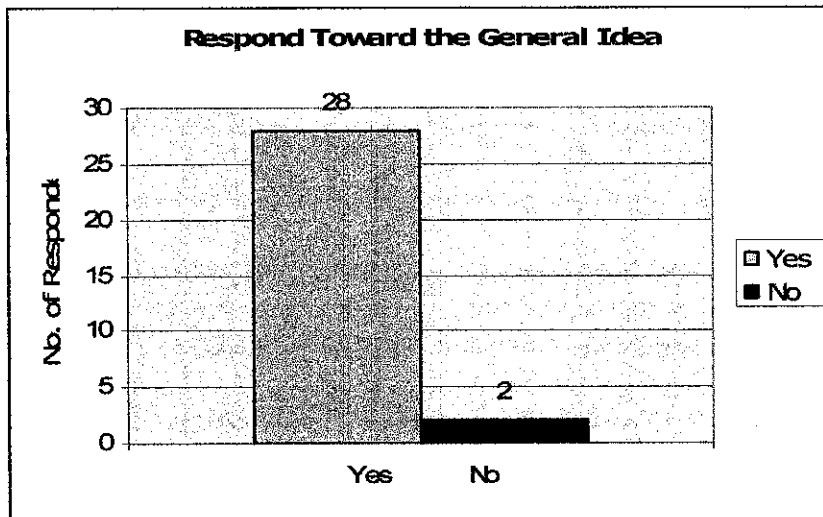


Figure 12: Respond toward the general idea

Testers' opinion towards the general idea of doing the graduation checklist is also being investigated. A total of 28 testers believed that this system is very useful in helping them carrying out the task while only 2 testers were against this implementation. Moreover, with the less number who were against it showed the support that this project is welcomed by majorities.

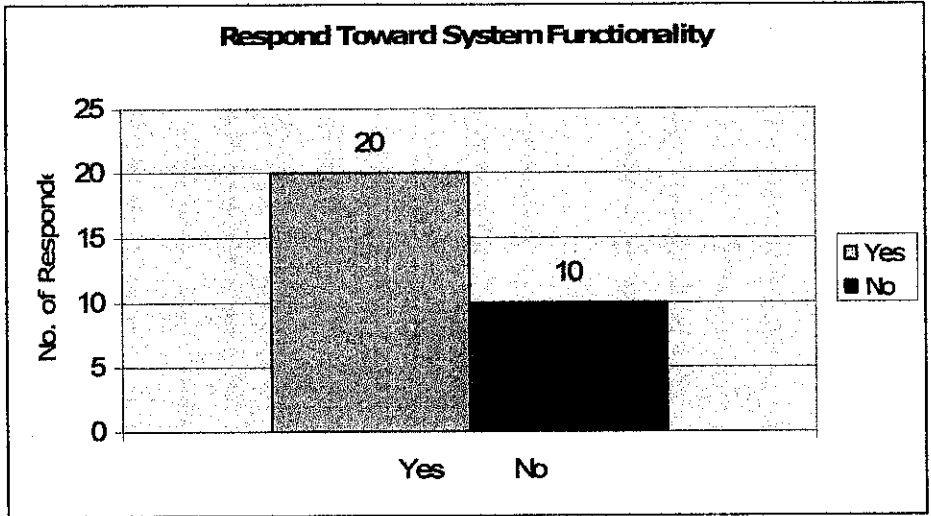


Figure 13: Respond toward system functionality

Figure 13 illustrate testers toward the functionality in the system. Testers experienced and knew how to use the system function as it is very easy. From the survey, it is found that a total of 20 testers compared to 10 think that the system functionality of this system is compatible and very useful. These statistics again support the main objective of this project.

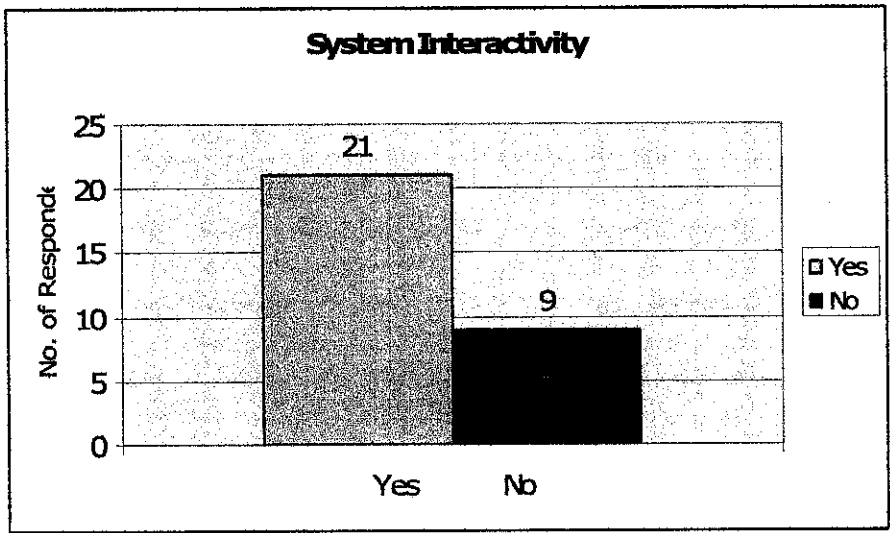


Figure 14: System Interactivity

Only 9 of the testers disagree with the interactivity in the system. Some of the participants favor in the system's theme color and the arrangement of text in the website. Those 21 testers have no problem in navigating from a web page to another web page.

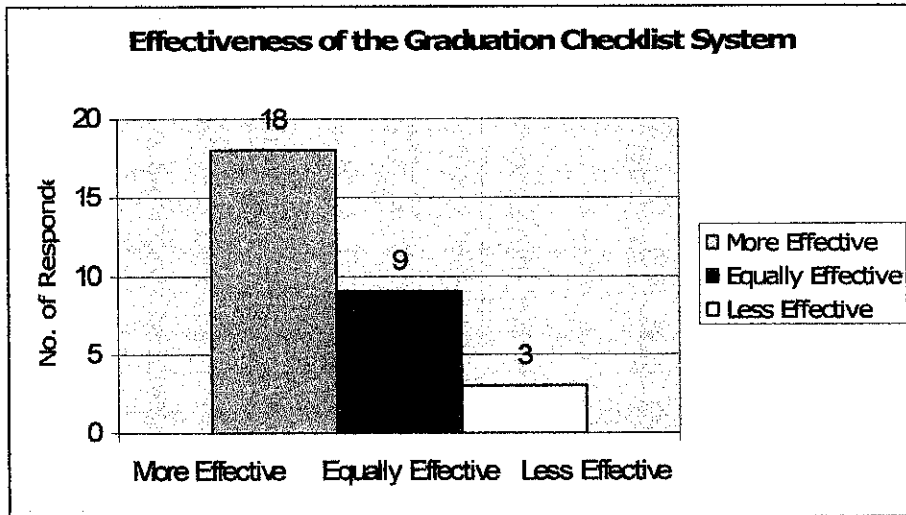


Figure 15: Effectiveness of the Graduation Checklist System

Another area being investigated is the effectiveness of the system from users' point of view. Based on the figure above, a total of 28 testers were very pleased with the effectiveness followed with 9 with equally effective and only 3 who did not feel this system is effective.

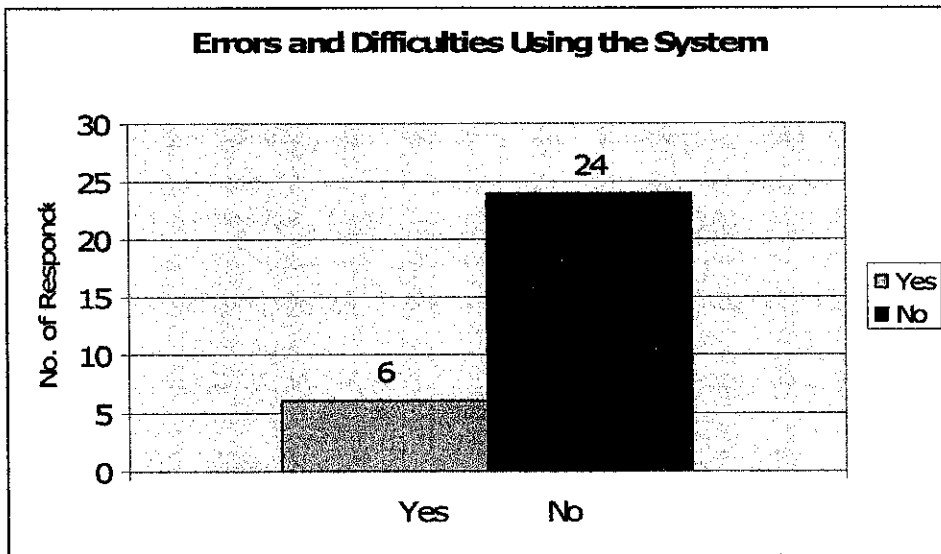


Figure 16: Errors and difficulties using the system

Other than that, the errors and difficulties are being surveyed. It is to inspect the weakness point and flaws of the system. It showed that 24 testers are satisfied with all functionalities provided. As seen above, only 6 resisted and said that sometimes the system respond time is slow which the system failed to respond the user request.

4.6.3 Conclusion Derived From Questionnaires

After analyzing the survey data, the participants have clearer view on the concept of implementing the system for them. The author felt that student is able to accept the GCS as new approach in encountering current medium graduation process. As for the participants, they have realized that the online GCS is able to provide the services 24/7. Besides than that, the overall system managed to be accepted by them as it includes the relevant information in it. The graduation checklist is what the most beneficial for them where they able to do the checklist through online without going through the current medium which is very tedious. Hence, all questionnaires showed very positive feedback and showed that this project is most welcomed.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

As the conclusion the author concludes that the development life cycle of this system has come with its fair share of problems and there are several things that the author learned from this undertaking. One is that implementing GCS is not an easy task to do, both from the technical as well as the administrative perspectives. Another which is a corollary to the first is that it is probably impossible to implement the GCS, whether built or bought, that satisfies the wide scope of expectations of a large and diverse advising community.

Overall it can be said that the implementation of GCS system will help in improving the current method of graduation checklist. Development of the system is also being rectified to be effective that it can reduce the hassles of the students the need for traveling and one can check their course completion and do the checklist activity anywhere and anytime within the comfort of their homes or hostels. For recommendation, the system can be enhanced more in terms of its user friendliness and functionality. With the advent of the Internet it became imperative to provide better tools at the desktop not just for ACS but for students as well.

CHAPTER 6

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APPENDIX 1

Survey questions as published and distributed by hand to 20 final year students on April 2007 to determine student reaction toward the idea of implementation of GCS.

1. Do you know about the graduation audit process for expected graduates?

Yes

No

2. Where do you find out about the graduation audit?

UTP Website

Friends

ACS

Others

3. Do you have performed the graduation checklist for graduation purpose?

Yes

No

4. Have you completed and submit your graduation checklist?

Yes

No

5. Do you satisfy with the current graduation checklist system effectiveness?

Yes

No

6. Do you agree by developing a web based graduation system is the best way to perform graduation checklist?

Agreed

Disagreed

Others

7. Do you understand the short from used in the graduation checklist course completion form? (Example: Req Crh and ACT Crh)

Yes

No →Refer to question 8

8. If No, please gives suggestions:

APPENDIX 2

Survey questions as published and distributed by hand to 30 final year students on September 2007 to determine student Reactions to the new developed system.

1. Based on the experience using the Graduation Checklist System, does the system manage to provide enough information of graduation process?

Yes

No

2. Do you think that this system is useful to reduce the hassles of the students the need for travel many time to ACS office in order to do graduation checklist?

Yes

No

3. Do you think this system functionality is easy to use and compatible?

Yes

No

If No, please leave your comment here: _____

4. Do you think this system is interactive and user friendly?

Yes

No

If No, please leave your comment here: _____

5. From your point of view, do you think that this system overall process is reliable and effective enough?

Most Effective

Equally Effective

Less Effective

6. Is there any an error or difficulties while using this system? If yes, please state the weakness point and flaws of the system.

Yes

No

If Yes, please leave your comment here: _____
