Online Final Year Project System for FICT, UTAR using AMP technologies

By

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REPORT STATUS DECLARATION FORM

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ACKNOWLEDGEMENT

I would like to thank for the guidance and time that my supervisor, Mr. Goh had spent to me. While I am confusing with my project, he had patiently explained and guided me toward a correct path. With assistance of Mr. Goh, I had a very clear and holistic picture on what I should do and will be doing.

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ABSTRACTS

Final year project (FYP) is a compulsory taking subject for every university students. As University Tunku Abdul Rahman (UTAR) do not own any system to purely deal and manage FYP related works, it taken a lot of man power to do manual works. Some tedious processes such as compilation of final grades and venue reservation are time consuming as it needs to go through some business processes and people. Besides, students also encounter issues like queuing up for supervisor proposed title and unaware of latest title update.

After knowing of the existing problems that user are facing, a proposed web portal is being planned and developed in order to deliver a better solution for student, supervisor, and FYP committee when they deal with FYP related works. A typical software development life cycle will be used throughout the development to ensure a quality deliverable.

After user requirements had been carefully defined by direct/indirect observation, a web portal had been successfully developed by using Apache, Mysql, PHP. technologies (A.M.P technologies). After system is implemented, flow of FYP undertaking process becomes shorter and more time can be conserved. Ultimately, all of the users benefit from using FYP portal.
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<td>cascading style sheets</td>
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<tr>
<td>ERD</td>
<td>entity-relationship diagram</td>
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<td>FICT</td>
<td>Faculty of Information and Communication Technology</td>
</tr>
<tr>
<td>FYP</td>
<td>Final Year Project</td>
</tr>
<tr>
<td>IT</td>
<td>information technology</td>
</tr>
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<td>PHP</td>
<td>Hypertext Preprocessor</td>
</tr>
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<td>SDLC</td>
<td>system development life cycle</td>
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<tr>
<td>SIIWP</td>
<td>student industrial internship web portal</td>
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<tr>
<td>SSL</td>
<td>Secure Sockets Layer</td>
</tr>
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<td>TLS</td>
<td>Transport Layer Security</td>
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<tr>
<td>UTAR</td>
<td>University Tunku Abdul Rahman</td>
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<tr>
<td>VIT</td>
<td>public internet portal for primary and high schools</td>
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<td>VIS</td>
<td>Volleyball Information System</td>
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<td>WBLE</td>
<td>Web-based Learning Environment</td>
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<td>Extensible Markup Language</td>
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CHAPTER 1 INTRODUCTION

1-1 Problem Statement and Motivation

All this while, University Tunku Abdul Rahman (UTAR) practices a manual way in managing final year project (FYP). Related events like static title list, making reservation for student’s FYP presentation, finalize of mark can be fasten up by using a systematic system.

Regarding the static title list, it is less flexible for a student to know the status of the title on whether it has been taken or is still available to take. There are few issues arise if FYP committee would like to frequently update the title list in order to keep student updating and to avoid students waiting for a taken title. Firstly, it is laborious to maintain the title list as FYP committee has other tasks to do. Next, for the current system title list is being uploaded as a PDF to be downloaded by the students. Many issues like student does not frequently check on the web miss out the updated version and student reluctant to download again the similar document could happen. Not only that, title list is less interactive to the students. Student not able to search for the project that suitable to their undertaking course, preferable supervisor offered title or area of the project. Instead, they required to look through one by one to find what project title they want to take.

When it comes to a presentation week for FYP student to present their works, supervisor is required to book for the venue in advance. He or she will be required to communicate with an operator who responsible to check on the availability of venue. Again, it is not an easy task for a person to manage a presentation venue booking. Human error easily can be done such as two presentations scheduled to be presented on the same venue. Not only that, it required moderator to agree on the scheduled
made by supervisor as well. Due to that, cancelation of scheduled presentation due to emergency is hard to reschedule back.

Furthermore, grading a student had always takes longer time to process. FYP committees have to review the marking scheme before it is being disseminate to supervisor and moderator. Marking scheme would change over the time and FYP committee will be the one who maintain the marking scheme. They need to manually make changes to the excel file which consist of marking scheme before email to all the supervisor and moderator. Supervisor and moderator will then evaluate their student after receive the excel file. After they done evaluation, supervisor will collect moderator’s evaluation and compile the final marks. Human errors easily can be made in final marks compilation. In order to reduce mistakes, supervisors will have to carefully calculate and revise before the mark is submitted. After submission of the final marks, FYP committee will then compile and review the discrepancy of marks. If happened that some students have high discrepancy in their marks, supervisor and moderator will have to discuss and make changes on the mark before re-submit to the FGO.

Current practice has several limitations and time consuming, it can be improved by proposed online web portal solution.

1-2 Background Information
For every undergraduate student, they are compulsory to complete their Final Year Project (FYP) in order to graduate from university. In University Tunku Abdul Rahman (UTAR), there are a few portal has been develop to distribute information and help student to manage their work easily such as Web-Based Learning Environment (WBLE) which used by student to download their learning material for every taking subjects and some announcement from lecturer, Faculty of Information
and Communication Technology (FICT) which mainly use to distribute information such as preview of timetables and guideline for FYP and industry training.

Two types of the FYP can be chosen by student which is research based or application based. Either of it is separate into 2 parts which is project one and project two. Project one is a planning stage of a project where student require to establish project scope and objective, do some research and plan for future works while project two comes to more technical part where student will start to design and develop their system(for application based) as planned on project one.

Two hours lecture class will be held for every week which the lecturer will cover on what students should be done and some guideline in doing FYP. Before attending any lecture, student will have to register FYP as one of their subject first. Students will have to come out with a topic and look for a supervisor to guide them through their FYP. Again, there are 2 ways to get a FYP topic. Student can either download a PDF file from FICT website which consists of a list of supervisor proposed topic, email supervisor for a meeting to get his/her proposed topic or student can browse through internet to find own interest topic, prepare a proposal and find a favorable supervisor to approve it. Eventually, student and supervisor will have to sign off an undertaking letter.

Once student had settled down with own project title, supervisor started to guide student in doing their FYP. Students are encouraged to have regular meeting with supervisor to ensure that they are in the right track. Besides that, student will need to write a bi-weekly report every two week and verify by their supervisor. As time goes by, student will have to come out with a preliminary report and also final report. It will be marked by supervisor and moderator. After all the final marks will be computed by supervisor and FYP committee will review the result. After submitted
CHAPTER 1: INTRODUCTION

final report, supervisor will have to book a venue for student’s presentation and meanwhile student has to get prepare with their FYP presentation. After the compilation of final marks by supervisor, FYP committee will have to review all the FYP students result and make sure the final grades has less marks discrepancy between supervisor and moderator.

1-3 Objectives

This project is aim for:

1. To propose an online solution on the current work flow into more systematic and effective way.

Current workflow of FYP undertaking processes is time consuming and laborious as most of the processes like venue reservation, moderator assignment, review result discrepancy, and maintenance of title list required man-power to manage it. Therefore, develops a web portal which mainly to manage FYP related events is proposed to make a FYP undertaking process to be more systematic, effective and convenient. Table below shows how the web portal can benefit the student, supervisor, and FYP committee.

<table>
<thead>
<tr>
<th>User</th>
<th>FYP event</th>
<th>How web portal helps?</th>
</tr>
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</table>
| Student   | Look for a project title | ✓ Able to view latest title list.  
✓ Student can search based on their interest area, project that suitable to their undertaking course and favorable supervisor.  
✓ Reduce time to make an appointment with supervisor. |
| Supervisor| Manage    | ✓ Do not receive any appointment on taken                                            |

BIS (Hons) Business Information System  
Faculty of Information and Communication Technology (Perak Campus), UTAR
<table>
<thead>
<tr>
<th>Role</th>
<th>Task</th>
<th>Benefits</th>
</tr>
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<tbody>
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<td>Supervisor</td>
<td>Add a title</td>
<td>Do not need to fill in a form and submit to FYP committee.</td>
</tr>
<tr>
<td>Supervisor</td>
<td>Reserve a presentation venue</td>
<td>Do not need to communicate with operator on available slot. Easy to find a replacement slot.</td>
</tr>
<tr>
<td>Supervisor</td>
<td>Evaluate student</td>
<td>Do not need to get moderator result, compile and submit.</td>
</tr>
<tr>
<td>FYP committee</td>
<td>Maintain title list</td>
<td>Title list will be maintained by supervisor itself.</td>
</tr>
<tr>
<td>FYP committee</td>
<td>Assign moderator</td>
<td>Able to assign based on the workload.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Able to assign project based on moderator area of interest.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ensure every student is assigned with a moderator.</td>
</tr>
<tr>
<td>FYP committee</td>
<td>Manage presentation venue reservation</td>
<td>Do not need to deal with every supervisor in providing information on presentation slot.</td>
</tr>
<tr>
<td>FYP committee</td>
<td>Review student evaluation</td>
<td>Do not need to manually sort out student with high discrepancy.</td>
</tr>
</tbody>
</table>

Table 1-3-T1 Table describes how FYP portal will help users in managing FYP related events.

2. To shorten time spent in manage FYP related event

A supervisor is a lecturer, moderator, tutor, and could be FYP committee as well. They have other tasks to perform therefore, shorten the time they spent on managing
FYP related event allow them to have extra time to do other tasks. By improve some of the FYP undertaking processes, time can be conserved. For example, eliminate the process of supervisor required to communicate with the operator to get available slot for presentation, operator do not need to manually record down slot that has been taken or check on availability of slot for supervisor whenever they need it. Not only that, avoid students from queuing up for a taken title will also benefit both supervisor and student. This is because students will not waste their time to schedule an appointment with supervisor on an unavailable title at the same time, supervisor do not need to notify student on the status of the title as it has been taken by other student.

1-4 Project Scope
To establish a web portal from stretch, basic hardware that require for developing it can be either a desktop or laptop with basic specification. Software that will be required is listed below:

- Framework NetBean IDE 7.1.2
- Apache 2.2.21
- mySQL 5.5.16 (Community Server)
- phpMyAdmin 3.4.5
- Google chrome

There are a lot of frameworks available in the market for web application development. Most of them are has similar functionality. The reason to choose NetBean as my main development framework is because of it is free and open source. NetBean has a user-friendly interface for building a web application in PHP and it is easy to use. Next, Apache server will be used in this development because it is free and has a simple interface. For the database, MySQL chosen to be used because of the
installation is easy and functionality that is needed is ready to use. It is always the best combination of using PHP, Apache, mySQL in creating website because it runs great on cheap. Besides, Google chrome will be the default browser that will to be use in development and testing.

Next, there are not only one programming language will be incorporate in developing a web portal which showing dynamic information. Programming languages that will be using are:

- PHP
- JavaScript
- AJAX
- CSS
- HTML/XHTML
- SQL

HTML/XHTML is definitely a must in every website development which to render the structure of webpage. Since there will be a lot of dynamic changes on the webpage there is where PHP comes in to make the dynamic webpage easier. PHP is a server side scripting language which allowed to be embedded in between HTML file. Therefore every time user request for the webpage, it will process the html file before response to user. JavaScript will also be used because of the PHP is a server side scripting. Every webpage is processing at the server side thus it is important to validate user input at client side before it is being sent to server. This is to ensure that there is no invalid element being sent over to server and by the time server received, it taken up processing time that eventually failed. AJAX will be used in developing FYP portal as well. SQL is being used to perform insert, delete update function to the database. Without SQL, data cannot be stored and shown to the users. The reason to
include AJAX is to increase the performance of webpage processing. Due to the asynchronous feature that AJAX has for client, it provides great and fast response to user. It is because of user no longer required to send the entire page back to server to process it. In fact, not all the elements in the webpage need to be dynamically changed.

There are few proposed modules below aimed to help student, supervisor, moderator, and FYP committee in managing FYP.

![Figure 1-4-F1 Figure shows overview of system scopes](image)

**Proposed title**

A list of proposed title will be shown to student and it support dynamic changes such as showing student the latest available titles and supervisor new added title. It allows student search title based on keywords, favorable supervisor, suitable course, project area, deliverable, and scale of the project. Students allow to book title and schedule a time to meet with supervisor for further information. Booking of title is based on first come first serve basic. Student who first signs on the undertaking form will be the one who successfully get the title. Other student who booked the same title but scheduled meeting at the later time will be notified that title has been taken by other student.
Moderator assignment

Moderator assignment can be easily done by FYP committee by providing information on supervisor workload and project area that supervisor would like to moderate. A suggestion of moderator to a student will show to the FYP committee so that better decision can make by FYP committee on moderator assignment.

Venue reservation

In this module, supervisors will have authority to view and book for an available slot for their student through online while FYP committee will need to maintain the slots. Supervisor can only book half an hour for a student and booked time will then send to the student’s moderator to approve. If moderator is free on the scheduled time, he or she can confirm the request and the confirmation will be seen by supervisor when they login to the portal. If moderator is not free on the schedule time, he or she required to email the supervisor to book for another time. The advantage of this venue reservation module is that it continuously shows the latest slot status to supervisor so that he or she will no need to go through an operator to ask for available slot and then confirm with the moderator. Reschedule of venue reservation can be also be easily done by supervisor as portal will always show the slot availability. Operator who in-charge on venue reservation no longer need to directly deal with every supervisors, instead he or she will only required to update slots that is not available to book onto the portal. Slots that are being blocked will then reflect to supervisor and moderator’s view so that they will not book on an unavailable venue.

Marking module

This module eliminate extra work of FYP committee who require to maintain marking scheme by manually make changes to the excel file. FYP committee will required to
maintain the marking scheme as usual after portal is implemented but they no longer need to modify the excel file and send to every supervisor and moderator instead, it replaced by a easy operate maintenance screen. Any changes that are made at this screen by a FYP committee will directly reflect to the supervisor and moderator screen. This will save a lot of time for FYP committee as maintenance of marking scheme become easier and less work.

1-5 Impact, Significant and Contribution
Current work flow required a lot of human effort to manage and maintain while managing FYP related event through online web portal make things more systematic and convenience. Information about the student, title, assessment, and presentation venue reservation is organized nicely on the FYP portal. Supervisors can always refer to the web portal when they need the information. Improve some of the processes helps student, supervisor, moderator and FYP committee manage FYP event effective.

Student can always view updated title list, do not need to email supervisor for schedule meeting time, and more flexible to look for a title as search function is ready to be used. For the supervisor, he or she can manages appointment, venue reservation and insert student’s assessment marks more conveniently as supervisor does not need to replying email to students to notify the title status, communicate with operator and moderator to confirm a presentation date, and wait for a marking schema to be able to evaluate his or her student.

On the moderator side, approve on a reservation date is rather simple by approve it on the portal. Furthermore, FYP committee saved their time because they have lesser tasks to do as processes are being automated.
CHAPTER 2 LITERATURE REVIEW

2-1 System Review

Nowadays, people want life to be more convenience (Santana, 2005). They want to get things done in faster yet get a quality output. For instance, people want updated information whenever they need it. There is where information technology (IT) comes in to help people and make their life easier. Instead of using a traditional manual way to perform tasks and disseminate information, people tend to make it automate because it will be more time effective yet remain quality.

A student industrial internship web portal (SIIWP) which is a vertical portal where it allows users to access related and customizes functionalities that suit users’ requirement has been introduced to automate the current manual business process (Wan, Aliza & Dismas, 2008). Its main purpose of SIIWP is to expose students to relate theoretical knowledge learned in the campus with real working environment. By doing that, they are able to produce quality graduates who possess well rounded skills (Wan, Aliza & Dismas, 2008).

Another review has made on public internet portal for primary and high schools (VIT). This development is to solve the scarcity of information about work in research and development process (Kuchta, Kadlec & Vrba, 2010). By having VIT, it allows publish and share teachers’ example, test and other valuable information with all people who interested in a selected problematic (Kuchta, Kadlec & Vrba, 2010). As technology growth rapidly, information delivery become more crucial and important.

Web portal not only fasten the business process in education field, it can be used for a wide range of area as well. Volleyball Information System (VIS) is an information system that was established to be used to manage and support volleyball related event to the public (Humski & Skocir, 2011). Before VIS, organize the volleyball
Competitions had been poorly connected and all the operation is done manually. Therefore, an information system established to serve as a medium that presents the desired information to the interested public (Humski & Skocir, 2011). Generally, it enabled quality competition monitoring, auto generate of team ranking, recording relevant data and facilitate the competition.

<table>
<thead>
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<th>Merit</th>
<th>Limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SIIWP</strong></td>
<td></td>
</tr>
<tr>
<td>✓ Ease student in finding related resources.</td>
<td>✓ Lack of guidance for first time user.</td>
</tr>
<tr>
<td>✓ More organize information with proper indexing for faster retrieval.</td>
<td></td>
</tr>
<tr>
<td>✓ Timely monitor intern students by allow supervisor view of weekly report online.</td>
<td></td>
</tr>
<tr>
<td>✓ Ease task of visitation scheduling</td>
<td></td>
</tr>
<tr>
<td>✓ Avoid human calculation error, system calculate final marks with entered marks.</td>
<td></td>
</tr>
<tr>
<td>✓ Ease of reports generation.</td>
<td></td>
</tr>
<tr>
<td><strong>VIT</strong></td>
<td></td>
</tr>
<tr>
<td>✓ Offers content management system to share documents or ideas over internet.</td>
<td></td>
</tr>
<tr>
<td>✓ User involvement in collect system requirements.</td>
<td></td>
</tr>
<tr>
<td>✓ User involvement in collect system requirements.</td>
<td></td>
</tr>
<tr>
<td>✓ Offers web page editor to allow create multimedia content easily.</td>
<td></td>
</tr>
<tr>
<td>✓ Content support flash animation to enhance interactivity</td>
<td></td>
</tr>
<tr>
<td>✓ Design with focus to increase user comfort.</td>
<td></td>
</tr>
<tr>
<td>✓ Access control management to enhance security and information integrity.</td>
<td></td>
</tr>
<tr>
<td>✓ CAPTCHA to prevent robotic registration</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 2: LITERATURE REVIEW

13

Table 2-1 T1 Table describes merit and limitation of review system

<table>
<thead>
<tr>
<th></th>
<th>✔ Internal messaging system to avoid spam messages.</th>
<th>✗ Too focus on functionality development and left out the security issue.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIS</td>
<td>✔ Automatic generation of the tables with the team ranking in each competition based on Berger’s algorithm.</td>
<td>✗ Centralize database but lack of security concern and protection.</td>
</tr>
<tr>
<td></td>
<td>✔ Auto delegation of judges, team, record list of all the registered players and coaches.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>✔ Allow publish of news and documents in any of the websites involved in the system.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>✔ Ability to review information such as result of competition of previous seasons, information of club, teams, coaches, and the referees.</td>
<td></td>
</tr>
</tbody>
</table>

Rather than manually manage, used of portal does help human to perform task and disseminate information faster. Each portal that discussed serve different purposes all had reduced the time of performing a business cycle. One thing that FYP portal distinct than other is it used of email to notify user whenever there is an important event, so that user able to response faster and act accordingly.

2-2 Tool and Software Review

Table 2-2 T1 shows the technology that is being used by:

1. student industrial internship web portal (SIIWP)
2. public internet portal for primary and high schools (VIT)
3. Volleyball information system (VIS)
4. Final year project portal (FYP Portal)
As we can easily notice that all of the review systems are using server side scripting, this is because of server side scripting help to generate dynamic web pages (Webopedia, 2010). It generates web pages at server side before response to client (Serverschool, 2010). Advantages of using PHP are it is free, easy to use as its syntax is easy to parse and human friendly and it support cross platform (tutorialchip,2012) while ASP.NET is easy to develop, build-in security and full support for Extensible Markup Language (XML), cascading style sheets (CSS), and other web standards language (Babu,2008). Both have its merit and limitation, PHP is cost effective as it is open source and do not charge a dollar for development and because of it nature of open source, information can be easier found and any issue that could not solve by

<table>
<thead>
<tr>
<th>System Aspect</th>
<th>SIIWP</th>
<th>VIT</th>
<th>VIS</th>
<th>FYP Portal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development tool</td>
<td>PHP</td>
<td>-ASP.NET 3.5</td>
<td>-PHP</td>
<td>-PHP</td>
</tr>
<tr>
<td></td>
<td>-XHTML</td>
<td>-C#</td>
<td>-HTML</td>
<td>-HTML</td>
</tr>
<tr>
<td></td>
<td>-JavaScript</td>
<td>-C++</td>
<td>-JavaScript</td>
<td>-JavaScript</td>
</tr>
<tr>
<td></td>
<td>-Easy</td>
<td>-CAPTCHA</td>
<td>-AJAX</td>
<td>-AJAX</td>
</tr>
<tr>
<td></td>
<td>PHP2.0</td>
<td>-Visual Basic</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dreamweaver MX2004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database</td>
<td>MySQL</td>
<td>-Microsoft SQL server</td>
<td>MySQL</td>
<td>MySQL</td>
</tr>
<tr>
<td>Server</td>
<td>No specified</td>
<td>-Microsoft exchange server</td>
<td>Apache</td>
<td>Apache</td>
</tr>
</tbody>
</table>

Table 2-2-T1 Table lists tools and technology used of review system
developer can easily posted on a forum and solved. By sharing code with others, loophole can also be found and solve with the most optimize solution.

Most of the portals make use of the advantage of JavaScript and AJAX because both of these increase the performance of a webpage. JavaScript extend functionality to web pages where it can be written together with HTML and every render of HTML can called it to do simple function (JScripters, n.d.). Process of JavaScript will be handled by client browser rather than sending back to server to process. Besides, AJAX provide better interactivity to user where it allow partially update (Roseindia, 2006). Instead of post back an entire form back to server just to validate the availability of name, AJAX can send server a portion of form and process it without interrupting user from entering other information into the form (Roseindia, 2006). Next, some of the portal may develop by highly technical people therefore they do not rely on software which can help them in design their web pages. In this case, Dreamweaver could be good practices where it helps to develop CSS templates faster as it allows simultaneous designing and coding (Nghean-apttech, 2007). User can save time because they can see the interface output immediately after writing the code.

Next, MySQL is good to be used as it is free and open source. It support cross platform and easily set up in Linux, Unix or Windows (Lehmann, 2010). As FYP portal is just a simple platform to manage FYP processes, it is more useful and appropriate to use free and open source database rather than to purchase an enterprise version of databases. Same case goes to Apache server. Apache is cost free and open source (Arie, n.d.). Although it is a freeware but it is still powerful where it provide security channel such as secure sockets layer (SSL) and transport layer security (TLS) (Arie, n.d.).
CHAPTER 3 METHODOLOGY

3-1 Methodology and Tools
In this project, modern spiral lifecycle model is chosen to be used rather than a traditional waterfall model which is rigid and less flexible and prototype model required clear user requirements. Waterfall model unable to make any changes as phases being proceeded, requirements are fixed and not able to revert back if any mistake happen in between (Sameeradilhan, 2011) while prototyping modeling required highly interaction with customer whereby prototype will be developed and testing and refine iteratively to fit user needs (iAnswer4u, 2011). The reason of used of spiral lifecycle model in this project is because of its flexibility. Spiral life cycle model is an iterative software development model which incorporates the features of both waterfall model and prototype model (iAnswer4u, 2011). It is typical use in risky, expensive, complex software project development but because of this model tolerant to changes at every phase, therefore it is being chosen for this project (sqa.org.uk, 2007). Since this project is still new and strange to the developer, it is more suitable to use spiral lifecycle model than other SDLC model because spiral lifecycle allow continuously review of each phase (ianswer4u, 2011).

Below is the table of comparison of traditional waterfall model, prototype model, and spiral life cycle model.
### CHAPTER 3: METHODOLOGY

#### Table 3-1-T1 Table shows the comparison on different methodologies

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Traditional waterfall model</th>
<th>Prototype model</th>
<th>Spiral life cycle model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advantages</strong></td>
<td>✓ Simple to implement</td>
<td>✓ User centric</td>
<td>✓ Flexible, allows changes to be implemented at every stages of the project.</td>
</tr>
<tr>
<td></td>
<td>✓ Minimal resource required to implement this model</td>
<td>✓ Design to fit user needs and expectation</td>
<td></td>
</tr>
<tr>
<td><strong>Disadvantages</strong></td>
<td>✓ Rigid and cannot revert back to previous phase</td>
<td>✓ Less emphasis on documentation</td>
<td>✓ Highly customize, not reusable for future project</td>
</tr>
<tr>
<td><strong>Suitable for project</strong></td>
<td>✓ Suitable when project is small with clear user requirement</td>
<td>✓ Suitable when project has high interaction with end users</td>
<td>✓ Suitable when project need to highly customize.</td>
</tr>
</tbody>
</table>

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Figure 3-1-F1 Figure shows the traditional SDLC, waterfall model.

Figure 3-1-F2 Figure shows the spiral model that is more flexible.
Figure 3-1-F3 Figure shows the prototype model which mainly focuses on user requirement.

3-1-1 Analysis Phase

In this phase, the system requirements are collected as much details as possible (Rouse, 2007). There are a lot of methods to gather user requirement such as through interview, active observation, distribute questionnaires and conduct a workshop (Liles, 2012). In order to get user requirement, active and passive observation methods is used for this project. Active observation is carry out through interact with student who currently taking FYP, by short talk with students, problems that they are currently facing is easy to be detected. Besides, requirements are also collected through quietly observe (passive observation) on how the FYP taking process is going through. This is not only done for one side of user but it also involve of supervisor who play an important role in FYP process. Flow diagrams of FYP undertaking processes from student and supervisor perspectives are drawn and it eventually
verified by experience supervisor to ensure it represent the processes correctly. With better understand of the traditional flow of business process, we able to identify the limitation of current system and enhance it by proposed web portal.

Deliverable:

FYP undertaking process flow diagram (student and supervisor perspective)

3-1-2 Design Phase
After gathered user requirements, it comes to design phase where requirements will be transformed into a complete, specific system design (Wadhwa, n.d.). This phase is crucial as the deliverable of this phase will serve as an input when it comes to the implementation phase (notetech.com, n.d.). Functional specifications that are gathered from analysis phase will be presented in a diagram form and documented for future reference.

Deliverable: UML diagram, ERD, and data dictionary, system flow

3-1-3 Implementation Phase
In this phase, prototype will be constructed based on the preliminary design that is established from design phase (Wadhwa, n.d). Based on the design that has been documented at previous phase, web portal will be coded accordingly. First version of prototype is usually scaled-down and represents an approximation of the characteristic of the final product (Wadhwa, n.d.). As the SDLC cycle iterate, the system will be growth bigger by adding or enhancing more features.

3-1-4 Testing Phase
It is important to carefully test on the prototype that we had developed because it helps to identify system defects and thus we can improve the system quality (Calsoftlabs, 2012). Types of testing that will be used in this project are alpha testing
and functional testing. Alpha testing is where developers will simulate as real users using system to carry out tasks and operation that a typical user might do. This is to validate the functionality, user interface and usability, security or performance of the system before it releases in beta (Singh, 2012). If some of the features failed in alpha testing, developer can decide whether to withhold the failed features and release the rest to beta or resolve the failed features before it proceed to beta testing (Clark, 2012). While functional testing is performed to ensure system functions correctly according to the design specifications (Calsoftlabs, n.d.).
3-2 FYP Undertaking Process Flow Diagram

Figure 3-2-F1 FYP taking processes from student perspective before proposed system implemented.
Figure 3-2-F2 FYP taking processes from student perspective after proposed system is implemented.
Main changes process that had make after implement proposed system – student perspective:

1. Before proposed system being implemented, students required to email supervisor themselves to schedule a time for getting details of the title before decide to take the title. This process may take some time because of the static title list issue, student do not know the status of the title. Therefore, every student who interested on the title that is being posted will email the supervisor for further details. In this case, supervisor has to manually queue these students. When there are student decided to take the offered title, supervisors will have to email students who are in the queue of the same title, notify them that the title is being taken.

After proposed system is being implemented, students do not need to write email to make an appointment. Instead, they can just make an appointment through FYP web portal by providing the date and time. Status of the appointment will be shown at student screen whether the supervisor has accepted or rejected the appointment. Besides, title list that will be displayed to student is more flexible as students are able to search FYP title by keywords, favorable supervisor, suitable course, project area, deliverable, and scale of the project. This will shorten the time for student to view their potential project title instead of going through one by one. Not only that, this title list will be maintained by all the supervisors rather than FYP committee. This will reduce workload of FYP committee since the maintenance of title list task is being delegated to supervisor now. Furthermore, supervisor no longer needs to spent their time on managing student who queue for his or her title, because taken title will not shows in the dynamic title list and for those students who booked the title before title is being taken will also be notified that the title being taken.
Figure 3-2-F3 FYP taking processes from supervisor and moderator perspective before proposed system implemented.
Figure 3-2-F4 FYP taking processes from supervisor and moderator perspective after proposed system is implemented.
Changes that had make after implement proposed system – supervisor and moderator perspective:

1. Before FYP portal implemented, supervisors will have to fill up a form to propose a FYP title. After form is filled up and submitted, FYP committee will have to update the title list and upload the new version onto the FICT web. This increase paper works and workload from both supervisor and FYP committee because supervisors are required to fill up a form in order to propose a FYP title and FYP committee has to keep the title list updated.

After the FYP portal is implemented, supervisors do not need to fill up a form to add new title anymore. Instead, they are able to add it by their own through FYP portal. Any title that is inserted by supervisor will directly reflect at the student side where they are able to view the latest title list when they login to the FYP portal. This will save time for FYP committee because task of managing and maintaining the title list will be delegated to all the supervisors. Instead of having FYP committee to maintain the title list, supervisor himself or herself will maintain their own propose title.

2. Before portal is implemented, student will have to write their own email to make an appointment with supervisor by indicated what topic they are interested. With static title list that currently is practiced, supervisor will require to check whether student interested topic is taken or is still available to take. If it is available to take, supervisor will required to make sure if there is someone who had made an earlier appointment than the student. If someone made earlier appointment than the student with the same topic, supervisor may need to notify student with this. After meeting up with the student who made an earlier appointment, supervisor will then notify the student about the status of the title whether it is being taken or the student may still come for
consultation as scheduled. This will increase supervisor workload as he or she required to keep students up-to-date with the title status that they are interested.

After portal is being implemented, students do not need to write an email to the supervisor to make an appointment. With this portal, student allows to make appointment to the supervisor by clicking on the interested title link and provide a schedule time to make an appointment. After that, supervisor will be able to see the appointment make by students in their screen. Supervisor can either confirm or reject the appointment and student will see the status of appointment at their screen. If supervisor has rejected the appointment, student may reschedule a time with supervisor as long as title is still available. Through this system, supervisor can easily manage their appointments.

3. Before portal is being implemented, booking a presentation venue is laborious. Supervisor required to get moderator free time and communicate with the operator to get available slot. After arrange the presentation, supervisor will then book the presentation venue with the operator. These processes are time consuming because communicate with operator is mandatory in order to get the available slot and book a presentation venue. Operator may not always available for supervisor and slot may be taken by others supervisor as well. If happen that arranged slot is being taken, supervisor required reschedule a time with moderator and book again with the operator. In this case, operator has more workload because he or she is required to manage all the presentation slots with minimum error.

After portal is implemented, operator no longer needs to manually manage presentation slot and deal with every supervisor anymore. Operator is only required to maintain the slots that are not available to book on the web and it will reflect on all the supervisor screens. On the other side, supervisor does not require to look for
operator to get the available slots anymore. Instead, he or she can directly view the venue availability through their own screen. Supervisor will book a slot and send request to gain moderator approval. Approval from moderator is required to confirm a presentation date for a student. If supervisor feels want to change the presentation time or moderator is not available at that time, he or she can always refer to the available slot on the web and place another replacement slot.

4. Before portal is implemented, supervisor and moderator required to fill in student marks in an excel file. Before marks is being submitted to the FGO, supervisor need to compile the supervisor given marks and moderator given marks. This process takes more time to process and tends to have more human error such as wrong calculation. After marks are being compiled and submit, FYP committee will have to manually calculate and review on the discrepancy. Sorted out the student who has high discrepancy is way time consuming and sometime may overlook some of the students.

After system is implemented, supervisor workloads will be reduced as they do not need to compile the final marks by themselves. They just need to submit their own marks and the final marks will be computed. FYP committee has less work as well because they do not need to manually calculate the discrepancy of all the students and sort out the student who has high discrepancy. Less error will be made as the calculation is done by the system and more flexible FYP committee can view the discrepancy and sort the students.

3-3 Method, Technology and Development Tool

3-3-1 Hypertext Preprocessor (PHP)

PHP will be use in develop proposed web portal because it is suited for web development and easily embedded into HTML (Php, 2012). As FYP portal required a lot of dynamic changes in order to interact with users therefore this project decided to
CHAPTER 3: METHODOLOGY

use PHP to develop it. Besides, PHP also provide security where it is being executed on the server side before send it to client. When web pages are created in server side and send over to client, client will not able to view the PHP code (Php, 2012). Moreover, with the popularity of PHP which lead of online and offline resources continuously growing (Inviqa, 2012), it is more easy to have community to help if any difficulty is found.

3-3-2 JavaScript and Asynchronous JavaScript and XML (AJAX)
JavaScript is a client side scripting language where it could act as a method for validating forms and provide interactive content to website while AJAX is a asynchronous of JavaScript which allow interaction independently and asynchronously with the server (Kyrnin, n.d.). In this project JavaScript will be used for validation checking. Since PHP is a server side scripting and it process webpage at server side before send it over therefore, JavaScript is necessary to be used so that validation can be check by user’s browser itself before send it over to server to further process. Other than this, AJAX will be used in this project to increase the performance of the website. With AJAX, the loaded JavaScript will not affect user from making changes because it happen independently with the server (Kyrnin, n.d.).

3-3-3 MySQL
Database is essential for this project because it provides storage to store basic data and therefore we could retrieve data from database and generate dynamic page. The reason of chosen MySQL as database of this project is because it is free yet powerful as it able to support a lot of programming languages and development tools (Mysql, 2002). For this case, MySQL does support NetBean which will be used in this project.
3-3-4 Apache Web Server

Since PHP is a server side scripting language, a server is a must in order to run the website. Apache is chosen as the server because it is free and support PHP. Not only that, Apache also provides security features such as Secure Sockets Layer (SSL) and Transport Layer Security (TLS) to ensure safe communication over the network.
CHAPTER 3: METHODOLOGY

3-4 Timeline

Figure 3-4-F1 Planning stage

Figure 3-4-F2 Analysis phase and FYP 1 completion.

Figure 3-4-F3 Design phase

Figure 3-4-F4 Implementation and testing phase. FYP 2 completion

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**3-5 Budgeting**

If the system were ready to implement, estimated cost that will be charged is shown as below.

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Target</th>
<th>UTAR</th>
<th>Other University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ Laptop</td>
<td></td>
<td>RM0.00</td>
<td>RM0.00</td>
</tr>
<tr>
<td>Database</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ MySQL</td>
<td></td>
<td>RM0.00</td>
<td>RM0.00</td>
</tr>
<tr>
<td>Server</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ Apache</td>
<td></td>
<td>RM0.00</td>
<td>RM0.00</td>
</tr>
<tr>
<td>Other supporting software</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ PHP</td>
<td></td>
<td>RM0.00</td>
<td>RM0.00</td>
</tr>
<tr>
<td>✓ Browser</td>
<td></td>
<td>RM0.00</td>
<td>RM0.00</td>
</tr>
<tr>
<td>✓ NetBeans IDE</td>
<td></td>
<td>RM0.00</td>
<td>RM0.00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>RM0.00</td>
<td>RM0.00</td>
</tr>
</tbody>
</table>

Table 3-5-T1 Table shows budgeting for system commercializes.

Assuming UTAR and other university student and supervisor possess at least a laptop to gain access to the FYP portal. Laptop or desktop is common for a university student and also staff therefore there are no cost for hardware if portal were to be implemented in either UTAR as well as other university. Besides, MySQL, Apache, NetBeans IDE, and Dreamweaver, PHP are chosen as a platform of this system development. Because of it open source nature and they are all free of charge yet powerful tools. In a nutshell, FYP system will deliver be able to deliver useful features which will benefit users without any cost.
CHAPTER 4 SYSTEM DESIGN

4-1 Introduction to system
After understand about the problems currently face and requirements of the users, it is now proceed to a design phase where user requirements will be transformed into diagrams. These diagrams will be very useful to act as a communication tools for a developer to convey their system design and specification. Besides, it also documented for future references so that other new developer is able understand the system structure without refer to the massive code. These diagrams help developer and users know how the system is being builds and how the object is interlink and relate to each other.

Architecture below describes how a dynamic website works through the internet. Users will need to open up their browser such as Internet Explorer, Google Chrome, Firefox or any other basic browser to be able to view and interact with HTML pages. By entering address of the FYP portal, Web browser passes through internet, and request access to the services. Web server is the place that store and share all the existing web pages. When web server receives request from the client, it responds by sending back their requested webpage. Dynamic webpage will be processed and generated by retrieving data from the database to form a webpage before sending back to user. Webpage generated by the time user request it,
4-2 Architecture diagram

Figure 4-2-F1 Figure shows a dynamic website architecture diagram.

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4-3 System Flow

Figure 4-3-F1 Figure shows a system flow of a student
Figure 4-3-F2 Figure shows a system flow of a normal user - 1st part.
Figure 4-3-F3 Figure shows a system flow of a normal user – 2nd parts.
Figure 4-3-F4 Figure shows a system flow of an admin.
Figure 4-3-F5 Figure shows a system flow of a super admin.
Highlight of the system flow

1. Decision point of ① at figure 4-3-F3 and ② at figure 4-3-F4 is based on the decision of super admin at ③ whether he opens the session or closes the session. If super admin opens the session, supervisor will be able to access to manage presentation modules and not able to access to manage appointment module. If super admin closes the session, supervisor will not be able to access to manage presentation modules and is able to access to manage appointment module. Similarly, if super admin opens the session, admin will be able to access to manage presentation modules else manage presentation modules will hide from the admin.

2. Note that admin has the access to normal user screen and admin screen while super admin has the access to normal user screen, admin screen and super admin screen.
4-4 Use case

Figure 4-4-F1 System shows a use case of a student.
Figure 4-4-F2 System shows a use case of a normal user.
Figure 4-4-F3 Figure shows a use case of an admin.
Figure 4-4-F4 Figure shows a use case of a super admin.
Figure 4-5-F1 Figure shows an entity-relationship diagram of FYP portal
4-6 Data dictionary

Table: admin

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>admin_id</td>
<td>INTEGER</td>
<td>id of admin</td>
<td></td>
<td>PK</td>
<td></td>
</tr>
<tr>
<td>name</td>
<td>VARCHAR(45)</td>
<td>name of admin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>room</td>
<td>VARCHAR(45)</td>
<td>room number of admin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>email</td>
<td>VARCHAR(45)</td>
<td>email of admin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>status</td>
<td>VARCHAR(45)</td>
<td>&quot;active&quot;</td>
<td>inactive admin leave the school</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-6-T1 Table shows all the attributes details in admin table.

Admin table stores all the admin details such as name, room number, email address, admin current status, and admin id which use to uniquely identify every admin. Active status will make admin posted title available to student while inactive will hide admin from being searched by students.

Table: student

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>student_id</td>
<td>INTEGER</td>
<td>id of student</td>
<td></td>
<td>PK</td>
<td></td>
</tr>
<tr>
<td>name</td>
<td>VARCHAR(45)</td>
<td>name of student</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>course</td>
<td>VARCHAR(45)</td>
<td>course of student</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>email</td>
<td>VARCHAR(45)</td>
<td>email of student</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-6-T2 Table shows all the attributes details in student table.

Student table stores all the student details such as name, undertaking course, email address, and student id which use to uniquely identify every student.
CHAPTER 4: SYSTEM DESIGN

Table : user

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>user_id</td>
<td>INTEGER</td>
<td></td>
<td>id of user for login</td>
<td>PK/FK</td>
<td>Admin(admin_id)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Student(student_id)</td>
</tr>
<tr>
<td>password</td>
<td>VARCHAR(45)</td>
<td></td>
<td>password for login</td>
<td></td>
<td></td>
</tr>
<tr>
<td>userRole</td>
<td>INTEGER</td>
<td>3</td>
<td>user role to identify user</td>
<td>FK</td>
<td>role(role_id)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>privilege.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-6-T3 Table shows all the attribute details in user table.

User table consist of user_id which use to uniquely identify every user, password to authenticate identity of the user, and userRole to grant relevant privilege. User_id and password will be used when user login to the system. System will match provided user_id and password before allow user gain access to the portal.

Table : course

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>course_id</td>
<td>INTEGER</td>
<td></td>
<td>id of course</td>
<td>PK</td>
<td></td>
</tr>
<tr>
<td>course</td>
<td>VARCHAR(2)</td>
<td></td>
<td>abbreviation of course.</td>
<td></td>
<td>Eg: IB</td>
</tr>
<tr>
<td>course_desc</td>
<td>VARCHAR(45)</td>
<td></td>
<td>full description of</td>
<td></td>
<td>course</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>course name</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-6-T4 Table shows all the attribute details in course table.

Course table is created to store all the offer courses in UTAR. Course_id is used to uniquely identify every course, course store of abbreviation of course, and course_desc store all full description of course name.
### Table: role

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>role_id</td>
<td>INTEGER</td>
<td></td>
<td>id of role</td>
<td>PK</td>
<td></td>
</tr>
<tr>
<td>descr</td>
<td>VARCHAR(45)</td>
<td></td>
<td>description of role</td>
<td></td>
<td></td>
</tr>
<tr>
<td>comment</td>
<td>VARCHAR(45)</td>
<td></td>
<td>privilege of a user 0-Super Admin, 1-Admin,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2-Normal user, 3-Student</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-6-T5 Table shows all the attribute details in role table.

Role table is a table which store all the details of a role. Role id uses to uniquely identify a role, descr names the role and comment describes what are the privileges of each role_id will have. This role_id is referred by user table and the privilege will be identified once the user successfully login to the system.

### Table: title

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>title_id</td>
<td>INTEGER</td>
<td></td>
<td>id of title</td>
<td>PK</td>
<td></td>
</tr>
<tr>
<td>title</td>
<td>VARCHAR(80)</td>
<td></td>
<td>title description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>objective</td>
<td>VARCHAR(300)</td>
<td></td>
<td>objective of title</td>
<td></td>
<td></td>
</tr>
<tr>
<td>innovative</td>
<td>VARCHAR(300)</td>
<td></td>
<td>innovative of title</td>
<td></td>
<td></td>
</tr>
<tr>
<td>deliverable</td>
<td>INTEGER</td>
<td>1</td>
<td>id of deliverable 1-prototype, 2-full system</td>
<td>deliverable(del_id)</td>
<td></td>
</tr>
<tr>
<td>scale</td>
<td>VARCHAR(2)</td>
<td></td>
<td>number of student allow to take this title</td>
<td></td>
<td></td>
</tr>
<tr>
<td>offer_by</td>
<td>INTEGER</td>
<td>0</td>
<td>admin who offer this title</td>
<td>FK</td>
<td>admin(admini_id)</td>
</tr>
</tbody>
</table>

Table 4-6-T6 Table shows all the attribute details in title table.
Title table will has all the supervisor added titles details. Title id is used to uniquely identify every title, and other details like objective, innovative, expected deliverable (deliverable), maximum number of student the title can takes (scale), and who offer the title (offer_by) will be stored in this table.

**Table : deliverable**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>del_id</td>
<td>INTEGER</td>
<td></td>
<td>id of deliverable</td>
<td>PK</td>
<td></td>
</tr>
<tr>
<td>type</td>
<td>VARCHAR(45)</td>
<td></td>
<td>description of deliverable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-6-T7 Table shows all the attributes details in deliverable table.

Deliverable table will have only 2 attributes which are del_id and type. Del_id will uniquely identify each deliverable, and type will describes the deliverable. Title table will refer to this table to get the deliverable type and display to user. This table mainly is used to remove update anomalies so that table which consist more than one row of same deliverable such as title table do not has to update multiple

**Table : skill**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>skill_id</td>
<td>INTEGER</td>
<td></td>
<td>id of skill</td>
<td>PK</td>
<td></td>
</tr>
<tr>
<td>desc</td>
<td>VARCHAR(45)</td>
<td></td>
<td>description of skill</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-6-T8 Table shows all the attribute details in skill table.

Skill table is a table which consists of all the skills. Skill such as programming, SQL knowledge and database knowledge is basic for a website development. This table will store all the possible skill required to complete a project. This will help student to know whether they are suitable to the title or not. If student has less confident in dealing with the new skill the title required then they can move to other title which they think they are more suitable with.
Table : required_skill

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>title_id</td>
<td>INTEGER</td>
<td></td>
<td>id of title</td>
<td>PK/FK</td>
<td>title(title_id)</td>
</tr>
<tr>
<td>skill_id</td>
<td>INTEGER</td>
<td></td>
<td>id of skill</td>
<td>PK/FK</td>
<td>skill(skill_id)</td>
</tr>
</tbody>
</table>

Table 4-6-T9 Table shows all the attribute details in required_skill table.

Required_skill table is a composite table which consist primary key of title table and skill table. This table remove the many to many relationships between title table and skill table and it also serves the purpose to store all the skills required for a particular title. With these, students are able to know what skills they need to possess in order to take the title.

Table : admin_interest

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>admin_id</td>
<td>INTEGER</td>
<td></td>
<td>id of admin</td>
<td>PK/FK</td>
<td>admin(admin_id)</td>
</tr>
<tr>
<td>skill_id</td>
<td>INTEGER</td>
<td>0</td>
<td>id of skill</td>
<td>FK</td>
<td>skill(skill_id)</td>
</tr>
</tbody>
</table>

Table 4-6-T10 Table shows all the attribute details in admin_interest table.

This table is used to store the admin area of interest. In the admin profile, supervisor can add their area of interest and these records will help in moderator assignment. In assign moderator screen, a suggest moderator drop down list will be generated based on admin interest area and student taken title area.

Table : suit_course

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>title_id</td>
<td>INTEGER</td>
<td></td>
<td>id of title</td>
<td>PK/FK</td>
<td>title(title_id)</td>
</tr>
<tr>
<td>course_id</td>
<td>INTEGER</td>
<td></td>
<td>id of course</td>
<td>PK/FK</td>
<td>course(course_id)</td>
</tr>
</tbody>
</table>

Table 4-6-T11 Table shows all the attribute details in suit_course table.
Suit_course table is a composite table which consist primary key of title table and course table. This table remove the many to many relationships between title table and course table and it also serves the purpose to store all the courses that are suitable for a particular title.

**Table : title_queue**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>booking_id</td>
<td>INTEGER</td>
<td>id of booking</td>
<td>PK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>title_id</td>
<td>INTEGER</td>
<td>id of title</td>
<td>FK title(title_id)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>book_by</td>
<td>INTEGER</td>
<td>id of student who book the title</td>
<td>FK student(student_id)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>book_date</td>
<td>DATETIME</td>
<td>date time that student schedule to meet supervisor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>status</td>
<td>VARCHAR(45)</td>
<td>&quot;P&quot;</td>
<td>P-Pending, C-Confirm Schedule DT, A-Approved, R-Rejected</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-6-T12 Table shows all the attribute details in title_queue table.

Title_queue table basically is used to record every appointment made by student so that supervisor will be able to see those appointments through this table of records. Table will records student id who book the title (book_by), appointment date and time (book_date), title that they are interested on (title_id), booking_id to identify every appointment and finally the status of the appointment. Status of the appointment by default is set as ‘P’ which indicates status is pending. Supervisor has not approved the appointment yet. After supervisor approved the appointment the status will change to ‘C’ and if supervisor reject the appointment the status will change to ‘R’. After student decided to take the offer title after meet up with supervisor the status will change to ‘A’ after supervisor register the student under his supervisor.
Table : confirmtitle

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>student_id</td>
<td>INTEGER</td>
<td></td>
<td>id of student</td>
<td>PK/FK</td>
<td>student(student_id)</td>
</tr>
<tr>
<td>title_id</td>
<td>INTEGER</td>
<td></td>
<td>id of title</td>
<td>PK/FK</td>
<td>title(title_id)</td>
</tr>
<tr>
<td>sup_id</td>
<td>INTEGER</td>
<td></td>
<td>id of supervisor</td>
<td>FK</td>
<td>admin(admin_id)</td>
</tr>
<tr>
<td>mod_id</td>
<td>INTEGER</td>
<td></td>
<td>id of moderator</td>
<td>FK</td>
<td>admin(admin_id)</td>
</tr>
<tr>
<td>session_id</td>
<td>INTEGER</td>
<td></td>
<td>id of session</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-6-T13 Table shows all the attribute details in confirmtitle table.

This table is used to store all the students who have a title. This table will store their student id, title id, supervisor id (sup_id), moderator id (mod_id) and session_id. After supervisor register a student under his supervision, student id, title id and sup_id field will be inserted a value. Moderator id will only be inserted when admin assigned a moderator to a student. Next, session id will be assigned when the presentation session is open by a super admin. The purpose of having session id in this table is to separate records from previous semester with current semester.
**Table : openvenue**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>session_id</td>
<td>INTEGER</td>
<td>id of session</td>
<td></td>
<td>PK</td>
<td></td>
</tr>
<tr>
<td>semester</td>
<td>VARCHAR(45)</td>
<td></td>
<td>description of semester eg: Jan 2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>from_date</td>
<td>DATETIME</td>
<td></td>
<td>presentation venue starting date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>to_date</td>
<td>DATETIME</td>
<td></td>
<td>presentation venue end date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>open_by</td>
<td>INTEGER</td>
<td></td>
<td>session is open by which admin</td>
<td>FK</td>
<td>admin(admin_id)</td>
</tr>
<tr>
<td>status</td>
<td>VARCHAR(45)</td>
<td></td>
<td>session is &quot;active&quot; - presentation is available to book session is &quot;inactive&quot; - presentation is not available to book</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4-6-T14 Table shows all the attribute details in openvenue table.

This table is the main table of open session for supervisor to start book for a presentation slot for their students. Session_id is a key to identify the session, semester describes the semester, from date is the starting date of FYP presentation, to_date is the end date of FYP presentation, open_by is to keep track who open the session and lastly status indicate whether the session is active or inactive. If it is active, presentation venue is ready to book or else it is not ready to book.
Table : res_queue

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>title_id</td>
<td>INTEGER</td>
<td></td>
<td>id of title</td>
<td>PK/FK</td>
<td>title(title_id)</td>
</tr>
<tr>
<td>pre_date</td>
<td>DATETIME</td>
<td></td>
<td>presentation date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pre_venue</td>
<td>VARCHAR(45)</td>
<td></td>
<td>presentation venue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>status</td>
<td>VARCHAR(45)</td>
<td></td>
<td>status of reservation P-Pending, C-Confirm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>session_id</td>
<td>INTEGER</td>
<td></td>
<td>id of session</td>
<td></td>
<td></td>
</tr>
<tr>
<td>student_id</td>
<td>INTEGER</td>
<td></td>
<td>id of student</td>
<td>PK</td>
<td>student(student_id)</td>
</tr>
</tbody>
</table>

Table 4-6-T15 Table shows all the attribute details in res_queue table.

Res_queue is created to store all the venue reservation records. Supervisor can only book a slot for one student. Title id and student id uniquely identify every reservation record, pre_date stores scheduled presentation date, pre_venue stores scheduled presentation venue, session_id defines the session, and status indicates the status of the reservation. When supervisor send out their reservation request to moderator, it is in the pending status, after moderator approved, the status will change to confirm.

Table : session_venue

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>session_id</td>
<td>INTEGER</td>
<td></td>
<td>id of session</td>
<td>PK</td>
<td></td>
</tr>
<tr>
<td>room_name</td>
<td>VARCHAR(45)</td>
<td></td>
<td>number of the room</td>
<td>PK</td>
<td></td>
</tr>
</tbody>
</table>

Table 4-6-T16 Table shows all the attribute details in session_venue table.

Session_venue is used to store all the venues which are opened for presentation venue reservation. Session_id identified the session and room name will store the venue name.
Table : block_dt

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>session_id</td>
<td>INTEGER</td>
<td>0</td>
<td>Session_id identify a venue is ready to book</td>
<td>PK/FK</td>
<td>session_venue (session_id)</td>
</tr>
<tr>
<td>room_name</td>
<td>VARCHAR(45)</td>
<td></td>
<td>room_number</td>
<td>PK/FK</td>
<td>session_venue (room_name)</td>
</tr>
<tr>
<td>blockDateTiem</td>
<td>DATETIME</td>
<td></td>
<td>datetime that is being block by admin</td>
<td>PK</td>
<td></td>
</tr>
<tr>
<td>created_by</td>
<td>INTEGER</td>
<td></td>
<td>block inserted by which admin</td>
<td>FK</td>
<td>admin(admin_id)</td>
</tr>
</tbody>
</table>

Table 4-6-T17 Table shows all the attribute details in block_dt table.

Block_dt table is created to record all the slots that are being blocked by admin. Session id used to identify the session, room name stores the venue name, block date time stores the date and time which the slot is not available to reserve for a presentation, and created by stores admin id which create the block on the particular slot.

Table : assess_elem

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>elem_id</td>
<td>INTEGER</td>
<td></td>
<td>id of assess element</td>
<td>PK</td>
<td></td>
</tr>
<tr>
<td>descr</td>
<td>VARCHAR(45)</td>
<td></td>
<td>description of assess element</td>
<td></td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>INTEGER</td>
<td></td>
<td>total marks for an assess element</td>
<td></td>
<td></td>
</tr>
<tr>
<td>parent</td>
<td>INTEGER</td>
<td></td>
<td>if consist parent, this elem_id is a sub-assess element.</td>
<td>FK</td>
<td>assess_elem (elem_id)</td>
</tr>
<tr>
<td>evaluate_by</td>
<td>VARCHAR(45)</td>
<td></td>
<td>&quot;sup&quot;-supervisor,</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Table 4-6-T18** Table shows all the attribute details in assess_elem table.

Assess_elem table is used to store all the assessment criteria in marking scheme. Elem_id with “none” will be the main assessment while the elem_id with parent_id will be the sub-assessment under the main assessment. Elem_id is used to uniquely identify each record, descr is the name of the assessment, total is the total marks allocation for the particular assess element, parent is to identify whether it is a main assessment of a sub-assessment and evaluate by identify who will be evaluated the assess element.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Datatype</th>
<th>Default value</th>
<th>Comment</th>
<th>PK/FK</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>student_id</td>
<td>INTEGER</td>
<td>id of student</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>elem_id</td>
<td>INTEGER</td>
<td>id of assess</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>element</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>marks</td>
<td>DECIMAL(4,2)</td>
<td>marks student get for that assess_element</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>remarks</td>
<td>VARCHAR(200)</td>
<td>remarks for the assess_elem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>scale</td>
<td>DECIMAL(10,0)</td>
<td>scale of marks (total is 10 and will be convert to marks in %)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 4-6-T19** Table shows all the attribute details in student_grade table.

Student grade table is used to store all the marks that have been evaluated by supervisor and moderator for a particular student. Student_id identify the student, elem_id identify the evaluation element, marks store the result of the student in percentage after convert from scale, remarks store the result of the student or moderator comments, and scale is the scale that is inserted by the supervisor and moderator before converted it into percentage.
CHAPTER 5 SYSTEM IMPLEMENTATION

5-1 Setup and configuration

5-1-1 XAMPP Apache server

5-1-1-1 Step 1: Download

XAMPP version that this project is using is XAMPP version 1.7.7. To install this please go to: http://sourceforge.net/projects/xampp/files/XAMPP%20Windows/1.7.7/

Figure 5-1-1-1-F1 Figure shows selection of all the files that available to download.
5-1-1-2 Step 2: Installation

After downloaded the installer, a .exe file will be created, simply click on it to start the installation.
Figure 5-1-1-2-F1 Double click on the shortcut icon and leave the destination as C drive. Press on “install”.

After the contents are extracted, the set up script will run automatically.

Figure 5-1-1-2-F2 Enter y to allow creation of shortcut.
CHAPTER 5: SYSTEM IMPLEMENTATION

Figure 5-1-1-2-F3 Check on inserted paths and enter y to proceed.

Figure 5-1-1-2-F4 Enter n to proceed to normal installation.
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Figure 5-1-1-2-F5 Enter 1 to start XAMPP Control Panel.

Figure 5-1-1-2-F6 Allow access in case window prompts a firewall alert.
To make sure you had successfully installed the Apache web server. Type \texttt{http://localhost/} in your browser.

![XAMPP for Windows](image)

Figure 5-1-1-2-F7 Check on status of services that is running in your PC.

![XAMPP Control Panel Application](image)

Figure 5-1-1-2-F8 Manually start the Apache and MySQL if the services are not started.
5-1-2 NetBeans Framework

5-1-2-1 Step 1: Download
NetBeans that this project is using is version 7.1.2. To install this please go to: http://www.oldapps.com/netbeans.php?old_netbeans=7574#download-section

5-1-2-2 Step 2: Installation
NetBeans organization provides instruction on installation. Refer to official website http://netbeans.org/community/releases/70/install.html
5-2 Print screen and function description

5-2-1 Login

Figure 5-2-1 F1 Login pages for FYP portal.

Login page will show to user when they visit FYP portal. Users are required to enter their username and password to verify their identity. Different user will have different role and the role decide what views and function is available for them to use. If login failed, web page will notify that you are not a correct user. If it is a valid username after matching username and password with the database, it will proceed to next screen.
5-2-2 Student

Figure 5-2-2-F1 Figure shows the navigation bar of a student screen before undertake a title.

Figure 5-2-2-F2 Figure shows the navigation bar of a student screen after undertake a title.

5-2-2-1 User profile

Figure 5-2-2-1-F1 User profile will be shown once student login to the portal.
Figure 5-2-2-1-F2 Screen show how interface looks after click on edit pencil.

After login to the portal, student will see his or her personal information which included their student ID, name, email and course. Student only allows to edit their email so that supervisor easy to contact them. Other field cannot be changed.

To edit the field, click on the edit pencil at the right corner. Email field will be enable and student can update their email and click on the confirm button to submit updated email.
CHAPTER 5: SYSTEM IMPLEMENTATION

5-2-2-2 Title list

Figure 5-2-2-2-F1 Title list is shown after student click on the title list on the navigation bar.

Student able to view the latest title list by click on the title list on the navigation bar which located at the top.

Figure 5-2-2-2-F2 Student able to search by category.

Student is allowed to search title by category. Categories that can be searched include supervisor, deliverable, skill, no of student and suitable course. After student has
selected the category that they would like to search on, drop down list that is right beside the selection will reflect accordingly.

Figure 5-2-2-2-F3 Screen shows how selection of first drop down list will reflect to the drop down list right beside it.

For example supervisor is selected in first drop down list, the second drop down list will show all the supervisors who offer FYP. If student select on deliverable, selection of deliverable type will reflect on the second drop down list.
CHAPTER 5: SYSTEM IMPLEMENTATION

Figure 5-2-2-2-F4 Screen shows the result of query by category.

After selected the value of both drop down lists, click on the search button and the table will reload and show student matched result.

Figure 5-2-2-2-F5 Screen shows the search function that is available for student.

Beside of search by categories, student can also search by keywords by fill in keywords into the textbox that is right beside the search by category function.
CHAPTER 5: SYSTEM IMPLEMENTATION

Figure 5-2-2-2-F6 Result shows the result of keyword search.

Fill in the keywords that student would like to search and click on the search icon on the right hand side of the textbox. Result that is matched with the keywords provided by the student at all the field will return and shows in the table.

5-2-2-3 Book a title

After student had found their interested title in the title student may click on the hyperlink which associated with project tile name to make an appointment with supervisor.
Figure 5-2-2-3-F1 Figure show the screen after “3D depth map processing” hyperlink is being clicked.

Figure 5-2-2-3-F2 Figure shows a plug-in calendar for student to input a date.
Student is allowed to make an appointment with the supervisor by input a date and time. Click on the confirm button after student inserted both date and time.

![Validation check on empty field](image)

Figure 5-2-2-3-F3 Figure show the validation check on empty field.

Student is not allowed to make an appointment without input both date and time.

![Validation check on crash date and time with existing record](image)

Figure 5-2-2-3-F4 Figure show validation check on crash date and time with existing record.
Since it is on first come first serve basic, student is not allowed to make an appointment if other student had scheduled the same date and time in advance. Alert will notify student so that student change to another time.

Figure 5-2-2-3-F5 Figure show successfully making an appointment.

If no one has taken the schedule time, appointment is successfully made after click on confirm button.

Figure 5-2-2-3-F6 Figure shows the redirect screen after successfully make an appointment.
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After successfully make an appointment, page will redirect to “manage appointment” which allow student to manage their appointment.

5-2-2-4 Manage appointment

Figure 5-2-2-4-F1 Figure shows the legend of “manage appointment” screen.

<table>
<thead>
<tr>
<th>Status</th>
<th>Name</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pending</td>
<td>Supervisor</td>
<td>not yet approved student appointment. Appointment is pending.</td>
</tr>
<tr>
<td></td>
<td>approved</td>
<td>Supervisor approved student appointment. Supervisor free to consult at that particular time.</td>
</tr>
<tr>
<td></td>
<td>not available</td>
<td>Appointment is being rejected by supervisor. Supervisor is not available for consultation at the particular time. It could happen for appointment that has already scheduled.</td>
</tr>
<tr>
<td></td>
<td>student</td>
<td>is allowed to delete appointment at any status.</td>
</tr>
<tr>
<td></td>
<td>is allowed</td>
<td>to reschedule appointment time. Edit is disable when the title is being taken.</td>
</tr>
</tbody>
</table>

Table 5-2-2-4-T1 Table show the indication of icons at manage appointment screen.
CHAPTER 5: SYSTEM IMPLEMENTATION

Figure 5-2-2-4-F2 Figure shows screen when edit icon is clicked.

Figure 5-2-2-4-F3 Figure shows how student re-schedule a time with supervisor by change of schedule time and press on confirm.

Again, validation of no empty field and record existed will alert user to make a valid appointment. Maximum appointments that student is allowed to make is set as 3 to avoid student simply make appointment which will cause other student could not book a time for a particular title. Taken title and rejected title is not count in this case. Other than that, student can only make an appointment once for one particular title.
Figure 5-2-2-4-F4 Figure shows alert that notify student he or she cannot book more than 3 titles.

In order to book for this title, student required to delete one of the listed title before it can be booked.

5-2-2-5 My title
Under “My title”, student is able to view all his or her title details, supervisor details, moderator details, and presentation details.
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Figure 5-2-2-5-F1 Figure shows all the details of student undertake title included supervisor detail, moderator detail and presentation detail.

Figure 5-2-2-5-F2 Figure shows the moderator details of the student after moderator is being assigned.
Figure 5-2-2-5-F3 Figure shows the presentation details after presentation time had agreed by both supervisor and moderator.

5-2-3 Supervisor

5-2-3-1 User profile
CHAPTER 5: SYSTEM IMPLEMENTATION

Figure 5-2-3-1-F1 Screen shows the main page of a supervisor, moderator, admin, or super admin after login.

![Main Page Screenshot]

Figure 5-2-3-1-F2 Screen shows the edit screen of user information after click on the edit pencil at the top right corner.

Similarly, staff is allowed to update their personal details and this information will reflect to the title list at the student screen. Student becomes easier to find supervisor because they can always get the up-to-date information.

![Edit Screen Screenshot]

Figure 5-2-3-1-F3 Screen shows the room is being changed by staff.

![Room Change Screenshot]
CHAPTER 5: SYSTEM IMPLEMENTATION

Figure 5-2-3-1-F4 Screen shows the room is being edited to N103.

Figure 5-2-3-1-F5 Screen shows student screen which get the up-to-date room information.

Figure 5-2-3-1-F6 Screens show the area of interest that will affect on future moderation title.
Area of interest of a supervisor is chosen etc as default. Supervisor is encouraged to tick on the area that they are interested so that when FYP committee doing a moderator assignment, he or she may assign a project tile which is an interest of the supervisor would like to moderate.

Overall status will show at the main screen to supervisor for easy manage.

Figure 5-2-3-1-F7 Figure shows the status of no of student under supervisor and moderation.

Click on the status link “You are currently supervisor of (1) student(1)” will bring screen to “manage student” [For details of manage student refer to 5-2-3-3-2 Manage student].
Figure 5-2-3-1-F8 Figure shows the status of appointment.

Click on the status link “You have (3) Pending Appointment” will bring screen to “manage appointment” [For details of manage appointment refer to 5-2-3-3-3 Manage appointment].

Figure 5-2-3-1-F9 Figure shows the status of venue reservation for FYP presentation.

This status will only show after venue reservation is open by super admin [For details of open venue reservation refer to 5-2-5-1 Open session].
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Figure 5-2-3-1-F10 Figure shows the status of pending approval of venue reservation.

Figure 5-2-3-1-F11 Figure shows the status of confirm of venue reservation.

5-2-3-2 title

Figure 5-2-3-2-F1 Figure shows the navigation that is under title before presentation venue is ready to book. (Super admin has the privilege to open presentation booking).

Figure 5-2-3-2-F2 Figure shows the navigation that is under title after presentation venue is ready to book. (Supervisor is not supposed to add new student at this stage).
5-2-3-2-1 add new title

Figure 5-2-3-2-1-F1 Screen shows a table that required supervisor to fill in before makes title available to student.

Figure 5-2-3-2-1-F2 Screen shows a normal supervisor can only propose their own title.
CHAPTER 5: SYSTEM IMPLEMENTATION

Figure 5-2-3-2-1-F3 Screen shows an admin can propose own title or propose on behalf of other supervisor.

Figure 5-2-3-2-1-F4 Screen shows the validation of empty field before adding new title into title list.

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Figure 5-2-3-2-1-F5 Screen shows the successful add of new title on behalf of supervisor.

Figure 5-2-3-2-1-F6 Screen shows the successful added new title show in student title list.
5-2-3-2-2 add student propose title

Figure 5-2-3-2-2-F1 Screen shows the validation on empty field at “add student propose title” function and highlight the different between “add new title” and “add student propose title”.

“add student propose title” is a function for supervisor to take the student(s) under his or her supervision by student propose title while “add new title” is to add title to the public title list for potential student(s) to take.
Figure 5-2-3-2-2-F2 Screen shows the validation on invalid input value at student field while add a student propose title.

Figure 5-2-3-2-2-F3 Screen shows the successfully add a student propose title with input a valid student id.
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Figure 5-2-3-2-2-F4 Screen shows the student details after supervisor added student own propose title.

5-2-3-3 Manage

Figure 5-2-3-3-F1 Figure shows the navigation that is under managed before presentation venue is ready to book. (Super admin has the privilege to open presentation booking)

Figure 5-2-3-3-F2 Figure shows the navigation that is under manage after presentation venue is ready to book.
5-2-3-3-1 Manage title

Figure 5-2-3-3-1-F1 Screen show how the title is being organized at “manage title”.

Figure 5-2-3-3-1-F2 Screen shows the legend at “manage title”.

In manage title screen, supervisor can see all the titles which included his or her propose title and student propose title.
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<table>
<thead>
<tr>
<th>Status</th>
<th>Name</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Published</td>
<td>Supervisor had published the title. Title is available for other students but so far no student makes an appointment for this title yet.</td>
<td></td>
</tr>
<tr>
<td>Scheduled</td>
<td>Title is available for other students and there are student(s) make an appointment for this title.</td>
<td></td>
</tr>
<tr>
<td>Taken</td>
<td>Title is being taken by student(s). Title is not available for other student to take.</td>
<td></td>
</tr>
<tr>
<td>Delete</td>
<td>Delete the title. Title is no longer available for student to take. Delete of title that is taken by a student will drop the student automatically.</td>
<td></td>
</tr>
<tr>
<td>Edit</td>
<td>Supervisor is allowed to edit all the title details.</td>
<td></td>
</tr>
</tbody>
</table>

Table 5-2-3-3-1-T1 Table show the indication of icons at manage title screen.

![Image of manage title screen]

Figure 5-2-3-3-1-F3 Screen shows the edit screen at “manage title”.

Any change make at edit screen after pressing on confirm button will reflect changes at student side.
5-2-3-3-2 Manage student

Figure 5-2-3-3-2-F1 Screen show all the student(s) which is under user supervision or moderation.

<table>
<thead>
<tr>
<th>Status</th>
<th>Name</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pending</td>
<td>Supervisor is not schedule a presentation date for this student yet.</td>
<td></td>
</tr>
<tr>
<td>Scheduled</td>
<td>Supervisor scheduled a presentation date for this student and waiting for moderator approval.</td>
<td></td>
</tr>
<tr>
<td>Confirmed</td>
<td>Moderator has approved the presentation date.</td>
<td></td>
</tr>
<tr>
<td>Delete</td>
<td>Drop the student. Alert will prompt whether supervisor wanted to drop student and make title available to other student or delete the title together with the student.</td>
<td></td>
</tr>
</tbody>
</table>

Table 5-2-3-3-2-T1 Table show the indication of icons at manage student screen.

In manage student screen, supervisor is allowed to view all the students which are under supervision and moderation. Supervisor can also search student(s) who are under supervision or moderation.
Figure 5-2-3-3-2-F2 Screen shows the result of search all the students who are under supervision.

Figure 5-2-3-3-2-F3 Screen shows the result of search all the students who are under moderation.

Figure 5-2-3-3-2-F4 Screen shows the presentation venue reservation has sent to moderator for student, Lai Yok Zhong.
Figure 5-2-3-2-2-F5 Screen shows the presentation venue reservation has been approved by moderator for student, Lai Yok Zhong.

This screen is basically allowed supervisor to view all the student details which are under their supervision or moderation. Besides of this, this screen also helps supervisor to keep track on their presentation venue reservation status so that they not miss out any of their student.
5-2-3-3-3 Manage appointment

Figure 5-2-3-3-3-F1 Screen shows the manage appointment screen.

Legend above shows the color indication of all titles which has a student appointment. Title which does not have student appointment will not show here. Supervisor is allowed to accept appointment made by student within 2 weeks which is on current week and coming week.
CHAPTER 5: SYSTEM IMPLEMENTATION

Table 5-2-3-3-3-T1 Table show the indication of icons at manage appointment screen.

<table>
<thead>
<tr>
<th>Status</th>
<th>Name</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pending</td>
<td>Supervisor is not response to student appointment yet.</td>
<td></td>
</tr>
<tr>
<td>Scheduled</td>
<td>Supervisor approved student appointment.</td>
<td></td>
</tr>
<tr>
<td>Approved</td>
<td>Student decided to take this title after consultation. Title is taken by this student.</td>
<td></td>
</tr>
<tr>
<td>Delete</td>
<td>Reject appointment. Appointment is removed after delete.</td>
<td></td>
</tr>
</tbody>
</table>

Figure 5-2-3-3-3-F2 Screen shows the message that is prompt after appointment is being approved by supervisor.

By check on the color cell which indicate an appointment scheduled by student and click on the confirm button, appointment is approved and student will be notify the appointment is being approved.
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Figure 5-2-3-3-3-F3 Screen shows the appointment is being approved successfully.

Figure 5-2-3-3-3-F4 Screen shows the appointment is being approved and reflected at student side.

Figure 5-2-3-3-3-F5 Screen shows message prompt to user when user about to reject the appointment by pressing on delete icon.
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Figure 5-2-3-3-3-F6 Screen shows appointment is being rejected. Appointment is removed from the row.

Figure 5-2-3-3-3-F7 Screen shows appointment is being rejected and notified at student screen.

In order to approve a student to take the title, supervisor required to click on “manage appointment” and click on the hyperlink associated with the title name under a particular student to proceed to next screen.

Figure 5-2-3-3-3-F8 Screen shows after click on the hyperlink.

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Figure 5-2-3-3-3-F9 Screen shows approve title screen which allow more than one student to take the title.

Student ID field default will populate student ID who made this appointment. For student who wants to form a group will need to present themselves on meeting day and give supervisor their ID.

Figure 5-2-3-3-3-F10 Screen shows the empty field validation before approve student undertake a title.
Figure 5-2-3-3-3-F11 Screen shows invalid student id validation before approve student undertake a title.

Figure 5-2-3-3-3-F12 Screen shows supervisor successfully added students under his supervision with title: “Moveable wireless sensor network (fly)”.  

Figure 5-2-3-3-3-F13 Screen redirect to “manage student” screen after successfully added.
5-2-3-3-4 Manage presentation

Figure 5-2-3-3-4-F1 Figure shows the screen of “Manage presentation”.

In manage presentation screen, supervisor can only reserve one slot for one particular student. In order to book a presentation venue for a student, supervisor required to check on one of the checkbox that represent date and time. A pop-up window will then prompts to supervisor and supervisor required to specific for which student he or she would like to make a reservation.
### Table 5-2-3-3-4-T1
Table describes indication of all the colors.

<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Pending</td>
<td>Reservation of venue is made by you and is waiting for moderator approval.</td>
</tr>
<tr>
<td>Red</td>
<td>Confirm</td>
<td>Reservation of venue is approved by moderator or you as a moderator had approved the request sent by other supervisor. Student will be notified of the presentation date.</td>
</tr>
<tr>
<td>Blue</td>
<td>Request for approval</td>
<td>Reservation is made by other supervisor and he or she request for your approval/confirmation.</td>
</tr>
<tr>
<td>Gray</td>
<td>Blocked slot</td>
<td>Slot is blocked by admin. Slot is not available for FYP presentation.</td>
</tr>
<tr>
<td>Orange</td>
<td>Taken/Occupied</td>
<td>Slot is booked by other supervisor. It can be still pending or already confirm.</td>
</tr>
</tbody>
</table>

### Table 5-2-3-3-4-T2
Table describes indication of all the status icons.

<table>
<thead>
<tr>
<th>Status</th>
<th>Name</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Icon]</td>
<td>Pending</td>
<td>Reservation is made by other supervisor and the request is pending for your approval/confirmation.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Pending for approval</td>
<td>Reservation is made by other supervisor and he or she request for your approval/confirmation.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Confirm</td>
<td>Reservation of venue is approved by moderator or you as a moderator had approved the request sent by other supervisor. Student will be notified of the presentation date.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Delete</td>
<td>Cancel reservation (only supervisor can cancel their own reservation). It can be in pending or confirm stage.</td>
</tr>
</tbody>
</table>
Figure 5-2-3-3-4-F2 Figure shows the pop-up window after supervisor check on one of the checkbox.

Figure 5-2-3-3-4-F3 Title list shows all the student’s titles that has not reserve a presentation venue.
Figure 5-2-3-3-4-F4 Screen shows the student and moderator name after a title is selected.

Figure 5-2-3-3-4-F5 Figure shows a student drop down list when selected title has more than one student.
CHAPTER 5: SYSTEM IMPLEMENTATION

Figure 5-2-3-3-4-F6 Figure shows the reservation request is sent to moderator after a confirm button is clicked.

Figure 5-2-3-3-4-F7 Figure shows the pending status at the checkbox and table in supervisor view.

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Figure 5-2-3-3-4-F8 Figure shows the pending for approval status at the checkbox and table in moderator view.

Figure 5-2-3-3-4-F9 Figure shows the pop-up window for a moderator to approve the request after checked on the pending for approval request.
Figure 5-2-3-3-4-F10 Figure shows moderator had successfully approve the request.

Figure 5-2-3-3-4-F11 Figure shows the venue reservation is being confirm - supervisor view.
Figure 5-2-3-3-4-F12 Figure shows the venue reservation is being confirm - moderator view.

Figure 5-2-3-3-4-F13 Figure shows the venue reservation is being confirm – other supervisor view (Neither supervisor or moderator).
Figure 5-2-3-3-4-F14 Figure shows student home page when venue reservation for his/her FYP presentation is confirmed.

Figure 5-2-3-3-4-F15 Figure shows another screen that consists of presentation information.
Figure 5-2-3-3-4-F16 Figure shows the delete confirmation after supervisor click on the delete button.

Figure 5-2-3-3-4-F17 Figure shows an alert to supervisor that presentation venue reservation has been deleted.

Figure 5-2-3-3-4-F18 Figure shows the alert that supervisor does not allow to book after all student has already reserved a time slot.
Supervisor is required to delete the previous reservation request in order to make a new reservation request.

5-2-3-4 Assessment

Figure 5-2-3-4-1-F1 Screen shows the navigation that is under assessment.

5-2-3-4-1 My students

Figure 5-2-3-4-1-F2 Screen show all the student assessment elements for FYP 1.

Figure 5-2-3-4-1-F3 Screen show sub-assessment elements under individual assignment.
**CHAPTER 5: SYSTEM IMPLEMENTATION**

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**Assessment of Preliminary Report**

<table>
<thead>
<tr>
<th>Key assessment</th>
<th>Scale</th>
<th>Marks</th>
<th>Full Marks (%)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project background</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literature Review</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Scope &amp; objective</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methodology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grammar &amp; writing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0 / 20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

- None

---

**Figure 5-2-3-4-1-F4** Screen show sub-assessment elements under preliminary report.

**Figure 5-2-3-4-1-F5** Screen show how marks are being converted by entering scale.

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By enter scale to each key assessment element, marks will automatically convert to percentage based on the total marks allocate for the particular key assessment element.

Figure 5-2-3-4-1-F6 Screen show auto calculated total after all marks has been entered.

Figure 5-2-3-4-1-F7 Screen show marks and grade is being computed and show at “my students” screen.

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Supervisor can always update student marks and the marks that are inserted will be viewable by super admin.

5-2-3-4-2 Moderation

5-2-4 Admin

Figure 5-2-4-F1 Figure shows the navigation link of an admin before presentation reservation is being opened by super admin [For open presentation details refer to 5-2-5-1 Open session].

Figure 5-2-4-F2 Figure shows the navigation link of an admin after presentation reservation is being opened by super admin.

5-2-4-1 Assign moderator

Figure 5-2-4-1-F1 Figure shows the screen of assign moderator.
In this screen, admin is allowed to assign moderator to a student. This screen is separate into 2 portions. On top is a workload table that allowed admin to view supervisor workload before assigns a student under their moderation while at the bottom, screen render a table of all the students who has an approved title. A moderator suggestion list will populate at a drop down list for admin to refer so that a better decision on moderation assignment can be made. This suggestion list is populated base on the area of interest of the supervisor.

Figure 5-2-4-1-F2 Figure shows the screen that allow supervisor to edit their area of interest which will affect the moderator assignment suggestion list.

Figure 5-2-4-1-F3 Figure shows the suggestion list for the title “business application”.

Figure 5-2-4-1-F4 Figure shows the area of expertise that is required for title “business application”.

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Figure 5-2-4-1-F5 Figure shows the matches area of interest of supervisor with title “business application” at Figure 5-2-4-1-F4.

Figure 5-2-4-1-F6 Figure shows the matches area of interest of supervisor with title “business application” at Figure 5-2-4-1-F4.

Figure 5-2-4-1-F7 Figure shows how admin change suggested moderator to all the supervisors.
CHAPTER 5: SYSTEM IMPLEMENTATION

<table>
<thead>
<tr>
<th>Status</th>
<th>Name</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pending</td>
<td>Student is not assigned with any moderator yet.</td>
<td></td>
</tr>
<tr>
<td>Confirmed</td>
<td>Student is assigned with a moderator and student notified with the assignment. Moderator can be changed in this status.</td>
<td></td>
</tr>
</tbody>
</table>

Table 5-2-4-1-T1 Table shows the status indication.

Figure 5-2-4-1-F8 Figure shows the information message that prompt to user after confirm button is pressed.

Figure 5-2-4-1-F9 Figure shows the validation check in moderator assignment. Moderator cannot be “None”.

Figure 5-2-4-1-F10 Figure shows the workload table that allowed admin to make better decision on moderator assignment.

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118
Figure 5-2-4-1-F11 Figure shows all the criteria that allow to search or sort.

Figure 5-2-4-1-F12 Figure shows the result of searching by supervisor name.

Figure 5-2-4-1-F13 Figure shows the result of sorting by number of students under supervision in descending order.

Figure 5-2-4-1-F14 Figure shows the result of sorting by number of students under moderation in descending.
Figure 5-2-4-1-F15 Figure shows the result of sorting by number of students under moderation in descending order.

Figure 5-2-4-1-F16 Figure shows the result of sorting by total weightage in ascending order.

After all the students have assigned with moderator, venue reservation for FYP presentation is now allowed to open. Privilege of open presentation venue reservation is granted to super admin.
5-2-4-2 Manage skill

Figure 5-2-4-2-F1 Figure shows the screen of manage skill.

This screen is use to maintain skill list. Admin is allowed to add new skill and update existing skill.

Figure 5-2-4-2-F2 Figure shows the validation check on empty input.
Figure 5-2-4-2-F3 Figure shows the validation check on existing record before add a new skill. Validation is not case sensitive.

Figure 5-2-4-2-F4 Figure shows the edit screen after edit pencil is being click.

Figure 5-2-4-2-F5 Figure shows message prompt to user when skill successfully edited.
CHAPTER 5: SYSTEM IMPLEMENTATION

5-2-4-3 Maintain marking scheme
Maintain marking scheme is a maintenance screen for an admin to manage the marking scheme in a dynamic way. Admin can change the marks allocation for different assessment elements with ease. Admin can also add a new assess criteria for supervisor or moderator without manually make changes to excel file.

Figure 5-2-4-3-F1 Figure shows the maintain screen of marking scheme.

Figure 5-2-4-3-F2 Figure shows the total evaluation marks of a moderator before adding new assess elements to moderator.
Figure 5-2-4-3-F3 Figure show total evaluation marks of a moderator at super admin screen of “view all student assessment” before new assessment element is added.

Figure 5-2-4-3-F4 Figure shows how to add a new evaluate criteria to a moderator.

Choose of a “None” parent will create a new main assessment while choose of “Preliminary report” as a parent will create a new sub-assessment under “Preliminary report”.

Figure 5-2-4-3-F5 Figure shows a successfully add of new assessments element.
CHAPTER 5: SYSTEM IMPLEMENTATION

Figure 5-2-4-3-F6 Figure shows a successfully add of new assessments element in table rows.

Figure 5-2-4-3-F7 Figure shows the changes at assessment at supervisor side.

New main assessment element is added and the total marks that are evaluated by a moderator is also changed accordingly.

Figure 5-2-4-3-F8 Figure shows the changes at super admin screen of “view all student assessment” after new main assessment element is added.
Figure 5-2-4-3-F9 Figure shows the wrong assessment screen when moderator wants to add marks for demonstration.

Moderator has no field to enter their marks for demonstration.

Figure 5-2-4-3-F10 Figure shows how admin add a sub-assessment for demonstration.
Figure 5-2-4-3-F11 Figure shows the correct assessment screen when moderator wants to add marks for demonstration.

Figure 5-2-4-3-F12 Figure shows the edit screen of maintain assessment.

Admin is allowed to change the assessment name, marks allocation, parent, and people who evaluate the assessment by click on the edit pencil.

Figure 5-2-4-3-F13 Figure shows the change of person who evaluate demonstration.

Figure 5-2-4-3-F14 Figure shows the change of name of assessment, marks allocation and people who evaluate it.
CHAPTER 5: SYSTEM IMPLEMENTATION

Figure 5-2-4-3-F15 Figure shows the assessment screen of a moderator where the demonstration no longer under their evaluation.

Figure 5-2-4-3-F16 Figure shows the assessment screen of a supervisor where the demonstration turns up as a new main assessment.

Figure 5-2-4-3-F17 Figure shows the change of assessment and marks allocation of relevant functionality.
Figure 5-2-4-3-F18 Figure shows the update of assessment mark for demonstration after submit button is clicked.

The FYP portal will automatically convert the total marks that student get for demonstration to the percentage allocation for this assessment. For example, student get 9 out of 10 marks for the demonstration but the marks allocation for the demonstration of the overall result is only 5%, system automatically convert the marks to percentage therefore student get 4.5 out of 5 percent for this assessment.

Figure 5-2-4-3-F19 Figure shows the validation check on empty input when admin would like to edit on assessment name.

Figure 5-2-4-3-F20 Figure shows the validation check on non-numeric input when admin would like to edit on marks allocation.
Figure 5-2-4-3-F21 Figure shows the alert prompt before admin delete an assess element.

Figure 5-2-4-3-F22 Figure shows the alert prompt to admin of the failure of delete the assessment due to the assessment has sub-assessment under it.

Figure 5-2-4-3-F23 Figure shows the student result on preliminary report before delete of sub-assessment.
Figure 5-2-4-3-F24 Figure shows the student details of result on preliminary report before delete of sub-assessment.

Figure 5-2-4-3-F25 Figure shows the successful delete of “reference” which is under preliminary report.
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Figure 5-2-4-3-F26 Figure shows the student details of result on preliminary report after “reference” is being deleted.

Figure 5-2-4-3-F27 Figure shows the student result on preliminary report after “reference” is being deleted.

Marks allocation for preliminary report is 20% and student got 10.2 over 18.

Final marks = \( \frac{10.2}{18} \times 20 = 11.333333 \)
Result for preliminary report will be rounded off with floor() method, therefore result of the student is still 11%.

5-2-4-4 Manage presentation

Figure 5-2-4-4-F1 Figure shows the navigation available under manage presentation.

5-2-4-4-1 Manage presentation venue

Figure 5-2-4-4-1-F1 Figure shows the screen of “manage presentation venue”.

Figure 5-2-4-4-1-F2 Figure shows the validation check on empty value while adding new venue.
Figure 5-2-4-4-1-F3 Figure shows the validation check on existing record while adding new venue.

Figure 5-2-4-4-1-F4 Figure shows the new venue “N002” has successfully added.

Figure 5-2-4-4-1-F5 Screen shows new venue is available to book at manage appointment. [For details of manage appointment refer to 5-2-3-3-3 Manage appointment]
Figure 5-2-4-4-1-F6 Screen shows validation check on existed venue.

Figure 5-2-4-4-1-F7 Screen shows validation check on empty value when edit venue.

Figure 5-2-4-4-1-F8 Screen shows a successfully update of venue name.
Figure 5-2-4-4-1-F9 Screen shows a supervisor manage appointment screen before venue name is being updated.

Figure 5-2-4-4-1-F10 Screen shows a supervisor manage appointment screen after venue name is being updated.
Figure 5-2-4-4-1-F11 Screen shows an alert prompt to admin before venue is being deleted.

Figure 5-2-4-4-1-F12 Screen shows an alert which indicate the successful of delete venue.

Figure 5-2-4-4-1-F13 Screen shows the screen of manage appointment after room N003 has been remove.
5-2-4-4-2 Manage presentation block slot

Figure 5-2-4-4-2-F1 Figure shows the screen of manage presentation block slot.

Manage block slot screen is a maintenance screen to manage all the available slots for FYP presentation venue reservation. Admin is allowed to block slots that are not available for presentation. Blocking is given main priority whereby admin is allowed to block a slot that is already scheduled by supervisor. System does not support notify of supervisor that the scheduled slot has been blocked by admin, therefore, admin will required to manually notify the particular supervisor on the blocking event.
<table>
<thead>
<tr>
<th>Color</th>
<th>Description</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Blocked slot</td>
<td>Slot is blocked by admin. Slot is not available for FYP presentation.</td>
</tr>
<tr>
<td></td>
<td>Presentation in</td>
<td>Slot is booked by other supervisor. It can be still pending or</td>
</tr>
<tr>
<td></td>
<td>scheduled</td>
<td>already confirm.</td>
</tr>
</tbody>
</table>

Table 5-2-4-4-2-T1 Table describe indication of color in manage presentation block slot screen.

<table>
<thead>
<tr>
<th>Status</th>
<th>Name</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pending</td>
<td>Reservation is made by other supervisor and the request is pending for your</td>
</tr>
<tr>
<td></td>
<td></td>
<td>approval/confirmation.</td>
</tr>
<tr>
<td>✔️</td>
<td>Confirm</td>
<td>Reservation of venue is approved by moderator or you as a moderator had</td>
</tr>
<tr>
<td></td>
<td></td>
<td>approved the request sent by other supervisor. Student will be notified of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the presentation date.</td>
</tr>
</tbody>
</table>

Table 5-2-4-4-2-T2 Table describe indication of status icons in manage presentation block slot screen.
Figure 5-2-4-4-2-F2 Figure shows the presentation venue reservation is in scheduling by supervisor “Goh Hock Guan” and it is in pending of approval from moderator “Yap Seok Gee”.

Figure 5-2-4-4-2-F3 Figure shows the presentation venue reservation is scheduled by supervisor “Goh Hock Guan” and approved by moderator “Yap Seok Gee”.

Figure 5-2-4-4-2-F4 Figure shows the alert prompt to admin after successfully updated of block slots.
Figure 5-2-4-4-2-F5 Figure shows the output screen after admin successfully updated the block slots – view of admin.

Figure 5-2-4-4-2-F6 Figure shows the output screen after admin successfully updated the block slots – view of moderator and supervisor.
CHAPTER 5: SYSTEM IMPLEMENTATION

Figure 5-2-4-4-2-F7 Figure shows the successful update on block slot on a scheduled slot.

Admin is required to manually inform to supervisor “Goh Hock Guan” and moderator Yap Seok Gee about their scheduled presentation venue reservation is not available due to certain reason. If it happened that the status is in “Scheduling”, admin only required to inform to supervisor on the changes since moderator has not approve the reservation request yet.
Figure 5-2-4-4-2-F8 Figure shows the output screen after successful update of a block slot on a scheduled slot – view of admin.

Figure 5-2-4-4-2-F9 Figure shows the output screen after successful update of a block slot on a scheduled slot – view of supervisor and moderator.
Figure 5-2-4-4-2-F10 Figure shows the manage presentation block slot screen with all the available venues.

Figure 5-2-4-4-2-F11 Figure shows the search function in manage presentation block slot screen.
Figure 5-2-4-4-2-F12 Figure shows the output screen of search by “N001”.

Figure 5-2-4-4-2-F13 Figure shows the output screen of search by “N002”.

Figure 5-2-4-4-2-F14 Figure shows the edit screen of range of presentation date.
Figure 5-2-4-4-2-F15 Figure shows the successful update of presentation range from 09/04/2013 – 19/03/2013 to 09/03/2013 – 12/04/2013.

Note: Change of presentation date will delete reservation records that are out of the date range.

Figure 5-2-4-4-2-F16 Figure shows the venue reservation table before presentation date range is changed.
Figure 5-2-4-4-2-F17 Figure shows the venue reservation table changed after date ranged is edited.

Figure 5-2-4-4-2-F18 Figure shows the effect on supervisors’ manage presentation screen after presentation date range is changed.

5-2-5 Super admin

Figure 5-2-5-F1 Figure shows the navigation bar of a super admin before open session.
5-2-5-1 Open session – open presentation slot booking

Figure 5-2-5-1-F1 Figure shows the screen of open session under a super admin.

This screen is basically for a super admin to open the presentation slot booking session so that all the supervisors are allowed to book a presentation slot for their student. Session is only allowed to open after all the students has assigned with a moderator. This is because system is required to know who the moderator of the student is in order to send a request to the respective moderator to gain approval for the presentation time. Super admin required to specific a range of date of presentation will hold and at least one venue open for booking.
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Figure 5-2-5-1-F2 Figure shows the validation check on empty field at open session screen.

Figure 5-2-5-1-F3 Figure shows system allowed open venue for more than one room.
Figure 5-2-5-1-F4 Figure shows a prompt of date picker calendar to user when the calendar icon is being clicked.

Figure 5-2-5-1-F5 Figure shows session has been successfully opened.
5-2-5-2 Manage admin

Figure 5-2-5-2-F1 Figure shows the screen of manage admin.

This screen is use to maintain user privilege on accessing certain screen.
### Icons | Description | Indication
---|---|---
Super admin | Super admin has privilege of admin and normal user and privilege of open session, close session, manage admin, and view all student assessments. [For details of super admin privilege refer to 5-2-5 Super admin] |  
Admin | Admin has privilege of normal user and privilege of assign moderator, manage skill, maintain marking scheme, manage presentation. [For details of admin privilege refer to 5-2-4 Admin] |  
Normal user | Normal user has privilege of user profile, add new title, add student propose title, manage title, manage student, manage appointment, manage presentation, assessment of my students, assessment of moderation. [For details of normal user privilege refer to 5-2-3 Supervisor] |  
Active | User is active. Titles which are offer by this user will show in student title list. |  
Inactive | User is inactive. Titles which are offer by this user will not show in student title list. |  

Table 5-2-5-2-T1 Table describes indication of icons in manage admin screen.

![Figure 5-2-5-2-F2](image)

Figure 5-2-5-2-F2 Figure shows the selection of role can be assigned to a new user.
CHAPTER 5: SYSTEM IMPLEMENTATION

Figure 5-2-5-2-F3 Figure shows the validation check on empty input before add a new admin.

Figure 5-2-5-2-F4 Figure shows the successful add of new user.

Figure 5-2-5-2-F5 Figure shows the successful login as normal user by enter “11121” as username and “abc123” as password.
Figure 5-2-5-2-F6 Figure shows privilege of user Wong Chee Siang is changed.

Figure 5-2-5-2-F7 Figure shows the role change of user Wong Chee Siang from normal user to admin.

Figure 5-2-5-2-F8 Figure shows the alert for role change to super admin.
Figure 5-2-5-2-F9 Figure shows the role change of user Wong Chee Siang from admin to super admin.

Figure 5-2-5-2-F10 Figure shows the user Sohail Safdar status is changed from active to inactive.

Figure 5-2-5-2-F11 Figure shows the title list from student view before status is changed to inactive.
Figure 5-2-5-2-F12 Figure shows supervisor “Sohail Safdar” is no longer available in the selection list and all his offer titles disappear in the title list.

5-2-5-3 Student assessment

Figure 5-2-5-3-F1 Figure shows all the student result for FYP1.

Student assessment screen will shows all the student assessment by supervisor and moderator and compute of final marks. Super admin is allowed to sort the list by descending or ascending. Besides, super admin can also search the student results which have high discrepancy marks between supervisor and moderator.
Figure 5-2-5-3-F2 Figure shows the sorting result by descending order.

Figure 5-2-5-3-F3 Figure shows the searching result of marks discrepancy that is more than 15%.

Figure 5-2-5-3-F4 Figure shows the high discrepancy marks found in the result list. To view supervisor and moderator grading detail, click on the title link.
Figure 5-2-5-3-F5 Figure shows the details of assessment by supervisor and moderator after title link is clicked.

5-2-6 Log out

Figure 5-2-6-F1 Figure shows the log out link at the top of the navigation bar.
CHAPTER 6 PROJECT REVIEW AND DISCUSSION

After the system has been successfully developed, objectives that were previously set are now being evaluated.

Objective 1: To propose an online solution on the current work flow into more systematic and effective way.

System has been successfully developed and this system is able to solve issues such as static title list, high workload of operator in managing presentation slot, high workload of admin in maintenance FYP information and many others. Table below describe how system transform the FYP undertaking flow become more systematic and effective.

<table>
<thead>
<tr>
<th>Event related to: title list</th>
<th>No.</th>
<th>Issues</th>
<th>Solution</th>
<th>Achieved?</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Static title list, student hardly get latest title information</td>
<td>1.</td>
<td>Develop dynamic title list in FYP portal</td>
<td>✓</td>
<td>- Student able to view latest title list whenever they login to FYP portal. - Student able to search for their interest title faster by provided search function. - Student do not required download the latest version of title list from FICT web.</td>
<td></td>
</tr>
<tr>
<td>2. Procedure of adding new title into title list.</td>
<td>2.</td>
<td>Modules that allow supervisor add new title into the list.</td>
<td>✓</td>
<td>- Eliminate procedure of filling a form in order to add a new title. - Publishing a new title</td>
<td></td>
</tr>
</tbody>
</table>
3. **Maintenance of title list**: Delegate task to supervisor own self.  
   - Achieved?  
   - Contribution: - Reduce workload

### Event related to: Appointment

<table>
<thead>
<tr>
<th>No.</th>
<th>Issues</th>
<th>Solution</th>
<th>Achieved?</th>
<th>Contribution</th>
</tr>
</thead>
</table>
| 4.  | **Hard to manage appointments** | Modules that help student and supervisor manage appointment easily.     | ✓         | - Student easy to schedule / re-schedule an appointment. (No need to write an email)  
   |                               |                                                                          |           | - Supervisor able to view all appointments in one screen.                     |
   |     |                                |                                                                          |           | - Accept or reject appointment with a single click.                           |

### Event related to: Moderator assignment

<table>
<thead>
<tr>
<th>No.</th>
<th>Issues</th>
<th>Solution</th>
<th>Achieved?</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td><strong>Time consuming in moderator assignment process.</strong></td>
<td>Modules that help admin make better decision.</td>
<td>✓</td>
<td>- Admin able to make decision based on supervisor workload.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Admin able to make decision based on moderator area of interest.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- Ensure all students have assigned a moderator.</td>
</tr>
</tbody>
</table>

### Event related to: Presentation venue reservation

<table>
<thead>
<tr>
<th>No.</th>
<th>Issues</th>
<th>Solution</th>
<th>Achieved?</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. Heavy operator workload.
   Modules that allow operator maintain available time slot.

7. Hard to arrange presentation time.
   Modules that show slot availability.

---

<table>
<thead>
<tr>
<th>Event related to: Student evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
</tr>
<tr>
<td>-----</td>
</tr>
</tbody>
</table>
| 8.  | Human error in marks compilation. | System compiles final marks. | ✓ | - Reduce workload  
- Reduce calculation error. |
- Validation check. |

Table 5-T1 Table show how FYP portal achieved effectiveness by solving some issues.
Objective 2: To shorten time spent in manage FYP related event

Some of the processes in FYP flows can be eliminate or improved. By eliminate unnecessary processes in FYP undertaking flow, time that previously used to manage those processes can be saved. Not only that, system also helps user to save their time by improve some of the processes that are mandatory. Table below describes how system achieved time saving for different users.

<table>
<thead>
<tr>
<th>User</th>
<th>No.</th>
<th>Action</th>
<th>Before system implemented</th>
<th>After system implemented</th>
<th>Achieved?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>1.</td>
<td>Eliminate</td>
<td>Has student book for taken title</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>2.</td>
<td>Improve</td>
<td>Write an email to make an appointment</td>
<td>Input date and time to make an appointment.</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>3.</td>
<td>Improve</td>
<td>Static title list</td>
<td>Dynamic title list with search function support.</td>
<td>✓</td>
</tr>
<tr>
<td>Supervisor</td>
<td>4.</td>
<td>Eliminate</td>
<td>Notify student if title is taken</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>5.</td>
<td>Improve</td>
<td>Fill in a form to add new title and submit to FGO.</td>
<td>Directly add a title.</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>6.</td>
<td>Improve</td>
<td>Manually manage student appointment</td>
<td>Systematically show all student appointments.</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>7.</td>
<td>Improve</td>
<td>Reply email for accept or reject appointment.</td>
<td>Click to accept or reject appointment.</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>8.</td>
<td>Improve</td>
<td>Communicate with operator to get latest information of the available slots.</td>
<td>View on FYP portal.</td>
<td>✓</td>
</tr>
</tbody>
</table>
9. Improve Collect moderator evaluation, combine, compile, and submit Submit evaluation. ✓

User : FYP committee

<table>
<thead>
<tr>
<th>No.</th>
<th>Action</th>
<th>Before system implemented</th>
<th>After system implemented</th>
<th>Achieved?</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td>Eliminate Gather supervisor new propose title form and update title list.</td>
<td>-</td>
<td>System suggests moderator based on moderator area of interest, workload table provides information of every supervisor workload.</td>
<td>✓</td>
</tr>
<tr>
<td>11.</td>
<td>Improve Manually assign moderator to student.</td>
<td>System suggests moderator based on moderator area of interest, workload table provides information of every supervisor workload.</td>
<td>Maintain presentation venue availability on web.</td>
<td>✓</td>
</tr>
<tr>
<td>12.</td>
<td>Improve Deal with every supervisor in presentation venue reservation.</td>
<td>Maintain presentation venue availability on web.</td>
<td>Maintain presentation venue availability on web.</td>
<td>✓</td>
</tr>
<tr>
<td>13.</td>
<td>Improve Manually review all student assessments.</td>
<td>Provide sort function on different discrepancy and final marks.</td>
<td>Provide sort function on different discrepancy and final marks.</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 5-T2 Table show how FYP portal shorten different user time in managing FYP.
CHAPTER 7 CONCLUSION AND RECOMMENURATION

After web portal is being implemented, FYP undertaking flow becomes shorter. Processes like manually update of title list and marking scheme, notify student about the title status, and final marks compilation will be removed. Remove of these processes save more time for a user and therefore they can perform better in other activities.

If system were to put into practice, users might have difficulty in adopt into a brand new system and tend to has more comments. In order to get user acceptance, briefing of how this system can benefit and training on the modules are necessary. After user experienced to use the system, collect their feedbacks and from there system will be enhanced and refined in the future.

As time goes by, system will grow bigger and might cover all the FYP processes. Table below describe some recommendation for future development.

<table>
<thead>
<tr>
<th>No.</th>
<th>Recommendation</th>
<th>Explanation</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Create reusable template</td>
<td>It is noticeable that some of the screens are repeated. All these repeating screens consist of similar codes but with different variable. Transform these code into a file and call it when need it will reduce number of repeating codes and thus increase performance of a webpage generation.</td>
<td>- Easy maintenance for future development. Any changes of standard screen can change in the template instead of change on every screen. - Backend code structure and organized.</td>
</tr>
<tr>
<td>2.</td>
<td>User oriented system</td>
<td>Requirements collect for system development is mainly through supervisor. Since every user will has different perspective view and</td>
<td>- Clearer user expectation and system that created based on user requirement will</td>
</tr>
</tbody>
</table>
expectation to the system, it is desirable to collect different user requirements and refine accordingly.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Include students who take FYP II into the system</td>
</tr>
<tr>
<td></td>
<td>Modules is developed based on FYP I students for current stage. Supervisor needs to go through processes such as add students, book presentation venue, and insert marks for student to complete a cycle. Suppose student records already existed when they first take FYP I, system needs to recognize them and allow supervisor to book a presentation venue and insert marks for student who take FYP II.</td>
</tr>
<tr>
<td></td>
<td>- System support more users instead of only FYP I student.</td>
</tr>
<tr>
<td></td>
<td>- Manage concurrently as supervisor does not need to separately manage FYP I and FYP II students.</td>
</tr>
<tr>
<td>4.</td>
<td>Integrate with supervisor workload system</td>
</tr>
<tr>
<td></td>
<td>There are another system has been developed to manage supervisor workload. By integrate workload system and FYP portal together, the better artificial intelligent the system can have. For example, system can help supervisor to reject appointments after map with the workload table.</td>
</tr>
<tr>
<td></td>
<td>- Reduce supervisor workload as supervisor will not receive any appointment requests on unavailable time.</td>
</tr>
<tr>
<td>5.</td>
<td>Enhance of reservation module</td>
</tr>
<tr>
<td></td>
<td>Current development only allows one reservation request for one student. In the future, system may allow supervisor to book multiple times for a student. Reservation become first come first serve basic</td>
</tr>
<tr>
<td></td>
<td>-More flexible, supervisor can has multiple options for venue reservation.</td>
</tr>
</tbody>
</table>

Table 7-F1: Table describes of possible future enhancement.
REFERENCES

REFERENCES


APPENDIX A: POSTER
Objective

1. To propose an online solution on the current work flow into more systematic and effective.

2. To shorten time spent in manage FYP related event.

Scope

By using Apache, MySQL, and PHP technologies to develop an online solution which will improve the process of title list, moderator assignment, presentation venue reservation, and FYP evaluation.

Methodology

Collect user requirements through active, passive observation, and closely work with supervisor. Spiral SDLC is being used throughout the project for a highly customize web solution. Basic system design diagram such as use case, ERD, and data dictionary are documented for system implementation and future references.

Conclusion & Recommendation

After system has been developed, time spent for manage FYP become shorten and more effective. In the near future, developer would focus more on user feedbacks and enhancement of system.

By: Lim Shu Shin
APPENDIX B: BI-WEEKLY REPORT
# FINAL YEAR PROJECT BIWEEKLY REPORT

*(Project II)*

<table>
<thead>
<tr>
<th>Trimester, Year: T3Y3</th>
<th>Study week no.: 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Name &amp; ID: Lim Shu Shin 0903525</td>
<td></td>
</tr>
<tr>
<td>Supervisor: Mr. Goh</td>
<td></td>
</tr>
<tr>
<td>Project Title: Online Final Year Project System for FICT, UTAR using AMP Technologies.</td>
<td></td>
</tr>
</tbody>
</table>

## 1. WORK DONE

*Please write the details of the work done in the last fortnight.*

- Login page is successfully done, every pages will verify the privilege of access.
- title can be display to student dynamically.
- supervisor can add title and display on student side.
- verification on title add on supervisor side is added. (important field cannot omit.)

## 2. WORK TO BE DONE

- Continue with student able to book a title for maximum 3 and they can cancel their booked title.
### 3. PROBLEMS ENCOUNTERED

- None.

### 4. SELF EVALUATION OF THE PROGRESS

Trying to finish it by week 10 and week 11 can focus more on documentation. Have to rush everyday so that modules can be successfully summit on time.

_________________________   _______________________ 
Supervisor’s signature                  Student’s signature
APPENDICES B

FINAL YEAR PROJECT BIWEEKLY REPORT

(Project II)

Trimester, Year: T3Y3  Study week no.: 3
Student Name & ID: Lim Shu Shin 0903525
Supervisor: Mr. Goh
Project Title: Online Final Year Project System for FICT, UTAR using AMP Technologies.

1. WORK DONE
[Please write the details of the work done in the last fortnight.]

- Establish linkage between title propose and student booking title. On first come first serve basic. All students are allowed to book a title if title is not taken or officially approve by supervisor. Contraint added so student will not book every title. Only 3 title is allow to book by a student.
- Student allow to manage booked title. They can delete booked title, and edit schedule date.
  (will be reflect at supervisor side.)
- Supervisor can view all the booking by student. (Successfully render color at checkbox background indicated the title booked at that particular time)
2. WORK TO BE DONE

- Approved booking time to inform student that supervisor is okay with the time that they scheduled for meeting.
- Approve the title, and title is no longer view by other student.
- Allow multiple student take a title.
- Start venue reservation module.

3. PROBLEMS ENCOUNTERED

- None.

4. SELF EVALUATION OF THE PROGRESS

Trying to finish it by week 10 and week 11 can focus more on documentation. Have to rush everyday so that modules can be successfully summit on time.

_________________________   _______________________ 
Supervisor’s signature                 Student’s signature
FINAL YEAR PROJECT BIWEEKLY REPORT

(Project II)

<table>
<thead>
<tr>
<th>Trimester, Year: T3Y3</th>
<th>Study week no.: 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Name &amp; ID: Lim Shu Shin 0903525</td>
<td></td>
</tr>
<tr>
<td>Supervisor: Mr. Goh</td>
<td></td>
</tr>
<tr>
<td>Project Title: Online Final Year Project System for FICT, UTAR using AMP Technologies</td>
<td></td>
</tr>
</tbody>
</table>

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Approved booking time to inform student that supervisor is okay with the time that they scheduled for meeting.
- Approve the title, and title is no longer view by other student.
- Allow multiple student take a title.
- FYP committee can open session for presentation venue reservation.
- After open session all the supervisor able to book title for taken student.
- Color successfully render to indicate status of the venue reservation (green for pending, red for confirm, blue for pending for approval, grey for block slot and carol for taken/occupied)
- allow FYP committee block the particular time so other supervisor not able to book for that particular hour
- blocking is prior when supervisor already taken the time that initially not being blocked. FYP committee required to manually notify the blocking to supervisor.
- Allow to add, delete blocking slot.
- Allow to add, edit, delete presentation venue.
- Allow searching for view of title at student perspective.
- Allow to add new admin.
- Only one main super admin is allowed to manage (add and drop) privilege of admin.
- Main super admin is allowed to add of new admin.
- Admin is allowed to manage their title by edit delete and add which is already done previously.
- Admin allow to manage their student who taken their title or proposed own title to them.
- Admin can drop a student.
- Allow to add student own proposed title.
- Show admin profile in main page.
- Allow edit of profile in main page.

<table>
<thead>
<tr>
<th>2. WORK TO BE DONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Allow assignment of moderator to each student</td>
</tr>
<tr>
<td>- show status of admin at the main page (show how many student is under supervisor and moderation)</td>
</tr>
<tr>
<td>- allow only FYP committee to manage skill list</td>
</tr>
<tr>
<td>- Add advance search to title list.</td>
</tr>
<tr>
<td>- start marking module</td>
</tr>
<tr>
<td>- show discrepancy of marks.</td>
</tr>
<tr>
<td>- search function for most of the table list.</td>
</tr>
<tr>
<td>- documentation</td>
</tr>
</tbody>
</table>
### 3. PROBLEMS ENCOUNTERED

- None.

### 4. SELF EVALUATION OF THE PROGRESS

Trying to finish it by week 10 and week 11 can focus more on documentation. Have to rush everyday so that modules can be successfully summit on time.

_________________________         _________________ _______
Supervisor’s signature                 Student’s signature
# FINAL YEAR PROJECT BIWEEKLY REPORT

*Project II*

<table>
<thead>
<tr>
<th>Trimester, Year: T3Y3</th>
<th>Study week no.: 7</th>
</tr>
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<tbody>
<tr>
<td>Student Name &amp; ID: Lim Shu Shin 0903525</td>
<td></td>
</tr>
<tr>
<td>Supervisor: Mr. Goh</td>
<td></td>
</tr>
<tr>
<td>Project Title: Online Final Year Project System for FICT, UTAR using AMP Technologies.</td>
<td></td>
</tr>
</tbody>
</table>

## 1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Allow assignment of moderator to each student
- show status of admin at the main page (show how many student is under supervisor and moderation)
- allow only FYP committee to manage skill list
- Add advance search to title list.
- develop marking module
- show discrepancy of marks.

## 2. WORK TO BE DONE

- testing by supervisor
- solve bugs found.
3. PROBLEMS ENCOUNTERED

- None.

4. SELF EVALUATION OF THE PROGRESS

On track, focus more in documentation now.

_________________________        __________________ ______
Supervisor’s signature                 Student’s signature
**FINAL YEAR PROJECT BIWEEKLY REPORT**

*(Project II)*

<table>
<thead>
<tr>
<th>Trimester, Year: T3Y3</th>
<th>Study week no.: 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Name &amp; ID: Lim Shu Shin 0903525</td>
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</tr>
<tr>
<td>Supervisor: Mr. Goh</td>
<td></td>
</tr>
<tr>
<td>Project Title: Online Final Year Project System for FICT, UTAR using AMP Technologies.</td>
<td></td>
</tr>
</tbody>
</table>

1. **WORK DONE**

[Please write the details of the work done in the last fortnight.]

- testing by supervisor
- solve bugs found.

2. **WORK TO BE DONE**

- Full documentation of FYP II
- Presentation slide and preparation

3. **PROBLEMS ENCOUNTERED**

- None.
APPENDICES B

4. SELF EVALUATION OF THE PROGRESS

_________________________             _____________ ___________
Supervisor’s signature                 Student’s signature
FINAL YEAR PROJECT BIWEEKLY REPORT

(Project II)

<table>
<thead>
<tr>
<th>Trimester, Year: T3Y3</th>
<th>Study week no.: 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Name &amp; ID: Lim Shu Shin 0903525</td>
<td></td>
</tr>
<tr>
<td>Supervisor: Mr. Goh</td>
<td></td>
</tr>
<tr>
<td>Project Title: Online Final Year Project System for FICT, UTAR using AMP Technologies.</td>
<td></td>
</tr>
</tbody>
</table>

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Full documentation of FYP II
- encrypt password in database

2. WORK TO BE DONE

- Presentation slide and preparation
- To be uploaded to turn-it-in and attaches receipt in the full report.
3. PROBLEMS ENCOUNTERED

- None.

4. SELF EVALUATION OF THE PROGRESS

_________________________             _____________ ___________
Supervisor’s signature                 Student’s signature
APPENDIX C: TURN-IT-IN
Online Final Year Project System for FICT, UTAR using AMP technologies

By

Lim Siew Shan (09ACB03525)

Supervisor: Mr. Goh Hock Guan