



Faculty of Computer Science and Information Technology

FINAL YEAR PROJECT TITLE ALLOCATION SYSTEM

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Projek ini merupakan salah satu keperluan untuk
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ABSTRACT

Final Year Project (FYP) is a two-part course which must be completed by all final year students of Faculty of Computer Science & Information Technology (FCSIT), Universiti Malaysia Sarawak (UNIMAS). Students must have a supervisor and project title approved before starting their FYP. To enhance current manual-based process of FYP title allocation in FCSIT, a web-based system, Final Year Project Title Allocation System is proposed and developed. In this report, it describes the planning, analysis, design, implementation and testing, and evaluation of the prototype. System Development Life Cycle (SDLC) is the methodology applied in this system development. Firstly, the problems found in current process of title allocation are identified. After that, literature reviews is done to determine the feasibility of this project. To elicit user requirements, interview with lecturers and students are carried out. After identifying the requirements and determine the project scope, design and implementation of the system started. When the system is developed, unit testing, system testing and acceptance testing are carried out. Acceptance testing is done with FCSIT lecturers and students. From the test results, system is evaluated. This project has achieved its objective as a web-based system is developed for FYP title allocation which will surely assist FCSIT lecturers and final year students to make the process more efficient and effective. For further possibility of enhancement, limitation and future works of the system are also discussed in this report.

ABSTRAK

Projek Tahun Akhir adalah kursus dua bahagian yang perlu dilengkapkan oleh semua pelajar tahun akhir Fakulti Sains Komputer & Teknologi Maklumat (FSKTM), Universiti Malaysia Sarawak (UNIMAS). Pelajar mesti mempunyai tajuk dan penyelia projek yang diluluskan sebelum memulakan kursus tersebut. Untuk meningkatkan proses peruntukan tajuk akhir tahun yang masih dijalankan secara manual di FCSIT, satu sistem berasaskan web, Sistem Peruntukan Tajuk Projek Tahun Akhir telah dicadangkan. Dalam laporan ini, perancangan, analisis, reka bentuk, pelaksanaan dan pengujian, dan penilaian prototaip akan dihuraikan dengan teliti. System Development Life Cycle (SDLC) adalah metodologi yang digunakan dalam pembangunan sistem ini. Pertama, masalah yang terdapat dalam proses semasa peruntukan tajuk dikenal pasti. Selepas itu, sistem peruntukan tajuk projek yang sedia ada dikaji untuk menentukan daya maju projek ini. Untuk mendapatkan keperluan pengguna, wawancara dengan pensyarah dan pelajar dijalankan. Selepas mengenal pasti keperluan dan menentukan skop projek, reka bentuk dan pelaksanaan sistem bermula. Apabila sistem siap dibangunkan, pengujian unit, pengujian sistem dan ujian penerimaan dilaksanakan. Ujian penerimaan dilakukan dengan pensyarah dan pelajar FCSIT. Daripada keputusan ujian, sistem dinilai. Projek ini telah mencapai objektifnya kerana satu sistem berasaskan web telah dibangunkan untuk peruntukan tajuk projek tahun akhir dan ia pasti akan membantu pensyarah dan pelajar tahun akhir FCSIT untuk menjalankan proses tersebut dengan lebih berkesan dan cekap. Selain itu, had dan potensi sistem pada masa depan juga dibincangkan dalam laporan ini.

CHAPTER 1: INTRODUCTION

1.1 Overview

The Faculty of Computer Science & Information Technology (FCSIT) at Universiti Malaysia Sarawak (UNIMAS) offers five undergraduate programmes, namely Information System, Software Engineering, Multimedia Computing, Network Computing and Computational Science. These five programmes have a two-part course which is taken by all students in their final year of study, named Final Year Project (FYP). The first part is TMP 4913 Final Year Project I and the second part is TMP 4935 Final Year Project II. Every FCSIT undergraduate must complete and pass both parts of FYP as a requirement for graduation.

FYP is a project-based course that requires students to design and develop a system or prototype as part of a Computer Science/ IT related project that involves design specification, implementation and evaluation. Throughout this course, students will need to apply their knowledge to a specific topic, and develop their organizational, theoretical and applied skills. At the end of each part, students need to submit a written report and present a demonstration and oral defense of their project. Before starting on their FYP, students need to have their supervisors and project titles approved. Students are encouraged to select project titles according to their interest and/or research areas.

Currently, the process of allocating FYP titles to students is done manually, without a centralized system. This manual-based process is time-consuming, as well as may cause unnecessary issues and/or inconveniences such as students have to meet few lecturers to get their proposed titles before making any confirmation while lecturers have to keep repeating the same thing when students come to ask for proposed titles. In this project, a system is

proposed to assist FCSIT lecturers and students in selecting FYP titles. The system aims to help make the FYP title allocation process more efficient for both lecturers and students.

1.2 Problem Statement

Currently, FCSIT has FYP Management System for managing the FYP activities of its final year students. Registered students can manage their project details, activities and view the feedback from supervisor and examiners. However, students can only use this system after a supervisor and a project title has been chosen and approved. Final Year Project title allocation is still done manually, so there is a lack of system to do the title allocation. By using manual method, students have to meet lecturers face to face to enquire about project titles, and this process is time consuming.

Besides that, there are students who wish to find a supervisor who accepted their proposed titles. There are also students who want to select project titles given by lecturers while some lecturers want to select students who are capable to do the project given. Lecturers always need to provide the same information for students repeatedly, when there are many students who come to ask about the project titles. Students who do not have any project titles have to do brain storming. Among students, they have to ensure the project title is not repeating.

According to Richard Cowie (n.d.), the main methods of final year project allocation includes first-come, first served basis which involves the active participation of both supervisor and student. However, this method seems to be a matter of luck. It is quite unfair as some students might unable to reach to certain lecturer at particular time. Besides, there are students who choose their supervisor based on staff popularity. At the meantime, there are

lecturers using students' prior results as basis of title allocation. This method may discourage weak students in searching for project titles.

Furthermore, getting answer or reply about a project title from lecturer or student is may not be efficient through emailing. Lecturers or students are not checking their mails frequently and it causes late replying. Hence the whole process from consultation, choosing a supervisor and a FYP title is very time consuming.

In addition, the existing system does not provide the FYP titles done by previous batches. The lecturers and students may lack of references to improve the existing project, or search for information on related projects.

1.3 Objectives

The objectives of the project are as follows:

- To design and develop a web-based system for Final Year Project title allocation.
- To assist FCSIT lecturers and final year students in Final Year Project titles allocation.

1.4 Brief Methodology

Figure 1.1 shows the System Development Life Cycle, which is applied in this project.

The main phases are planning, analysis, design, implementation and testing, evaluation.

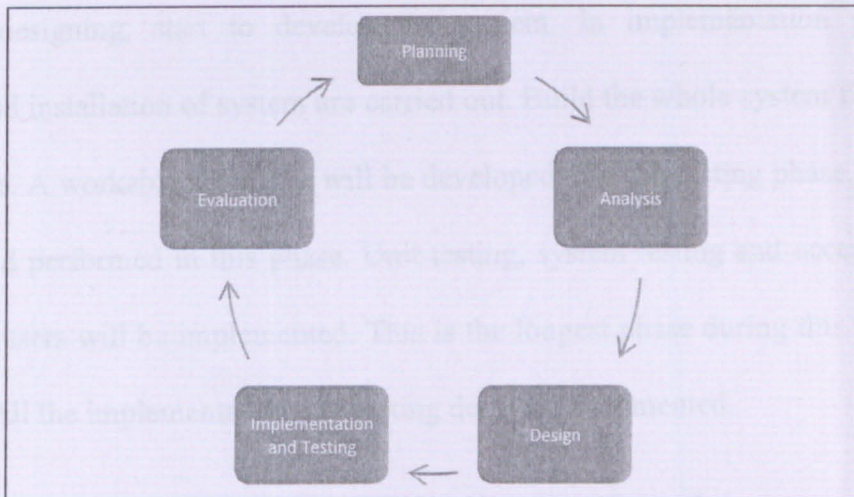


Figure 1.1: System Development Life Cycle

Firstly, in planning phase, the problems found in the current process of title allocation are identified. The need of FYP title allocation system, study the feasibility of the system, and how the system works is determined. In this phase, identify the problems and requirements for the system. After that, do documentation for the project plan- a proposal.

Secondly, analyse the user and system requirements. Analysis activities are carried out. The activities include searching for at least three existing system which are mostly similar as the proposed system and do literature reviews. Besides, interview and observing will be carried out to gather user requirements and certain data. After that, analyse both the recommend and existing solution. Consider about the feasibility of the project with the resources available. The documentation that will be prepared during this phase is literature reviews, and the interview report.

In design phase, using the requirements elicited from analysis phase, designs the front end and back end of the system. This includes the design of system database. The methodology, requirement analysis and design will be documented.

After designing, start to develop the system. In implementation phase, actual construction and installation of system are carried out. Build the whole system from its layout till the database. A workable prototype will be developed. For the testing phase, test plan will be prepared and performed in this phase. Unit testing, system testing and acceptance testing which involve users will be implemented. This is the longest phase during this whole system development. All the implementation and testing done are documented.

Finally, the system is developed and evaluation will be done to ensure the whole system performs as expected. This phase includes participants to identify, evaluate the usability problems and determine whether the interface has met usability requirements or not. The evaluation of the documentation is done as well to ensure the documentation and procedures are accurate and understandable.

1.5 Scope

The system is developed for FCSIT lecturers and final year students only. This system enables lecturers to upload their project title and abstract or descriptions. Students are allowed to propose their own project title or selecting the uploaded title. For lecturer's proposed titles, students can perform search based on the title and lecturer's name. Then the system will return search result for the students. The system allows lecturers and students to make appointment in order to enhance communication between lecturers and students. Besides, the system will display previous batches' confirmed project title in a list as reference for the coming batch of students and lecturers involved. This system does not include student's FYP progress tracking or document submission.