

**FSKKP TRACER'S STUDY
MANAGEMENT SYSTEM**

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I hereby declare that I have checked this thesis and in my opinion, this thesis is adequate in terms of scope and quality for the award of the degree in Bachelor of Computer Science (Computer System & Networking).

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I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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MANAGEMENT SYSTEM

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ABSTRAK

Ini adalah satu Kajian untuk Pengesahan Graduan(KPG) di mana ianya ialah sebuah sistem manual yang telah diwujudkan bagi menjejaki bakal graduan IPT tempatan sebelum menghadiri majlis konvokesyen masing-masing. Oleh itu, Kajian Pengesahan Graduan dalam sistem yang lebih efektif dengan menggunakan computer untuk mengetahui statistik yang berkaitan graduan. Kaji selidik sebelum ini dijalankan secara atas talian melalui laman web rasmi sebagai langkah untuk para graduan mengisi soalan kaji selidik. Selepas mengisi kaji selidik, para graduan dikehendaki cetak lampiran atau boring yang harus di kemukakan pada hari graduasi, di mana ianya menyusahkan pelajar untuk membawa cetakan tersebut ke hari kejadian. Menerusi sistem ini, ia di gunakan oleh pensyarah dimana memudahkan mereka menyemak informasi pelajar tersebut. Ia juga digunakan oleh pihak Kementerian Pengajian Tinggi (KPT) untuk mengenalpasti destinasi pertama bakal graduan di peringkat Sijil dan ke atas. Menerusi sistem ini, pihak Kementerian Pengajian Tinggi dapat mengetahui perkara-perkara asas berkaitan alam pekerjaan graduan baharu. Pembangunan Aplikasi Rapid (RAD) adalah metodologi yang digunakan untuk membangunkan aplikasi ini. Metodologi RAD terdiri daripada empat peringkat utama, pertama ialah tahap perancangan keperluan, peringkat reka bentuk pengguna, peringkat pembinaan, dan peringkat pemotongan terakhir. Selepas permohonan telah dibangunkan, pelanggan akan diberi ujian penerimaan pengguna (UAT) untuk memastikan semua fungsi berfungsi mengikut kehendak tanpa sebarang kesilapan. Ujian UAT akan memastikan permohonan itu memenuhi semua objektif dan boleh digunakan untuk menyelesaikan masalah semasa.

ABSTRACT

This is a review for Graduate Verification (KPG) which is a manual system that has been set up to track the prospects of local IPT graduates before attending their respective convocation ceremonies. Therefore, the Graduate Certification Study in a more effective system by using the computer to find out the relevant statistics of the graduates. Previous surveys were conducted online via the official website as a step for graduates to fill out survey questions. After completing the survey, graduates are required to print an attachment or boring that should be submitted on graduation day, where it is inconvenient for the student to bring the print to the day of the incident. Through this system, it is used by lecturers to make it easier for them to review the student's information. It is also used by the Ministry of Higher Education (KPT) to identify the first destination of graduates at the Certificate and above. Through this system, the Ministry of Higher Education can find out basic things related to the new graduates' nature of employment. Rapid Application Development (RAD) is a methodology used to develop this application. The RAD methodology consists of four main stages, the first is the level of planning requirements, the user design stage, the stage of construction, and the final cutting stage. After application has been developed, customers will be given a user acceptance test (UAT) to ensure that all functionalities function as needed without any mistake. The UAT test will ensure that the application meets all the objectives and can be used to solve current problems.

TABLE OF CONTENT

DECLARATION	
TITLE PAGE	
ACKNOWLEDGEMENTS	ii
ABSTRAK	iii
ABSTRACT	iv
TABLE OF CONTENT	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER 1 INTRODUCTION	1
1.1 OVERVIEW	1
1.2 PROBLEM STATEMENT	2
1.3 OBJECTIVE	3
1.4 SCOPE	3
1.5 THESIS ORGANIZATION	4
CHAPTER 2 LITERATURE REVIEW	5
2.1 INTRODUCTION	5
2.2 MANUAL	7
2.3 FSKKP'S TRACER STUDY MANAGEMENT SYSTEM	8
2.3.1 OVERVIEW OF WEB TECHNOLOGY	8
2.3.2 WEB-BASED INFORMATION VISUALIZATION FOR WEB BASED	9

2.3.3	JAVASCRIPT AND A WEB BROWSER AS A VISUALIZATION STAGE	9
2.4	EXISTING SYSTEM	10
2.4.1	INTERNSHIP MONITORING AND SUPERVISING WEB- BASED SYSTEM IN UITM	10
2.4.2	TOWARD A STUDENT INFORMATION SYSTEM FOR SEBHA UNIVERSITY, LIBYA	13
2.3.3	E-PERLU: DESIGN AND IMPLEMENTATION OF A TRAINING NEEDS ANALYSIS SYSTEM FOR LECTURERS	14
2.5	COMPARISON BETWEEN THE EXISTING SYSTEM	16
CHAPTER 3 METHODOLOGY		18
3.1	INTRODUCTION	18
3.2	RAPID APPLICATION DEVELOPMENT (RAD)	19
3.2.1	REQUIREMENT PLANNING	20
3.2.2	USER DESIGN	20
3.2.3	CONSTRUCTION	20
3.2.4	CUTOVER	21
3.3	PRELIMINARY DESIGN	22
3.3.1	SYSTEM ARCHITECTURE	22
3.3.2	FLOWCHART FOR USER	24
3.3.3	CONTEXT DIAGRAM	26
3.3.4	USE CASE	27
3.3.5	DIALOG DIAGRAM	28
3.4	TOOLS REQUIREMENT	29
3.4.1	HARDWARE REQUIREMENT	29
3.4.2	SOFTWARE REQUIREMENT	30

3.5	GANTT CHART	31
3.6	SUMMARY	31
CHAPTER 4 IMPLEMENTATION AND TESTING		32
4.1	INTRODUCTION	32
4.2	IMPLEMENTATION OF WEB DEVELOPMENT	33
4.2.1	USER	33
4.2.2	ADMIN	36
4.3	DATABASE REQUIREMENT	40
4.4	TESTING TECHNIQUE	43
4.4.1	FUNCTIONAL TESTING	43
4.4.2	TESTING REPORT	43
4.5	RESULT AND DISCUSSION	44
CHAPTER 5 CONCLUSION AND FUTURE WORK		45
5.1	INTRODUCTION	45
5.2	PROJECT CONSTRAINT	45
5.3	FUTURE WORK	46
5.4	CLOSING NOTE	46
REFERENCES		47
APPENDIX A		48
APPENDIX B		49
APPENDIX C		50

LIST OF TABLES

Table 2.1 Comparison for existing system	17
Table 3.1 Hardware Requirement.	29
Table 3.2 Software Requirement.	30

LIST OF FIGURES

Figure 2.1 the news about the Graduate Tracking Study.	6
Figure 2.2 Language Web Technology	8
Figure 2.3 List of Student	11
Figure 2.4 Coordinator's Dashboard	11
Figure 2.5 Student's Personal Information for Pre-registration	12
Figure 2.6 Workflow Status	13
Figure 2.7 Student data system.	14
Figure 2.8 e-PERLU user interface	15
Figure 2.9 e-PERLU administrator interface	16
Figure 3.1 Phases of RAD Methodology	19
Figure 3.2 System Architecture of Fskkp Tracer's Study management	22
Figure 3.3 Flowchart for User	24
Figure 3.4 flowchart for Admin.	25
Figure 3.5 Context Diagram for FSKKP Tracer Study management	26
Figure 3.6 Use case of Fskkp Tracer's study management system	27
Figure 3.7 Dialog diagram	28
Figure 4.1 Register Form	33
Figure 4.2 Register code	34
Figure 4.3 Search IC page	35
Figure 4.4 Student Detail page	35
Figure 4.5 Register User Details	36
Figure 4.6 Student List Page	37
Figure 4.7 Delete Code	37
Figure 4.8 Edit Student List	38
Figure 4.9 Analysis Data	38
Figure 4.10 Count Data	39
Figure 4.11 Calculation for analysis data	39
Figure 4.12 PhpMyAdmin Database Development Environment	40
Figure 4.13 Connection for database	40
Figure 4.14 Import Details into Database	41
Figure 4.15 Upload csv file	42
Figure 5.1 Entity Relation Diagram for Information Student	48
Figure 5.2 Gantt Chart Based on RAD Methodology	49

LIST OF ABBREVIATIONS

CSS	Cascading Style Sheets
DOM	Document Object Model
ED	Euclidean Distance
GE	Employability Status
HTML	Hypertext Markup Language
JS	JavaScript
PHP	Hypertext Preprocessor
RAD	Rapid application development
SDS	Student Data System
TS	Current Status
TNA	Training Needs Analysis
UAT	User Acceptance Test

CHAPTER 1

INTRODUCTION

1.1 OVERVIEW

Graduate Tracking Study is an annual study with the aim of tracking graduate's status employment before attending their respective convocation ceremonies. This survey is running through the official website as a step to facilitate graduates to fill out the survey question regardless of time and location by only using the ease of the internet in this era globalization. Through the survey, the Ministry of Higher Education (MoHE) can identify the first destination of graduates at certificate and above. The Ministry of Higher Education can find the basic things about working environment of the new graduates' job.

Graduate Tracking Study was launched in 2006 through the official website of <http://graduat.mohe.gov.my> and it is the first system that run by Ministry of Higher Education (MoHE) to ensure the success of the Graduate Tracking Study. In the early stages, this survey was conducted manually.

Each university campus has their own management and they keep all the information of their own. There are many ways to manage the information of student undergraduate or graduated student. In University Malaysia Pahang, the graduated students need to print their Graduate Tracking Study to check the student's status. This Information Management system can overcome the problems of manual system. It can meet all the informational needs of all user at all department level.

1.2 PROBLEM STATEMENT

Every system has their own problem itself because from the problem they can evaluate, developed or create some idea to upgrade or developed their system. From the research for this system have some problem to discuss. Firstly, there only manual system that have been develop for collect data of this Graduate Tracking Study. The manual system will occur many problem and difficulty. The problem that faced for every staff that in charge in this tracer study is they need to update every day the data of students and need to check manually all the information gathered where its correct or not.

It will have the human error for doing mistake when the staff need to check the data manually and it also takes a lot of time for generate the data of Graduate Tracking Study in University Malaysia Pahang (UMP).

Too much waste of paper and file. A lot of paper will waste to record. Hence, it will create a problem when to update the student's status. Moreover, it has probability to lose and misplacing the records. Therefore, it will affect the student's information.

This Fskkp tracer's study management system is a computerized system that will help the staff after receiving the data and which is easy to record the data of student.

1.3 OBJECTIVE

The objective of this project is:

- i. To design implementation using database for tracer study management.
- ii. To visualize the data of FSKKP Tracer's Study Management.
- iii. To test the functionality of management system for campus in university.

1.4 SCOPE

In order to achieve in this project, there are several scopes which are:

- i. Graduates status.
- ii. Graduate employability
- iii. Faculty of Computer System & Software Engineering (FSKKP) graduates on current year.

REFERENCES

- Alias, N., Sahri, Z., Zaini, A. A., Azmin, M. A. A., Hamzah, M. H., & Norazman, M. E. A. (2014). E-PERLU: Design and implementation of a Training Needs Analysis system for lecturers. *Proceedings - 2014 5th IEEE Control and System Graduate Research Colloquium, ICSGRC 2014*, 3, 7–12. <https://doi.org/10.1109/ICSGRC.2014.6908687>
- Binti Jaafar, A. N., Binti Rohafauzi, S., Binti Md Enzai, N. I., Bin Mohd Fauzi, F. D. H., Binti Nik Dzulkefli, N. N. S., & Bin Amron, M. T. (2018). Development of internship monitoring and supervising web-based system. *IEEE Student Conference on Research and Development: Inspiring Technology for Humanity, SCOReD 2017 - Proceedings, 2018–Janua*, 193–197. <https://doi.org/10.1109/SCORED.2017.8305395>
- Carta alir kajian pengesanan graduan (kpg). (n.d.).
- Guldamlasioglu, S. (2015). Web-based Information Visualization Using JavaScript Selin Guldamlasioglu. *University of Tampere*, (June).
- RAD methodology. (n.d.). Retrieved from <https://airbrake.io/blog/sdlc/rapid-application-development>
- Richards, G., Gal, A., Eich, B., & Vitek, J. (2011). Automated construction of JavaScript benchmarks. *ACM SIGPLAN Notices*, 46(10), 677. <https://doi.org/10.1145/2076021.2048119>
- Tracer Study on Aimst University. (2012).