

# EDUCATION PATH SYSTEM

MOHD ZULHAFIZ BIN HUSSIN

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(TANDATANGAN PENYELIA)

PUAN ZAHRIAH BT SAHRI  
Nama Penyelia **ZAHRIAH BT. SAHRI**

Pensyarah  
Fakulti Teknologi Maklumat dan Komunikasi  
Universiti Teknikal Malaysia Melaka

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## **DEDICATION**

A special dedication goes to my beloved parents En. Zainal bin Daud and Puan Amnah binti Mohd Nasir because giving support in completing my final year project which is entitled Malacca Driving School Management System (MDSMS).

I also would like to dedicate to the people who help and support direct or indirect in finishing my project successfully.

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## ABSTRAK

Education Path System, EPS adalah salah satu aplikasi khas di atas talian untuk membantu pelajar lepasan SPM memilih bidang, kos dan universiti yang sesuai. Sistem di atas talian ini adalah system pertama yang dibangunkan khas untuk pelajar. Buat masa ini, terdapat juga sistem yang berkaitan untuk pemilihan pelajar ke universiti, tetapi sistem tersebut hanya digunakan oleh pihak Unit Pemilihan Universiti (UPU) sahaja. Dengan ketiadaan system seperti kepada pelajar, ia dapat menimbulkan masalah kepada para pelajar. Pelajar tidak tahu di mana hala tuju mereka selepas menjalani peperiksaan SPM dan banyak lagi masalah yang berkaitan. Kebanyakan pelajar mendapat nasihat daripada guru, kaunselor, keluarga dan ada yang mengikut kata kawan-kawan mereka. Education Path System dibina untuk menyelesaikan masalah tersebut. Data yang terdapat di dalam EPS adalah data yang diperolehi dari Unit Pemilihan Universiti (UPU). EPS menggunakan teknik pengirran merit untuk menentukan kos dan universiti yang sesuai untuk pelajar. EPS boleh digunakan oleh dua kategori pengguna iaitu pelajar dan admin. Untuk menggunakan EPS pengguna terlebih dahulu mesti memasukkan username dan kata laluan. Jika mereka tiada akaun lagi, mereka mesti lah berdaftar. Selepas masuk ke sistem, pelajar boleh memilih menu-menu yang terdapat di dalam EPS. Pelajar mesti memasukkan subjek dan grad untuk mengetahui universiti dan kos yang sesuai untuk mereka. Selepas dikira merit dan dibandingkan di dalam pangkalan data, keputusan kos dan universiti akan keluar. Admin pula boleh menyelaraskan data-data yang terdapat di dalam EPS.

## ABSTRACT

Education Path System, EPS is one of online system developed to help the student SPM choose the right path of their education. That means this system can help to choose the right university and course. This system is first system develop only to use to student. Currently, the same system was developing but it only uses by department Unit Pemilihan Universiti (UPU). Without like system to student, it causes many problems to students. The students do not know where they must study after take SPM examination. Many of them get advice from counselor, family and their friends. The Education Path Portal develop to accomplish that problems. The data located in EPS is the data take from UPU. EPS is use merit calculation to match exam result and course. EPS can use by two user which is student and admin. For use EPS, first the user must login with enter their username and password. If they not have account yet, they must register as user to use this system. After entering this system, the students can choose menu located in EPS. The students must enter their exam result that means subject and grade. The system will calculate their merit point and match with course located in the database. If they qualified, courses and university will appear. Admin can make maintenances. With function like add, update, search and delete the data will manage efficiency.

## TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE
	<b>ACKNOWLEDGEMENTS</b>	<b>i</b>
	<b>ABSTRAK</b>	<b>ii</b>
	<b>ABSTRACT</b>	<b>iii</b>
	<b>TABLE OF CONTENTS</b>	<b>iv</b>
	<b>LIST OF TABLES</b>	<b>viii</b>
	<b>LIST OF FIGURES</b>	<b>x</b>
	<b>LIST OF ABBREVIATIONS</b>	<b>xii</b>
	<b>LIST OF APPENDICES</b>	<b>xiii</b>
<b>CHAPTER I</b>	<b>INTRODUCTION</b>	
	1.1 Project Background	1
	1.2 Problem Statement	2
	1.3 Objective	3
	1.4 Scope	4
	1.5 Project Significance	6
	1.6 Expected Output	6
	1.7 Conclusion	
<b>CHAPTER II</b>	<b>LITERATURE REVIEW AND PROJECT METHODOLOGY</b>	
	2.1 Introduction	8
	2.2 Domain	9
	2.2.1 Technique	10
	2.2.2 Facts and findings	12
	2.2.3 Existing System	12
	2.3 Project Methodology	15



2.3.1	Waterfall Model	15
2.3.1.1	Requirement Analysis	18
2.3.1.2	System and Software Design	18
2.3.1.3	Implementation and Unit Testing	18
2.3.1.4	Integration and System Testing	19
2.3.1.5	Maintenance	19
2.3.2	Database Life Circle	20
2.3.2.1	Database Initial Study	21
2.3.2.2	Database Design	22
2.3.2.3	Conceptual Design	22
2.3.2.4	Logical Design	23
2.3.2.5	Physical Design	23
2.3.2.6	Implementation and Loading	23
2.3.2.7	Testing and Evaluation	23
2.3.2.8	Operation	24
2.3.2.9	Maintenance and evaluation	24
2.4	Project Requirement	25
2.4.1	Software Requirements	25
2.4.2	Hardware Requirements	25
2.4.3	Network Requirements	26
2.5	Project Schedule and Milestones	26
2.6	Conclusion	32
<b>CHAPTER III ANALYSIS</b>		
3.1	Introduction	33
3.2	Problem Analysis	34
3.2.1	Manual System	34
3.2.2	Analysis of To Be System	37
3.3	Requirement Analysis	43
3.3.1	Functional Requirement	43
3.3.2	Non-functional Requirement	47
3.3.3	Others Requirement	48
3.3.3.1	Software Requirement	48
3.3.3.2	Hardware Requirement	50

	3.3.3.3 Network Requirement	50
	3.4 Conclusion	51
<b>CHAPTER IV</b>	<b>DESIGN</b>	
	4.1 Introduction	52
	4.2 High-level Design	53
	4.2.1 System Architecture	53
	4.2.1.1 DFDfor to be System	55
	4.2.1.2 DFD level 1 for EPS	56
	4.2.2 User Interface Design	59
	4.2.2.1 Navigation Design	60
	4.2.2.2 Input Design	62
	4.2.2.3 Output Design	62
	4.2.2.4 Input Design	60
	4.2.2.5 Output Design	64
	4.2.3 Conceptual and Logical Database Design	65
	4.2.3.1 Conceptual Database Design	65
	4.2.3.2 Logical Database Design	68
	4.2.3.3 DBMS Selection	70
	4.3 System Architecture	72
	4.3.1 Software design	73
	4.3.2 Physical Database Design	73
	4.3.2.1 Data Definition Language	73
	4.3.3 Security Mechanism	74
	4.3.4 Database Contingency	77
	4.4 Conclusion	79
<b>CHAPTER V</b>	<b>IMPLEMENTATION</b>	
	5.1 Introduction	80
	5.2 Software Development Environment	81
	5.2.1 Software, Hardware, and Network Setup	81
	5.2.2 Database Environment Setup	83
	5.3 Database Implementation	84
	5.3.1 Displaying Data from Multiple Tables	86
	5.3.2 Restricting and Sorting Data	88
	5.3.3 Aggregation Data Using Group Function	88

5.4	Software Configuration Management	89
5.4.1	Configuration Environment Setup	89
5.4.2	Version Control Procedure	91
5.5	Implementation Status	92
5.6	Conclusion	93
<b>CHAPTER VI</b>	<b>TESTING</b>	
6.1	Introduction	94
6.2	Test Plan	95
6.2.1	Test Organization	95
6.2.2	Test Environment	96
6.2.3	Test Schedule	97
6.3	Test Strategy	98
6.3.1	Classes of Test	100
6.4	Test Design	101
6.4.1	Test Description	101
6.4.2	Test Data	102
6.5	Test Result and Analysis	102
6.6	Conclusion	103
<b>CHAPTER VII</b>	<b>CONCLUSION</b>	
7.1	Observation on Weakness and Strengths	104
7.2	Proposition for Improvement	105
7.3	Contribution	105
7.4	Conclusion	106
	<b>REFERENCES</b>	107
	<b>BIBLIOGRAPHY</b>	108

## LIST OF TABLES

<b>TABLE</b>	<b>TITLE</b>	<b>PAGE</b>
2.1	Decision Support Provided by DSS	10
2.2	Student Employment System (SES) Details	13
2.3	Student Written Assessment System Details.	14
2.4	Hardware Requirements	26
2.5	Project Schedule for PSM I	27
2.6	Project Schedule for PSM II	30
3.1	Functional Requirement of Education Path System	45
3.2	Software Requirement for EPS application	48
3.3	Hardware Specification	50
3.4	Network Requirement	51
4.1	Main Page and Student Authentication Design	110
4.2	SPM Exam Result Input Design	111
4.3	User Register Input Design	112
4.4	Data Dictionary	115
4.5	DBMS for MySQL Database	71
5.1	Implementation Status Schedule	92
6.1	Personnel Requirements for Testing Activities	96
6.2	Test Environment	97
6.3	Test Schedule	98
6.4	Test Schedule	100
6.5	Test Case for Component Login for Student	125
6.6	Test Case for Component Register	125
6.7	Test Case for Component Enter Exam Result	126
6.8	Test Case for Component Backup for Staff	126
6.9	Test Case for Component Generate Report for Admin	126
6.10	Test Case for Component Export for Admin	127
6.11	Test Data for Component Login	129
6.12	Test Data for Component Register	129

6.13	Test Data for Component Enter Exam Result	130
6.14	Test Data for Component Backup for Staff	131
6.15	Test Data for Component Generate Report for Admin	131
6.16	Test Data for Component Export for Admin	132
6.17	Test Result for Component Login	134
6.18	Test Result for Component Register	134
6.19	Test Result for Component Enter Exam Result	134
6.20	Test Result for Component Backup for Staff	135
6.21	Test Result for Component Generate Report for Admin	135
6.22	Test Result for Component Export for Admin	135

## LIST OF FIGURES

FIGURE	TITLE	PAGE
2.1	The Waterfall Model	17
2.2	The Database Life Circle, DBLC	20
2.3	Summary of Activities in the Database Initial Study	21
3.1	Flow Chart for the Current System	35
3.2	Context Diagram for Manual System	35
3.3	Activity Diagram for Current System	37
3.4	Context diagram for to-be system, EPS	38
3.5	Activity Diagram Of Register	39
3.6	The Process Of Student Login	40
3.7	The Process of Matching and Decision Making by EPS	41
3.8	The Maintenance Process by Staff	42
3.9	Context diagram for to-be system, EPS	44
4.1	System Structure in a Wide Area Network	54
4.2	DFD level 0 for to-be system, EPS	55
4.3	DFD level 1 for Login Module	56
4.4	DFD level 1 for Register Module	57
4.5	DFD level 1 for Fill Subject And Grade Module	57
4.6	DFD level 1 for Matching Module	58
4.7	DFD level 1 for Maintenance Module	59
4.8	Navigation Design	60
4.9	Main Page Interface Design	110
4.10	SPM Exam Result Input Design	111
4.11	User Register Input Design	112
4.12	<b>Example of Suggestion Courses and Universities</b>	<b>62</b>
4.13	User Account Output Design	63
4.14	List of All Universities Output Design	64

4.15	Entity Relationship Diagram for EPS	66
5.1	Software Environment Development Setup	82
5.2	<b>Start the Database Service Setup</b>	83
5.3	Code to connect with database Education	84
5.4	SQL Statement by Using GROUP BY	89
5.5	Configuration Environment Setup	90
5.6	<b>Flow to Version Control Procedure</b>	91

## LIST OF ABBREVIATIONS

DBMS	Database Management System
SSADM	Structured Systems Analysis and Design Methodology
PHP	Hypertext Processor
DFD	Data Flow Diagram
DBLC	Database Life Cycle
ERD	Entity Relationship Diagram
RAM	Random Access Memory
PSM	Projek Sarjana Muda
CSS	Cascading Style Sheet
GUI	Graphical User Interface
OS	Operating System
NF	Normal Form
PK	Primary Key
FK	Foreign Key
RDBMS	Relational Database Management System
SQL	Structured Query Language
DDL	Data Definition Language
DBA	Database Administrator
DCL	Data Control Language
FTP	File Transfer Protocol
TCP/IP	Transmission Control Protocol/Internet Protocol



**LIST OF APPENDICES**

<b>APPENDIX</b>	<b>TITLE</b>	<b>PAGE</b>
A	Input Design	109
B	Data Dictionary	114
C	NORMALIZATION (3 <sup>RD</sup> NORMAL FORM)	117
D	Configuration Environment Setup of Education Path System	120
E	Test Description of Education Path System	125
F	Test Data of Education Path System	129
G	Test Result and Analysis	134
H	Data Definition Language	137

## CHAPTER I

### INTRODUCTION

#### 1.1 Project Background

Nowadays, the new information communication technology (ICT) is very important to Malaysia education system. It makes education more systematic and efficiency. It can be approve with the development of education websites, education forums and online systems. The best of example is the university intake forms online.

Guides necessary to students to choose the suitable course depend by their examination result. In that case, the system will be developing to help the students. The system will be developing is one of Decision Support Systems (DSS) which name is Education Path System (EPS) for university intake. This system can suggestion and help the students to choose suitable course. This system give suggestion depend result examination and qualification of students. Currently there no systematic system can use by students to know what course and university that they will get. The same systems already use by Ministry Of Education but it not release for student. So, this system helps the student to solve their problem with easiest.

## 1.2 Problem Statements

Every year, many students will be intake to the universities. Such as student which takes SPM will continue study to diploma, STPM and matriculation student will continue to degree.

At presents, no systems or current systems become to guide for students. It will make problem to students to know what course and universities to continue their study. Usually, the students get advice manually from counselor to choose the courses and universities depends qualification based on their examination results. In the certain case, there are also students follow their parents desire and also the students influenced by their friends.

Beside that, the others problem is the students always need to meet their counselor and it will be wasting time and cost to students. The others problem is certain of students cannot continue their study because they do not know what requirement each universities to continue study.

Therefore, the development of decision support system (DSS) is very important to make sure the Education Path System can evaluate its achievement and to solve as stated above.

### 1.3 Objectives

Regarding the problems explained before, the main goal of Education Path System is to guide the students to choose course and universities to continue study. Therefore, the objectives of this project were to:

- i) **Develop the decision support system based on web based application to the students which candidates of SPM.**

The special function that the system can do is advice course and universities to students which candidates of SPM. All decision is depend by qualification based on examination result.

- ii) **Develop the application based on Malaysia education system.**

This system will use merit system currently is using by Malaysia government to take students to university.

- iii) **Develop secure application to keep the critical data safe and keep it from lost.**

This system also keeps the data from lost. The data will be keeps such as students data, course and universities data.

- iv) **Backup and recovery critical data**

Another special function that the system can do is backup and recovery critical data. Backup and recovery can operation when the system crash or losing its function. Backup and recovery can be done by administrator anytime. Backup and recovery is useful to avoid the critical data disappear.

#### v) **Make the Database Report**

This system makes report facilities to the admin. That means, the admin can review the database, table and data anytime. After review the report, admin can choose either to export or not.

### **1.4 Scope**

The project scope divided in to three sections such as Project Scope, Module Scope and Target User. Project Scope will explain the overall scope of the project. Module Scope will explain all the modules scope that will be including in system. Target User will state the users of the system and the system limitation for each type of users.

Project scope of this system are covered all course and university in Malaysia. This system only use to register the students which want to use this system. After register, the students can start use this system by enter examination results. This system can be access via internet in everywhere.

This system has their target user. The target user divides into two categories. First category is back-end user. Back-end user is administrator and staff. Administrator will be able to maintain the databases and registration operation process. Administration also responsible to secure all the data and do function that the database needs. For example the administrator should do backup every day. Second category is front-end user. Front-end user also recognize as normal user or end user. Front-end user is the students who register and use this system.

The module of the system has been divides into several main modules as following:

**i. Login Module**

This module use to identify administrator and students in Education Path System. Only authorized administrator and students can enter the system.

**ii. Register Module**

This module allows student to register before use the matching module. System will record all the information and save it into database. The systems will also facilities user to update their profile. This module is design to give more independent to student to use this system.

**iii. Matching And Decision Module**

This module allows students enter their examination results and the system will make decision which course and university that will they get

**iv. Administration Module**

This module only to use by administrator and staff of Education Path System. This module allows administrator and staff to do backup and recovery data, add, update, delete, migration data, and also views all data.

## **1.5 Project Significance**

The Education Path System has been developed to help students know and choose possible courses and universities depends their qualification based on examination result. There are several benefits that have come up with the development of the system as will explain below.

Education Path System will record the student's information and also the courses each universities. This system will manage all data in one database. Beside that, with this project, the students can save their time and cost. For example, the students don't need to make appointment and discuss the counselor. This system also can be access every time and everywhere because it based on web based.

## **1.6 Expected Output**

The expected output of this project is web based system with 4 modules. After Education Path System was developed user can expected that the system:

### **i. Give a Possible Suggestion of Courses and Universities**

The main objective of this system is to help the students to choose the right of their education path. The system can help the students with all information that contains in the Education Path System.

### **ii. Can Be an Application To keep The Data Safe**

The system can be trusted to keep the critical data from losing or damage. If the critical data are losing, the system may be useless to the user.

### **ii. Should Done Backup And Recovery Data**

Backup and recovery are most important when the system was crash. Without backup and recovery data, if the system was crashed all the critical data that contain information about will be lose.

**iii. Will be a Web Based System**

When the system is developing, the main objective to build a web base system. The students hope the system can save their time and cost. With the web base, user can access the system every time and every where.

**iv. Should Done Review Report and Export**

Report is most important to administrator to review the database. It cans use anytime by administrator to review the database. It is because time to time the data in the database are updated. After review, the system have functionality to create export the database to another type of file such excel, PDF, CSV and others

**v. The database provide the higher security**

The system came with MySQL database. This database provides higher security to the data which is very critical. This database secures the data from being hack by hackers. With this MySQL database, user can save a thousand data and keep it saves.

## **1.7 Conclusion**

This chapter contains the detail description of the propose project which is Education Path System for university intake. From this chapter, the problem faced by the student was identified and the main objective and the scope of the project were clearly defined. In this chapter, the possible solution is suggested.

Chapter 2 will discuss on the literature review and the methodology that will be used in this system.