

**MERIT POINT ATTENDANCE SYSTEM UTEM**



**UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

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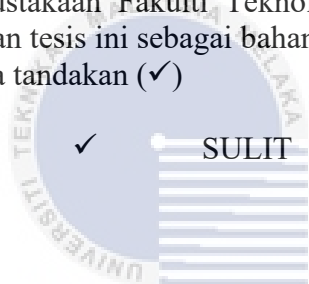
JUDUL: Merit Point Attendance System UTeM

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MERIT POINT ATTENDANCE SYSTEM UTeM

CHON YAO JUN



This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Software Development) with Honours.

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY  
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2021

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STUDENT :  \_\_\_\_\_ Date : 04/09/2021  
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## DEDICATION

I would like to dedicated my work to my loving parents, supervisor and friends. A indescribable expression to them whose always encourage and support me along with my work. And special thank to my supervisor, Dr. Mohd Sanusi Azmi who supports me throughout the process. I always appreciate all the things that given by them in helping me finish my works.



## ACKNOWLEDGEMENTS

In this project, the guidance from many people such as my supervisor, Dr. Mohd Sanusi Azmi play the important role. I would like to thank you to all these people.

I have to start by thanking Dr. Mohd Sanusi Azmi for giving assistant to complete this project successfully, provided me with the golden opportunity to do this wonderful project, who guided me in the direction to take for this project, provided me with the materials, and the necessary hardware for me to develop this system. For this, I am thankful.

Next, I would also like to thank my friends who helped me a lot in finalizing this project within the limited time frame, and also for all the moral support that they provided that finally allowed me to push on and finish this project.



## ABSTRACT

This project is designed to provide a merit point based attendance system in UTeM, named as U-Tem Merit . The U-Tem Merit is a website for the student, organizer and management team to use to manage programs in UTeM or outside programs. This system will provide all the services along the program from start to the end. U-Tem Merit provides easy and friendly use system for them when managing the programs.



## ABSTRAK

Project ini adalah untuk membuat satu system nilai merit kehadiran di UTeM, dinamakan sebagai U-Tem Merit. U-Tem Merit adalah satu laman web bagi pelajar, pengajar dan jabatan pengurusan menguruskan program di UTeM atau program luar UTeM. Sistem ini akan membekalkan semua perkhidmatan yang diperlukan sepanjang program diadakan. U-Tem Merit membekalkan mudah and mesra bagi pengguna menggunakan sistem ini apabila menguruskan program.





## TABLE OF CONTENTS

	<b>PAGE</b>
<b>DECLARATION.....</b>	<b>II</b>
<b>DEDICATION.....</b>	<b>III</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>IV</b>
<b>ABSTRACT.....</b>	<b>V</b>
<b>ABSTRAK .....</b>	<b>VI</b>
<b>TABLE OF CONTENTS .....</b>	<b>VII</b>
<b>LIST OF TABLES .....</b>	<b>XII</b>
<b>LIST OF FIGURES.....</b>	<b>XIII</b>
<b>LIST OF ABBREVIATIONS .....</b>	<b>XV</b>
<b>LIST OF ATTACHMENTS.....</b>	<b>XVI</b>
<b>CHAPTER 1: INTRODUCTION.....</b>	<b>1</b>
1.1    Introduction.....	1
1.2    Problem Statement.....	1
1.3    Objective.....	2
1.4    Scope.....	2
1.4.1    Target User .....	2
1.4.2    Platform .....	2
1.4.3    Modules to be developed.....	3
1.4.3.1    Student Module.....	3

1.4.3.2	Organizer Module.....	3
1.4.3.3	Management Team Module.....	4
1.5	Deliverable.....	6
1.6	Project Significance .....	6
1.7	Expected Output .....	6
1.8	Conclusion .....	6
<b>CHAPTER 2: LITERATURE REVIEW AND PROJECT METHODOLOGY .</b>		<b>7</b>
2.1	Introduction.....	7
2.2	Facts and findings .....	7
2.2.1	Domain .....	7
2.2.2	Existing System.....	8
2.2.3	Technique .....	9
2.3	Project Methodology.....	9
2.3.1	System Development Life Cycle.....	9
2.3.2	Database Life Cycle.....	11
2.4	Project Requirements.....	12
2.4.1	Software Requirement .....	12
2.4.2	Hardware Requirement.....	13
2.4.3	Other Requirements .....	13
2.5	Project Schedule and Milestones .....	13
2.6	Conclusion .....	14
<b>CHAPTER 3: ANALYSIS .....</b>		<b>15</b>
3.1	Introduction.....	15
3.2	Problem Analysis.....	15

3.3	Requirement Analysis.....	16
3.3.1	Date Requirement.....	17
3.3.2	Functional Requirement .....	21
3.3.2.1	Student Module.....	21
3.3.3	Non-Functional Requirement .....	23
3.4	Conclusion .....	24
<b>CHAPTER 4: DESIGN .....</b>		<b>25</b>
4.1	Introduction.....	25
4.2	High-Level Design.....	25
4.2.1	System Architecture .....	25
4.2.2	Use Case Diagram .....	27
4.2.3	User Interface Design .....	27
4.2.3.1	Interfaces for All Roles.....	27
4.2.3.2	Interfaces for Students .....	30
4.2.3.3	Interfaces for Organizer.....	34
4.2.3.4	Interfaces for Admin.....	38
4.3	Database Design .....	44
4.3.1	Conceptual and Logical Database Design.....	44
4.3.2	Business Rule: .....	44
4.4	Detailed Design.....	45
4.4.1	Module Integration and Interface Design.....	45
4.4.1.1	Student Modules .....	45
4.4.1.2	Organizer Modules .....	46
4.4.1.3	Management Team .....	47

4.4.2	Software Design .....	48
4.4.2.1	Students .....	49
4.4.2.2	Organizer .....	52
4.4.2.3	Management Team .....	55
4.4.3	Physical Database Design.....	59
4.5	Conclusion .....	59
<b>CHAPTER 5: IMPLEMENTATION .....</b>		<b>60</b>
5.1	Introduction.....	60
5.2	Software Development Environment Setup .....	60
5.3	Software Configuration Management.....	61
5.3.1	Configuration Environment Setup.....	61
5.3.2	Version Control Procedure .....	61
5.3.2.1	Web Application.....	62
5.3.2.2	Web Server .....	63
5.4	Implementation Status .....	64
5.5	Conclusion .....	65
<b>CHAPTER 6: TESTING.....</b>		<b>66</b>
6.1	Introduction.....	66
6.2	Test Plan .....	66
6.2.1	Test Organization .....	66
6.2.2	Test Environment .....	67
6.2.3	Test Schedule.....	67
6.3	Test Strategy .....	68

6.3.1	Classes of tests .....	68
6.3.1.1	Unit Testing .....	68
6.3.1.2	Integration Testing .....	68
6.4	Test Design .....	68
6.4.1	Unit Testing .....	69
6.4.1.1	Student .....	69
6.4.1.2	Organizer .....	72
6.4.1.3	Management Team .....	75
6.4.2	Integration Testing .....	80
6.5	Test Result and Analysis .....	87
6.6	Conclusion .....	88
<b>CHAPTER 7: PROJECT CONCLUSION .....</b>		<b>89</b>
7.1	Observation on Weakness and Strengths .....	89
7.1.1	Weakness .....	89
7.1.2	Strengths .....	89
7.2	Propositions for Improvement .....	90
7.3	Project Contribution .....	90
7.4	Conclusion .....	91
<b>REFERENCES .....</b>		<b>92</b>
<b>APPENDIX A .....</b>		<b>ERROR! BOOKMARK NOT DEFINED.</b>

## LIST OF TABLES

	PAGE
<b>Table 2.1: List of Software .....</b>	<b>12</b>
<b>Table 2.2: List of Hardware .....</b>	<b>13</b>
<b>Table 2.3: Gantt Chart .....</b>	<b>13</b>
<b>Table 3.1 Table of Attendance .....</b>	<b>18</b>
<b>Table 3.2: Table of Location .....</b>	<b>18</b>
<b>Table 3.3: Table of PointList.....</b>	<b>19</b>
<b>Table 3.4: Table of Program .....</b>	<b>19</b>
<b>Table 3.5: Table of User .....</b>	<b>20</b>
<b>Table 3.6: Student Module Requirement.....</b>	<b>21</b>
<b>Table 3.7: Organizer Module Requirement .....</b>	<b>22</b>
<b>Table 3.8: Management Team Module Requirement.....</b>	<b>22</b>
<b>Table 3.9: Non-Functional Requirement .....</b>	<b>23</b>
<b>Table 5.1: Website.....</b>	<b>62</b>
<b>Table 5.2: Web Server .....</b>	<b>63</b>
<b>Table 5.3: Module Implementation Progress .....</b>	<b>64</b>
<b>Table 6.1: Test Environment .....</b>	<b>67</b>
<b>Table 6.2: Test Schedule.....</b>	<b>67</b>
<b>Table 6.3: Test Case for Student.....</b>	<b>69</b>
<b>Table 6.4: Test Case for Organizer .....</b>	<b>72</b>
<b>Table 6.5: Test Case for Management Team.....</b>	<b>75</b>

## LIST OF FIGURES

	PAGE
Figure 2.1: Waterfall Model.....	11
Figure 3.1: Current Flow.....	16
Figure 3.2: U-Tem Merit Flow.....	17
Figure 4.1: System Architecture Visualized .....	26
Figure 4.2: Use Case Diagram of U-Tem Merit .....	27
Figure 4.3: Login.....	27
Figure 4.4: Forgot Password.....	28
Figure 4.5: Personal Information.....	29
Figure 4.6: Update Personal Information.....	29
Figure 4.7: Register as Student.....	30
Figure 4.8: Participated Programs with More Columns.....	31
Figure 4.9: Participated Programs with Lesser Columns.....	31
Figure 4.10: Claim UTeM Program's Attendance.....	32
Figure 4.11: Claim Outsire Program's Attendance.....	32
Figure 4.12: Select Attendance .....	32
Figure 4.13: Unable to Take Attendance .....	33
Figure 4.14: Allow to Take Attendance .....	33
Figure 4.15: All Programs for Organizer .....	34
Figure 4.16: Register Program .....	35
Figure 4.17: Update Program .....	35
Figure 4.18: View Program with QR Code .....	36
Figure 4.19: Manage Attendance.....	36
Figure 4.20: Generate Report .....	37
Figure 4.21: Register for Admin.....	38

<b>Figure 4.22: View All Students Detail .....</b>	<b>38</b>
<b>Figure 4.23: View More Columns of Programs .....</b>	<b>39</b>
<b>Figure 4.24: View Lesser Columns of Programs.....</b>	<b>39</b>
<b>Figure 4.25: Register Program for Admin.....</b>	<b>40</b>
<b>Figure 4.26: Update Program for Admin .....</b>	<b>40</b>
<b>Figure 4.27: Manage Other’s Program.....</b>	<b>41</b>
<b>Figure 4.28: View Program with QR Code .....</b>	<b>42</b>
<b>Figure 4.29: Manage Attendance.....</b>	<b>42</b>
<b>Figure 4.30: Generate Report .....</b>	<b>43</b>
<b>Figure 4.31: Manage Outside Programs .....</b>	<b>43</b>
<b>Figure 4.32: Conceptual and Logical Database Design .....</b>	<b>44</b>
<b>Figure 4.33: Authentication for Student.....</b>	<b>49</b>
<b>Figure 4.34: Participated Programs .....</b>	<b>50</b>
<b>Figure 4.35: Take Attendance.....</b>	<b>50</b>
<b>Figure 4.36: View All Programs .....</b>	<b>51</b>
<b>Figure 4.37: Authentication for Organizer.....</b>	<b>52</b>
<b>Figure 4.38: Manage Own Create Program .....</b>	<b>53</b>
<b>Figure 4.39: Manage Attendance for Organizer .....</b>	<b>54</b>
<b>Figure 4.40: Authentication for Management Team .....</b>	<b>55</b>
<b>Figure 4.41: Student List.....</b>	<b>56</b>
<b>Figure 4.42: Manage Programs for Management Team.....</b>	<b>57</b>
<b>Figure 4.43: Manage All Program Attendances.....</b>	<b>58</b>
<b>Figure 4.44: Manage Outside UTeM Program Attendances .....</b>	<b>58</b>
<b>Figure 4.45: Entity Relational Diagram.....</b>	<b>59</b>



## LIST OF ABBREVIATIONS

<b>FTMK</b>	-	<b>Fakulti Teknologi Maklumat &amp; Komunikasi</b>
<b>UTeM</b>	-	<b>Universiti Teknikal Malaysia Melaka</b>
<b>SDLC</b>	-	<b>System Development Life Cycle</b>
<b>DBLC</b>	-	<b>Database Life Cycle</b>
<b>ERD</b>	-	<b>Entity Relationship Diagram</b>
<b>SQL</b>	-	<b>Structured Query Language</b>
<b>RDBMS</b>	-	<b>Relational Database Management System</b>
<b>IDE</b>	-	<b>Integrated Development Environment</b>
<b>UML</b>	-	<b>Unified Modelling Language</b>
<b>FYP</b>	-	<b>Final Year Project</b>

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**LIST OF ATTACHMENTS**

	<b>PAGE</b>
<b>Appendix A</b>	
<b>Sample of source code</b>	<b>93</b>



## CHAPTER 1: INTRODUCTION

### 1.1 Introduction

Merit Point Attendance System UTeM is an website that helps students, organizer of programs and management team to manage programs which are merit point based. UTeM has lot of students and programs, but students did not able to know their performance in UTeM. They can only know by the certificates received. UTeM also does not have measurement given to the students who have contributions in the participated program. The students will have motivation to take part in program if some measurements are given such as merit point. Merit point is the point given to the participants when they take charge of some position or make achievement in the program. Depend on the performance of the participants, different merit point will be given. Organizer and management team also will get profit from it. Organizer can register programs with few easy steps and managements team can easily manage the systematically listed programs request from organizer. The organizer can be anyone who is assigned by the management team. Merit Point Attendance System UTeM is designed to solve the problems and provide convenience to all three of them.

### 1.2 Problem Statement

- The students do not know their own performance in university life by participating programs of university.
- The organizers are facing problems when registering and managing attendance of students in university.

- The management team spends lot of time for doing authentic programs and generate report.

### 1.3 Objective

This project embarks on the following objects:

- To digitalize the attendance system.
- To provide a merit point attendance system
- To increase the efficiency for the students, organizer and management team when managing a program.

### 1.4 Scope

#### 1.4.1 Target User

This project is target for students, organizer of programs and management team in UTeM.

#### 1.4.2 Platform

The platform to be used for this project is web browser for the frontend system as the interface to the user and Node.js for the backend system as the server provides service to the frontend system. The framework used for the frontend system is Vue.js which is open-source model-view-viewmodel. The backend framework used for the system is Express.js. Express.js is also free and open-source software for the Node.js which is suitable for this system. It is used for developing web application and acting as an application programming interface to help in communication between the frontend and backend system.

### 1.4.3 Modules to be developed

#### 1.4.3.1 Student Module

- Participated Programs Module
  - U-Tem Merit will display total point achieved from all the programs and a list of participated programs with calculated marks by adding up the achievement, position and program point in the program.
  - U-Tem Merit will display the status of the program requested by the student to indicate whether it is approved by the organizer.
- Claim Module
  - U-Tem Merit will provide a form for the student to claim the points for the achievement, position and program point in the program which can be UTeM program or out of UTeM program by providing certificate through uploading it.
- Attendance Module
  - U-Tem Merit will display processed programs which will be conducted on that day and student only can take attendance during the program is conducting.
- Programs Module
  - U-Tem Merit will display all the conducted programs and all participated students with their achievement and position.

#### 1.4.3.2 Organizer Module

- Manage Programs Modules

- U-Tem Merit will display a form for the organizer to fill in with the information of program which is going to be conduct.
  - U-Tem Merit will display the status of the program for the creator of program for the organizer.
  - U-Tem Merit will inform the creator of program any update of the program by the management team through email.
- Programs Module
- U-Tem Merit will display all the conducted programs which are created by the current organizer account only and all participated students with their achievement and position.
  - U-Tem Merit will provide service for the organizer to download the file in .csv format which containing the list of the students of a program.
  - U-Tem Merit will provide QR Code of the program which will be conducted on that day and approved.
  - U-Tem Merit will provide service for the organizer to manage the qualification of the participated students of the programs which are created by the organizer.

### 1.4.3.3 Management Team Module

- Student List Module
- U-Tem Merit will display all the students and process participated programs by each student.
  - U-Tem Merit will calculate the total point achieved in all participated programs by each student.

- Manage Programs Modules

- U-Tem Merit will display a form for the management team to fill in with the information of program which is going to be conduct.
- U-Tem Merit will display the detail of the program requested by the organizers for the management team to approve or reject.
- U-Tem Merit will inform the creator of program any update of the program by the management team through email.

- Programs Module

- U-Tem Merit will display all the conducted programs and participated students with their achievement and position.

- U-Tem Merit will provide service for the organizer to download the file in .csv format which containing the list of the students of a program.

- U-Tem Merit will provide QR Code of the program which will be conducted on that day and approved.

- U-Tem Merit will provide service for the management team to manage the qualification of the participated students.

- Other Programs Module

- U-Tem Merit will display the students who request the point achieved in program which is out of UTeM programs for management teams to approve or reject the qualification of the students to get the points.

## 1.5 Deliverable

The deliverables of this project are the literature review, project methodology, analysis, design, implementation, testing and finally the complete U-Tem Merit.

## 1.6 Project Significance

This project is built especially for students, organizer and management teams in UTeM. By using this system, this will definitely decrease the time consume on managing programs, taking attendance and collecting data of each program. As a result, it saves the time for all of three target users.

## 1.7 Expected Output

There are some of the expected outputs in this project. Firstly, U-Tem Merit is built perfectly at the end of this project, all of the modules stated above are built accurately. Secondly, the website is widely accepted by students, organizer and management team, it is easy to use and learn to use. Thirdly, the website helps students, organizer and management team of reducing time consume in managing merit point based program.

## 1.8 Conclusion

In conclusion, this chapter does the overview of this project which include problem statements, objectives, scope and so on. In following section, it will preview to the literature review of this project.