



**JAVA EVALUATION TESTING AND MARKING SYSTEM**

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

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY  
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**DECLARATION**

I hereby declare that this project report entitled  
**JAVA EVALUATION AND MARKING SYSTEM**

is written by me and is my own effort and that no part has been plagiarized  
without citations

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## DEDICATION

To my beloved parents, Mr. Koon Nyet Chin and Mrs Chow Siew Moi, for their seems less expression of love and fully support...

To my supervisor, Cik Intan Ermahani bt. A. Jalil, for making it all worthwhile...

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And finally thanks for the many people who were there to lend a hand along the way. Thanks to you all.



## ABSTRACT

This report contains complete compilation of all activities and works done throughout the fourteen weeks period of this semester. It discusses and describes all activities that contribute towards developing the student's knowledge, skills and exposures to system development environment. This Java Evaluation and Marking System is an online system that will automatically mark the student's answer and display the result. The question format in this system contains objective question, true false question, fill in the blank, and structure question where the student need to type in the true Java code. This project report contains seven main chapters. The first chapter will be the Introduction to the PSM 1 project and the system that will be developed. It will discuss about the project background, problem statements, objectives, scopes and its significances. The Literature Review and Project Methodology will be the second chapter where it is more to making comparison between the existing systems to the new one. A list of hardware and software requirements and the project's schedule are also in this chapter. Chapter III is about the Analysis where it describes the current system scenario and the requirements of the new system are detailed with the help of appropriate diagrams. As for Chapter IV which is Design, the topics discussed are focus on designing the new system architecture, detailed design of every important algorithm in this system, interfaces and also database based on the results from the analysis of the preliminary design. Chapter V discusses about how is this system is implemented into code and start to run. Chapter VI discusses about how is this system is tested and what kind of test plan has been carried out. Chapter VII is the conclusion of this system which discusses about the strength, weaknesses and the improvement should be added into this system in the future. The full description of the activities done as well as the system that will be developed can be found in the later chapters of this report.

## ABSTRAK

Laporan ini mengandungi himpunan semua aktiviti dan kerja yang telah dijalankan sepanjang tempoh empat belas minggu pada semester ini. Ianya membincangkan dan menerangkan kesemua aktiviti yang menyumbang kepada peningkatan pengetahuan pelajar dan kemahiran bagi mendedahkan pelajar kepada persekitaran pembangunan system yang sebenar. Laporan projek ini mengandungi tujuh bab. Java Evaluation and Marking Sistem ini adalah satu sistem yang akan menandakan jawapan pelajar dan memaparkan keputusan secara talian. Format soalan yang disediakan dalam sistem ini terdiri daripada soalan objektif, soalan betul atau salah, isi tempat kosong dan soalan struktur di mana pelajar dihendaki menjawab dengan kod Java yang sebenar. Bab pertamanya ialah Pengenalan kepada projek PSM 1 dan system yang bakal dibina. Ia akan membincangkan mengenai latar belakang, masalah-masalah, objektif, skop dan kepentingan projek tersebut. Kajian Literatur dan Metodologi Projek merupakan bab kedua di mana ianya lebih kepada membuat perbandingan di antara system yang sedia ada dengan system yang bakal dibangunkan. Senarai keperluan perkakasan dan perisian serta jadual projek juga turut disertakan di dalam bab ini. Bab III pula mengenai Analisis di mana ianya menerangkan secara terperinci mengenai scenario system semasa dan juga keperluan yang diperlukan oleh system yang akan dibangunkan dengan bantuan gambarajah yang sesuai. Bagi Bab IV iaitu reka bentuk ianya membincangkan seni bina sistem, reka bentuk terperinci untuk setiap algoritma yang penting dalam sistem ini, antaramuka dan juga pangkalan data system berdasarkan kepada hasil analisis rekabentuk awalan. Bab V membincangkan tentang bagaimana sistem ini dilaksanakan dalam bentuk kod dan mula berjalan. Bab VI membincangkan tentang bagaimana sistem ini diuji dan apa kes pengujian yang telah dijalankan selama ini. Bab VII adalah kesimpulan untuk sistem ini di mana membincangkan tentang kekuatan, kelemahan dan apakah pembaikan yang boleh ditambahkan lagi dalam sistem pada masa depan. Penerangan yang terperinci bagi aktiviti-aktiviti yang telah dan bakal dijalankan berserta dengan sistem yang bakal dibangunkan akan diceritakan di dalam bab-bab lain di dalam laporan ini.

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**LIST OF ABBREVIATION**

<b>ERD</b>	Entity Relationship Diagram
<b>FTMK</b>	Fakulti Teknologi Maklumat dan Komunikasi
<b>UTeM</b>	Universiti Teknikal Malaysia Melaka
<b>JEMS</b>	Java Evaluation and Marking System

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## CHAPTER I

### INTRODUCTION

#### 1.1 Project Background

The “Java Evaluation and Marking System” is mainly developed for the use of all Java lecturers from the Faculty of Information and Communication Technology, UTeM. It is mainly used to check the Java codes done by the student and an equivalent mark will be displayed for the coding according to the marking scheme set by the lecturer. Currently, there is still no system exists for this purpose where the lecturers still have to mark the lab sheet answer or quiz answer manually. Next, all marks will be recorded in an excel file. In order to make the process become easier, the proposed system will be built as a web based system where all lab exercise answer of Java subject can be uploaded by the students through this system and the answer will be marked by this system automatically. Only Java syntax, looping, logic coding and method will be focused in this proposed system. All the lab exercises answer can be checked by the students to see whether they submit correct answer or not by using this system. If the mark displayed is not a full mark, the answer can be corrected and checked with this system again until the highest mark is displayed. Consequently, the latest answer will be submitted by the students. All the students answer will be checked by the lecturer and their marks will be stored in a database. In addition, this system can be used for the quiz to test the student.

## 1.2 Problem Statements

It was quite wasting time to mark and record the lab exercise answer and quiz answer manually. The lab exercise answer or quiz answer submitted by the students was in a big amount and a lot of times need to be taken by the lecturer to mark the answer. Sometimes, the lecturer had problem and felt difficult to give marks especially for those who is totally almost answering all the questions wrongly.

Currently, students did not know how to get more marks for their homework. A lot of marks were lost due to many simple errors made by the student. Although there were some students that had tried their best for their work, they did not know how to check the answer due to their understanding on the programming skills was poor. So, they just simply hand in whatever they had done.

The process of homework submitting that have been done by students was not standardized. All the homework passed up by the students was not in the same time or in the same day. As usual, all the answer sheet or diskette were slipped under the door, put outside the room or thrown into the room by the students. As a result, lecturers need to pick up the answer sheet and mark it every time they saw a student's homework.

## 1.3 Objectives

- i. To save more time
  - This system will check and mark the students answer whenever they submit their homework. All result will be stored into the database.
- ii. To automate the marking system.
  - This system will mark the students' answer automatically according to the marking scheme as set by the lecturer.

- iii. To encourage the students to improve their programming skills.
  - This system will provide a chance for students to correct their work after checked by this system. So, they will do their best in exploring and understanding the Java language in order to get the best result
- iv. To encourage the students to get more marks.
  - This system will check the students work and display the deserved mark. So, the answer can be checked and corrected again until they got the highest mark as they can.

## **1.4 Scopes**

### **i. Lecturer Scope**

- a. This system will let the lecturer to update the latest answer scheme of every lab exercise or quiz into the system at any time.
- b. This system will let the lecturer to register their own profile into the system at any time.
- c. This system will let the lecturer to enable or disable the quiz for student at any time.
- d. This system will let the lecturer to view all the students' homework result.
- e. This system will check and mark the answers submitted by the students automatically and store their marks into the database.

### **ii. Student Scope**

- a. This system will let the students to check their lab exercise answers.
- b. This system will let the students to register their own profile.
- c. This system will let the students to submit their lab exercise or quiz answer.

## **1.5 Project Significance**

The Java Evaluation and Marking System that will be developed for the Faculty of Information and Communication Technology of University Technical Malaysia Malacca will benefit not only the students but also the lecturer who is teaching Java. This system is important because it helps the lecturer to save a lot of times which mark the Java coding uploaded by the students automatically. Then, every student's marks will be stored into the database and displayed to lecturer as they need. Next, it also encourages the students to do more research in order to get the highest mark for their work as they can. From that, their programming skills will be improved indirectly.

## **1.6 Expected Output**

This system will automatically check and compare the coding between the students answer and answer scheme set by the lecturer if the students want to check their answer. Marks will be automatically calculated and displayed to the student or lecturer. Once the student submits their answer, their answer will be marked and their result will be automatically added into the database.

## **1.7 Conclusion**

As a conclusion, this Java Evaluation and Marking System is hoped to bring the significance to both the user after it is being launched. The main objective of this system is to help the lecturer save more time and encourage the students to do more research in order to get more marks for their work. The answer submitted by the students will be marked and their marks will be added into the database. The next chapter that will be

discussed is about the project literature review and methodology regarding the proposed system.



## CHAPTER II

### LITERATURE REVIEW AND PROJECT METHODOLOGY

#### 2.1 Introduction

Basically, this chapter includes facts and findings, project methodology, project requirements, project schedule and milestone. In this chapter, it provides a brief overview of the concepts behind this research study and also includes some of the existing system review. This part clearly identifies the methodology to be adapted in the project development. Besides that, it lists all the tools, software, operating system and hardware used for system development.

In fact, a literature review is an evaluative report of information related to the selected area study of the study of the project. It is an important process in system development which encompasses research and analysis on previous system, techniques used and study on the project domain. It enables us to read more on the subject relevant to the project and see how the others have approached to the proposed area. The research about manufacturing resource planning is completed and done through searching, collecting, studying and analyzing relevant resources from journals, articles, reference books and web pages.