

## BORANG PENGESAHAN STATUS TESIS

JUDUL: TEST QUALIFICATION SYSTEM FOR MINISTRY OF HUMAN RESOURCE, MALAYSIA

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Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)

**TEST QUALIFICATION SYSTEM FOR  
MINISTRY OF HUMAN RESOURCE, MALAYSIA**

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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 COMMUNICATIONS TECHNOLOGY  
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2006**

## DECLARATION

I hereby declare that this project report entitled  
**TEST QUALIFICATION SYSTEM FOR  
MINISTRY OF HUMAN RESOURCE, MALAYSIA**

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 late father,  
Abdul Hamid Bin Ahmad.

To my mother,  
Shahbani Binti Hashim.

To my brothers and sisters,  
Mohd Radzif Bin Abdul Hamid, Rafizah Binti Haji Mahfuz  
and Nurul Fatiha Binti Abdul Hamid

Who inspired me with their love of learning, scholarship, and teaching

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## ABSTRACT

This research was about MOHR Training Qualification Test System (MTQS). It was an online computerized system that developed to solve the manual business problems using web-programming language, Personal Homepage (PHP). The main problems of the current system are, there is no efficient system for choose correct candidates for training, search the certain data, specific time, date and training schedule. The solving method is to perform analysis of current systems and proposed system and next, implement the available features, advantages and weaknesses to create a better system. For overall, this system is using Apache for the platform. For the methodology MOHR Training Qualification Test System use OOAD (Object Oriented Analysis Design), which is, it participate UML as analysis process. The OOAD implementation is include the diagram that have in the system such as use case diagram, interaction diagram, deployment diagram and class diagram. These systems are successfully because this system has archived the user requirement and the objectives of the system.

## ABSTRAK

Kajian ini adalah mengenai MOHR Training Qualification Test System (MTQS-Sistem Ujian Kelayakan Menduduki Latihan). Ia merupakan satu sistem komputer *online* yang dibangunkan bagi menyelesaikan masalah manual dengan menggunakan bahasa pengaturcaraan *Personal Homepage (PHP)*. Antara masalah utama yang timbul dari sistem sedia ada adalah seperti tidak mempunyai satu sistem yang sesuai untuk memilih calon yang layak bagi mengikuti latihan yang disediakan, carian data bagi tarikh, masa dan jadual yang sesuai. Metod yang digunakan bagi menyelesaikan masalah ini adalah dengan membuat kajian ke atas sistem yang sedia ada dan sistem yang hendak di bangunkan. Secara keseluruhannya, sistem ini menggunakan *Apache* sebagai platform. Dalam membangunkan sistem ini, antara metod yang digunakan ialah OOAD (Object Oriented Analysis and Design), dimana ia menggunakan UML sebagai proses analisis. Pembangunan OOAD adalah meliputi diagram yang terdapat didalam MTQS seperti *use case diagram*, *interaction diagram*, *deployment diagram* dan kelas diagram. Sistem ini adalah berjaya kerana ia memenuhi kehendak pengguna dan memenuhi objektif sistem.

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## LIST OF ACRONYM

MOHR	Ministry Of Human Resource
MTQS	MOHR Test Qualification Test System
SDLC	System Development Life Cycle
OOAD	Object Oriented Analysis and Design
JAD	Join Application Development
RAD	Rapid Application Development
CASE	Computer Assisted Software Engineering
OODLC	Object Oriented Development Life Cycle
OOA	Object Oriented Analysis
OOD	Object Oriented Design
OOP	Object Oriented Programming
PC	Personal Computer
PSM	Projek Sarjana Muda
HTML	HyperText Markup Language
IT	Information Technology



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## CHAPTER I

### INTRODUCTION

#### 1.1 Project Background

MOHR Training Qualification Test System (MTQS) is an online computerized system that developed to solve the manual business problems using web-programming language, Personal Homepage (PHP).

It is developed to solve current problem such as select MTQS candidates that need to go the training and also the level of knowledge for training that they should attend. Helps administrator to manage record, result and data of MTQS candidates.

MTQS is developed for all candidates to check their result and check training schedule. They also can register the examination by give their detail personal to administrator. Besides that, the candidates can see the schedule of the training, general calendar, new information about examination and also guidelines to take the examination.

This application also secured with password. This make sure that only the authorize candidates can access their own data and result because it may contains

sensitive and private information. Candidates, administrator and IT officer of Ministry of Human Resource (MOHR) can log MTQS.

For overall, MTQS is actually an internal system that will focusing on usual functions such as saving data, deleting data, display data, printing data, adding data, searching for data and updating data. The methodology for MTQS was Object Oriented Analysis and Design (OOAD).

## 1.2 Problem Statement

MOHR and especially Information Technology Department is still using manual system such as books and files in recording data according to candidates profile and examination.

This manual system can cause many unnecessary problems that can bring bad effects to the candidates, administrator, IT officer and MOHR itself.

These problems were listed below:

i. Difficulties in choosing the right course for the candidates

From the current system, MTQS candidates who want to attend knowledge training need to complete the form that given by Information Technology Officer. After the form had been completed, administrator will arrange the training schedule and sent the candidates to any type of level training. Sometimes it may cause candidates going to wrong training level.

ii. Personal record is managed in inefficiently

With manual system, percentages of person data record loss are quite high. When the candidates joined the training or had completed the form, administrator will manually save the data in personal file and placed it in the file room. Sometimes the

records were also on the risk to lose because of floods and fire. From the current system, administrator also face some difficult to update or to search certain record because administrator need to check one by one files or books. Administrator have to go through all files and books in the cabinet to search for some data that candidates request and this make the candidates have to wait a longer time to get what they want.

iii. No backup file for training and candidates record data

With manual system, no backup files for training data and candidates' data ever existed because it is difficult to make a backup files or books. If data loss ever happen, it will be very difficult to the MOHR because no database to save data and to retrieve data. It may take a long time to collect back the data and maybe some data will lose.

iv. Personal data record was unsafe

Without a proper system, all the data of MTQS in the books and files are kept only in cabinet without proper security and administrator will face big problem if the data lost or damage because some of the data may contains sensitive and private information.

For this system, the method that will use is Object Oriented Analysis and Design (OOAD). It is because the method is suitable with the flow of the system.

### 1.3 Objective

The objectives of MTQS are: -

i. To build a system that has functions that can help user manage the application.

By using this system, user can do their application such as recording data, deleting data, display data, printing data, adding data, searching for data and updating data

- ii. To provide a test module that can be used by the candidates and help admin in manage the report and result of the test.
- iii. To ease the selection of candidates to go for training based on their level.
- iv. To provide a system to manage data of candidates, training and test question.
- iv. To build a system with high security. The system was complete with the password because some of the data may contain sensitive and private information.
- v. To build a system that can act on immediate response for candidates. With the MTQS, the candidates can know the result immediately after answer all the question.

#### 1.4 Scopes

MTQS is an application which is developed for staff and administration MOHR, Putrajaya. The system can be use online as long as the operating system of the computer is Windows.

The MTQS is divided into three module; module of candidates, module of administrator and module of IT Officer. The purposes of these modules are to ensure that the planning and development of the system become easier. These modules also needed to ensure the system is built consistent with objectives and goals of the project and to fulfill the user's requirement.

### 1.4.1 Module of Candidates

i. Module for security

This system was complete with security. This is to make sure that only the authorize candidates can access their own personal data and result because it may contains sensitive and private information. To go through with the system, they should key in their ID number and the password.

ii. Module for registration

For a new user or candidates, they need to register by giving their particulars to the administrator and administrator will register before the candidates can use the system. After registered, the MTQS candidates can takes the examination. The candidates called administrator if they had problem with the system such as forget password. After registered, the candidates only can view their own personal data and edit but they are not allowed to delete.

iii. Module for answering test question

After entered, the system will display the profile of candidate, answer test question such as Information Technology (IT), administrator, finance and English and the system also will view the training schedule. The candidates only can answer the question once. The warning message will appear if the candidates want to try it again.

iv. Module for print

The candidates can print the candidate's personal data, examination result and training schedule.

v. Beside that the candidates also can review the schedule of training, general calendar, new information about examination and also guidelines to take the examination.

### 1.4.2 Scope of Administrator

i. Module for Security

This system was complete with security. This is to make sure that only the authorize person can access the data and result because it may contains sensitive and private information. For administrator, they needs to key in the ID number and password before access the system.

ii. Module for manage candidates

The manage candidates module responsible for managing the candidates data such as candidate's registration. Beside that, this module responsible to solve the problems faced by the candidates.

iii. Module for manage question

The manage question module responsible for managing the set of question that should be answered by the candidates. This module helps administrator to add new questions and delete the old questions. The questions will appear randomly for every different candidate.

iv. Module for manage results

The manage result module responsible for managing the result that will generate by the system. This module helps administrator to group the candidates according to their level.

v. Module for manage reports

The report module responsible for managing the report that will help administrator to make a decision either to sent the candidates for training or not. From this module, it will generate reports by grade result and reports by level.

vi. Module for manage training

The training module was responsible for managing training slot. This module also includes the administrator to manage select training based on candidates result.

vi. Module for search

Administrator can search data or candidates by IC number and name.

vii. Module for print

Administrator can print out the reports and results straight from the system.

### 1.4.3 Scope of IT Officer

i. Module for Security

This system was complete with security. This is to make sure that only the authorize person can access the data and result because it may contains sensitive and private information. For IT Officer, they need to key in the ID number and password before access the system.

ii. Module for search

Administrator can search data or candidates by IC number and name.

iii. Module for reports

The module responsible for IT Officer to view the reports by grade result and reports by level.