

## BORANG PENGESAHAN STATUS TESIS\*

JUDUL: SISTEM MAKLUMAT PENILAIAN TAHAP KECEKAPAN UNTUK LAN  
(ePTK)

SESI PENGAJIAN: 2007/2008

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**SISTEM MAKLUMAT PENILAIAN TAHAP KECEKAPAN UNTUK LAN  
(e-PTK)**

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This report is submitted in partial fulfillment of the requirements for the Bachelor of  
Computer Science (Database Management)

**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY  
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2007**

## DECLARATION

I hereby declare that this project report entitled

**SISTEM MAKLUMAT PENILAIAN TAHAP KECEKAPAN UNTUK LAN  
(e-PTK)**

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 family members and my supervisor.

## ACKNOWLEDGEMENTS

First, I would like to put forward a special thanks to my supervisor, En. Mohd fadzil bin Zulkifli for his worthless comments and suggestion and knowledge that shared with me to do the project.

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## ABSTRACT

The *Sistem Maklumat Penilaian Tahap Kecekapan untuk LAN* is developed for Lembaga Akreditasi Negara. Currently, human Resource Department manages PTK processes without any support system. Unfortunately, there are only two staffs who handle PTK overall processes besides manage others work. It leads to over workload and energy. Moreover, the staffs encountered problems on manage PTK results calculation and bank questions maintenance. This brings problems such information searching and updating. As a result, e-PTK system is intended to solve problems in manual system. The system provides facilities according to staffs and administrators privileges modules. An online PTK registration, result checking, bank question maintenance, registration approval process and *Jadual spesifikasi Ujian* management are handle more analytically and effectively. SSADM methodology with Data Flow Diagram is applied to illustrate the project work flow. Also, the system is developed by using the Microsoft Cold Fusion MX, Dream weaver for web design purpose and SQL Server 2000 as platform to store the system's information.

## ABSTRAK

Sistem Maklumat Penilaian Tahap Kecekapan untuk LAN dibangunkan untuk Lambaga Akreditasi Negara. Organisasi ini menguruskan proses-proses PTK tanpa sebarang bantuan sistem. Malangnya hanya dua orang staf yang mengendalikan kesemua proses PTK disamping menguruskan kerja lain. Ini mengakibatkan kepada beban kerja dan masa. Tambahan pula, staf menghadapi masalah dalam pengurusan mengira keputusan PTK dan mengendali bank soalan. Ini membawa kepada masalah-masalah seperti pencarian dan kemaskian data-data. Akibatnya, e-PTK sistem telah direka bagi mengatasi masalah dalam sistem semasa. Sistem ini memberi kemudahan kepada staf dan pentadbir LAN berdasarkan kepada kebenaran akses sistem itu. *Online* PTK pendaftaran, semakan keputusan, pengurusan bank soalan, kelulusan pendaftaran, dan jadual spesifikasi ujian dapat dikendalikan dengan lebih sistematik dan secara berkesan. Metodologi SSADM dengan bantuan *Data Flow Diagram* digunakan untuk menerangkan perjalanan sistem ini. Sistem ini dibangunkan dengan menggunakan *Microsoft Cold Fusion MX*, *Dream weaver* untuk tujuan perekaan aplikasi web dan *Microsoft SQL Server 2000* sebagai platform untuk simpan system data

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## LIST OF ABBREVIATIONS

NO	ABBREVIATION	NAME
1.	SSM	Sistem Saran Malaysia
2.	PTK	Penilaian Tahap Kecekapan
3.	LAN	Lembaga Akreditasi Negara
4.	HRM	Human Resource Management
5.	JSU	Jadual Spesifikasi Ujian
6.	IIS	Internet Information System
7.	LAN	Local Area Network
8.	ICT	Information and Communication Technology
9.	WBT	Web Based Training
10.	CONOCER	Occupational Competency Standardization and Certification Council
11.	JPA	Jabatan Perkhidmatan Awam
12.	KSM	Kementerian Sumber Manusia
13.	PDF	Portable Document Format
14.	PSM	Pengurusan Sumber Manusia
15.	OMR	Optimal Mark Recognition
16.	ASP	Active Server Pages
17.	FQA	Frequent Question Answer
18.	PHP	Hypertext Preprocessor

<b>19.</b>	<b>SDLC</b>	<b>System Development Life Cycle</b>
<b>20.</b>	<b>DFD</b>	<b>Data Flow Diagram</b>
<b>21.</b>	<b>ERD</b>	<b>Entity Relationship Diagram</b>
<b>22.</b>	<b>3NF</b>	<b>Third Normal Form</b>
<b>23.</b>	<b>PK</b>	<b>Primary Key</b>
<b>24.</b>	<b>FK</b>	<b>Foreign Key</b>
<b>25.</b>	<b>DBMS</b>	<b>Database Management System</b>
<b>26.</b>	<b>SQL</b>	<b>Structured Query Language</b>

## CHAPTER I

### INTRODUCTION

#### 1.1 Project Background

In November 2002, the Malaysian government introduced the new Sistem Saraan Malaysia (SSM) promotional scheme and the mandatory assessment of level of competency (or more commonly known as Penilaian Tahap Kecekapan-PTK) for all categories of public service employees including Staffs of Lembaga Akreditasi Negara. The main objectives of the SSM scheme are to ensure employee's self development through continuous learning, the use of knowledge and skills to enhance creativity and innovation, creation of learning institution and *k*-workers and the development of competency based human resource management. *Penilaian Tahap Kecekapan* has become an extremely well known especially among public servants over recent years.

Lembaga Akreditasi Negara (LAN) is a government organization which was inducted by the Minister of Education Y.B.Dato' Seri Najib bin Tun Abdul Razak. It is aimed to ensure the healthy development of either private higher or local public higher education. Human Resource Management at LAN handles every single process of PTK including PTK examination without any proper system support.

Consequently, the Sistem Maklumat Penilaian Tahap Kecekapan untuk Lembaga Akreditasi Negara (e-PTK) is designed and developed to minimize problems faced and smoothing management of all related PTK process.

## 1.2 Problem Statements

Although there was tremendous growth in Information Technology, but Human Resource Management handles PTK operations manually without a support system. The limitation of manual system is explained in the context of the problem statements faced by HR managers and end-users.

The manual filing system caused to several difficulties such improper data management, the values are not updated to changes, mistakes when doing the calculations on PTK results and record the information and also faced information searching problems.

Besides, a lot of calculation needed to be done before produce competency level of each candidate. The same formula or calculation has to be applied over 200 staffs at LAN. It consumed of time and energy.

Unfortunately, there are only two staffs who handle PTK results without using any system to do the calculation. After the calculation operation is completed, the staffs need to refer *sifir* to do conversion of generated marks into competency level.

Due to the stated problems, the e-PTK is developed for Human Recourse Management as well as Examination Unit with the objective to facilitate them in handling all PTK processes smoothly and reduce over workload.

## 1.3 Objective

The trends of objectives are moving towards the targets of the system as requested by user.

The objectives for developing the e-PTK are as the following:

- i. To Generate Schedule of PTK Examination

Schedule information or inputs will be entered through the application and it is saved into database. The staffs can view schedule through the system. From the system schedule, staffs can know examination information according to their *skim perkhidmatan*. After viewed the schedule the staff can proceed with exam registration.

ii. To Provide an Online PTK Exam Registration.

The staffs can register based on the examination information from schedule as provided through the system on registration application. It will make faster the registration process compared to its manual process. The data then will be saved into database. The system facilitates user to keep staffs registration systematically. Also, if the registration information do not make with registration criteria, then it will be rejected automatically by the system. Only accepted exam registration will be saved into database.

iii. To Automate PTK Results.

The system provides functions to calculate competency level of staffs. There are some calculation formulas that used by the system where it converts marks into percentage format. Followed that, competency level is produced and the results will be displayed on application's screen. Besides, the result slip will be generated with needed information without any extra manual work by the administrator.

iv. To Provide A Secured Database.

Database security is important to each system. Staffs can access system's modules based on given privileges. The system will reduce data redundancy which commonly occurs in manual filling system. Besides, back up and recovery and data integrity features also added to the database. Different login level

allowed unauthorized user from access private and confidential data of PTK

## 1.4 Scopes

The project scopes are obviously definite for the development of the e-PTK. An online system is delivered with the functionalities as the following:

### i. System Deliverables

#### a. Exam Schedule Management

The system facilities administrator to add, edit information on examination schedule. Then, schedule will be displayed in the application form. So that, staffs can refers during PTK registration.

#### b. Online PTK Exam Registration

The function is designed to assist administrator to manage PTK registration more systematically. Consequently, responsible staff does not need carry, view and approve application forms which may consume time. There is less workload and data is kept within single database.

#### c. *Jadual Spesifikasi Ujian (JSU) Management*

Examination Department has many collections of topics and constructs in term of JSU. The examination paper is published based on JSU. So, the system provides functions such add edit, delete on JSU analytically.