BORANG PENGESAHAN STATUS TESIS*

JUDUL: UTeM CURRICULUM VITAE SYSTEM (UTeMCV)

SESI PENGAJIAN: 2012/2013

Saya MOHAMAD IDZHAR BIN YA`AKUB

(HURUF BESAR)

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* Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)

UTeM CURRICULUM VITAE SYSTEM (UTeMCV)

MOHAMAD IDZHAR BIN YA`AKUB

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2013

DECLARATION

I hereby declare that this project report entitled

UTeM CURRICULUM VITAE SYSTEM

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

STUDENT : _____ Date: 06-SEP-2013

(MOHAMAD IDZHAR BIN YA'AKUB)

SUPERVISOR : _____ Date: 06-SEP-2013

(YAHYA BIN IBRAHIM)

DEDICATION

Alhamdulillah with blessed from Allah easy to develop this system completely. Developing this system needs to struggle and full commitment towards the project. Big thanks to my parent, Ya`akub Bin Shamsuddin and Rabiah Binti Abdullah because never stop for support me to complete this system completely. I wish to thank you'll again for the invaluable support and guidance given throughout the completion of my Final Year Project.

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First and foremost, Alhamdulillah and praise to Allah for His bless, I would like to express the deepest appreciation to my supervisor for this Project Sarjana Muda 1 (PSM I), En. Yahya Bin Ibrahim for the support and also the valuable guidance and advice that encourage me to complete the system successfully. He also helps me by giving idea in designing the system and spent some of his busy time to discuss about the system. Without all his advise and opinions the development of the PSM I would not have been possible and continue finish all my documentation for Project Sarjana Muda II (PSM II). Thanks again for support and guidance.

For all my friends that also works hard in completing their project, thanks for sharing their knowledge in order to develop this system. Giving an idea to make sure all the project is complete the moment that we have been through together with stress mood, happy mood, unsatisfied mood while develop this system make us together for helping each other until the end. Thanks all for your concern.

ABSTRACT

This Final Year Project (PSM) final report was written as to fulfil the requirement for completing the program of Bachelor of Computer Science (Database Management) with Honour in UTeM. It contains the compilation of activities done throughout one whole semester including semester break. The project developed is called “UTeMCV System”. UTeM Curriculum Vitae (UTeMCV) is a system that build to ease generate CV process for each users registered. It consist of three main roles that is “utem-academician”, “utem-non-academecian” and “public”. Each role may generate CV for themselves but “utem-academician” have more additional function. For optimize the use of “utem-academician” role helping user to generate other CV, a real data is needed to be store inside UTeMCV database.

ABSTRAK

Laporan akhir Projek Sarjana Muda (PSM) ini ditulis sebagai memenuhi keperluan untuk melengkapkan program Sarjana Muda Sains Komputer (Pengurusan pangkalan Data) dengan Kepujian di UTeM. Ia mengandungi kompilasi aktiviti-akiviti yang dilakukan sepanjang semester, termasuk semester khas. Projek yang dibangunkan dipanggil “UTeMCV System”. UTeM Curriculum Vitae (UTeMCV) dibangunkan untuk memudahkan proses membuat resume. Ia terbahagi kepada tiga scope pengguna iaitu “utem-academician”, “utem-non-academecian” dan “public”. Setiap jenis pengguna boleh menjanakan resume secara auto tetapi bagi “utem-academician”, ia mempunyai kegunaan tambahan. Untuk meningkatkan lagi penggunaan bagi pengguna “utem-academician” menjana CV, data yang sebenar mestilah di simpan didalam pangkalan data UTeMCV.

TABLE OF CONTENT

CHAPTER I

INTRODUCTION

1.1 Project Background

Basically, UTeMCV is a system that build to ease generate CV process for each users registered. The main target user is the UTeM's academicians. Registered user whose holding 'Academician" role in UTeMCV may have and extra resume generate function.

There are two main modules for generating CV that is generate basic resume and generate multiple types of academician resume. Those two modules have a different purposes, the basic resume will auto generate the detail of individual information in standard format and layouts within a single click. The second module will auto generate the detail of individual academician information in standard format and layouts together with the point of key performance indicator (KPI) for the preferment process also within a single click.

1.2 Problem Statements

UTeMCV is a system that build to ease generate CV process for each users registered. The main target user is the UTeM's academicians. Registered user whose holding 'Academician" role in UTeMCV may have and extra resume generate function.

Those extra functions were created to helps academicain preparing the resume and detail contribution documentation for applying UTeM Research Grant and for UTeM Job preferment process. Therefore, UTeMCV should required to have detail for each academicians or staffs in UTeM before it can be use. Figure 1.1 shows what is the current problem UTeM's academician will face if using UTeMCV.

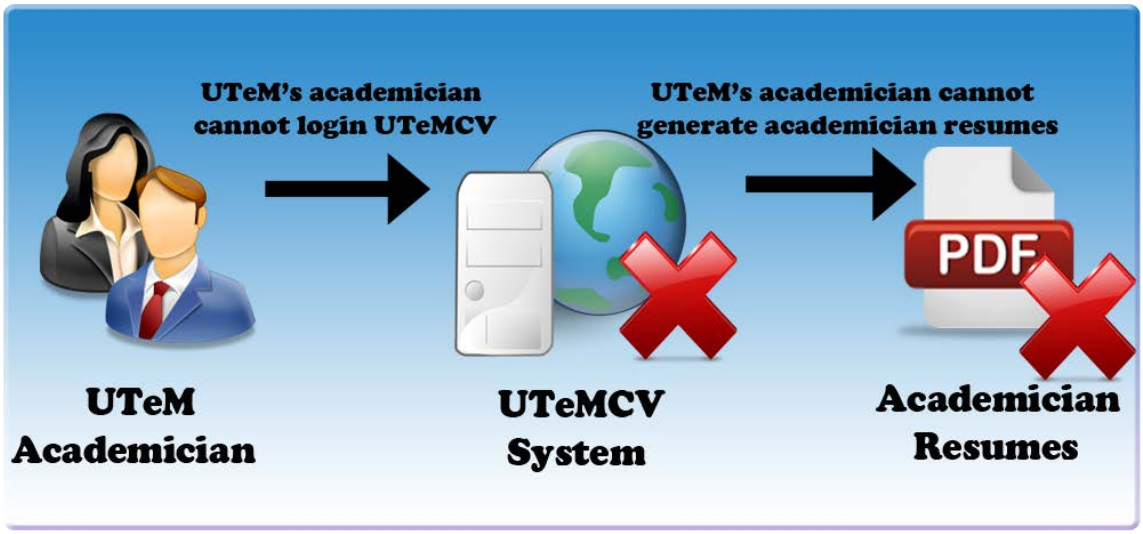

Figure 1.1: Problem UTeM's academician face using UTeMCV System

Currently, UTeM's academician was not able to use this system. They need to make a new registration process for using it. The registration process will collect basic information about their personal detail and their staff profile. By default, those information was once stored in UTeM database. They are required to key-in their details and the multiple data entry problem occur for them to gain access using UTeMCV.

For enable generate multiple type of academician resume purposes, not only the staff profile is required. UTeMCV need to have a collection of data about each staff research, publication and patents contribution toward UTeM. For optimize the use of

generate academician resume functions, each detail of UTeM's staff profile and their contribution is needed to be store inside UTeMCV single repository database.

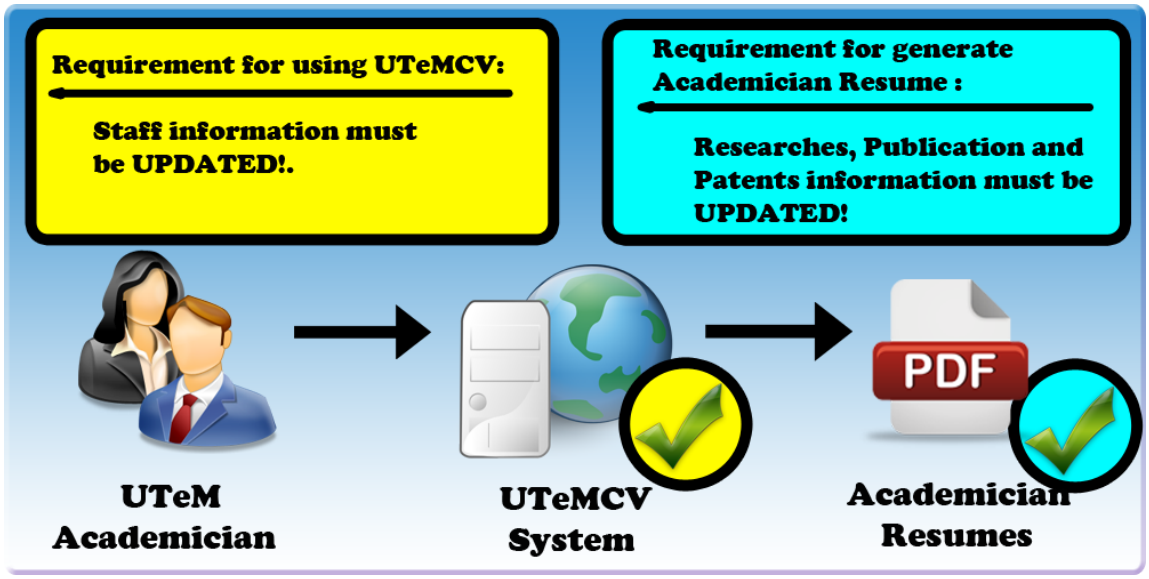

Figure 1.2: Requirement to enable UTeM's academician using UTeMCV System

Figure 1.2 shows the requirement for allowing UTeM's academicians using UTeMCV. From the requirement stated, several problems have been exracted. Below are the problems that have been identified from current UTeMCV System.

I. **Collection data or information about each UTeM's Staff profile was not updated.**

UTeM's staffs are required to key-in their details for registering process before using UTeMCV. This process may involved a multiple data entry problem occur for them while gaining access using UTeMCV.

II. **Collection data or information about UTeM's Staffs contribution was not updated (Researches, Publication and Patent).**

For enabling generate academician and CRIM resume, detail contribution for each staff also are required to be collect.

III. **Multiple data entry problem.**

Academicians in UTeM were requiring doing multiple data entry for registering and submitting their researches, publications and patents contribution by using multiple platform (via UTeMCV and other official UTeM platform).

1.3 Objectives

For enhancement UTeMCV system, several objectives were been suggested to encounter the problems that stated in “Problem Statement”. The objectives were listed as below.

I. **Enabling UTeM’s academicians access UTeMCV without register.**
   All of UTeM academicians may login and use this system and skip the registration process. They may login into this system by enter their UTeM officially email and using default password “abc123”.

II. **Enable UTeM’s academician to generate their academician resumes.**
   Enable generate academician resume functions for applying research grants and also for promotion with the real data and correct KPI calculated.

III. **Generate statistical report about total UTeM Researches, Publications and Patents within specific range of date group by faculty or department.**
   Make a new module to enable reports of all data that have been integrated with UTeMCV in PDF file format.

1.4 Project Scopes

In this project, several enhancement need to be done both on interface and database side. As for the data integration, it will tackle at the back end side (database). For the improving functions and statistical report generate function, it will be tackle at the front end side (JAVA).

1.4.1 Data integration process scope

Data integration process will focus more on database processes for integration on UTeMCV with UTeM officially systems to get an updates on collection of data about UTeM researches, publications and patents. In UTeMCV database, all of data mention above was designed to be stored using “one to many” relationship with user profile. Therefore, an updates collection about UTeM staff profile also need to be exist and make as perquisite.

I. UTeM’s staff profile data integration process

Before other integration can be done, UTeMCV must have the latest updates of staff profile inside their database. The target source must be identified and the extracted data from targeted source must be filter until meet the requirement need before can be stored inside UTeMCV database. There are special heuristic technique will be used to extract, transform and load the latest collection of staff profile data into UTeMCV.

II. UTeM’s researches data integration process

UTeMCV must have the latest updates of researches data for each staff in UTeM inside their database. The target source must be identified and the extracted data from targeted source must be filter until meet the requirement need before can be stored inside UTeMCV database. There are special heuristic technique will be used to extract, transform and load the latest collection of researches data into UTeMCV.

III. UTeM's publications data integration process

UTeMCV must have the latest updates of publications data for each staff in UTeM inside their database. The target source must be identified and the extracted data from targeted source must be filter until meet the requirement need before can be stored inside UTeMCV database. There are special heuristic technique will be used to extract, transform and load the latest collection of publcations data into UTeMCV.

IV. UTeM's patents data integration process

UTeMCV must have the latest updates of patents data for each staff in UTeM inside their database. The target source must be identified and the extracted data from targeted source must be filter until meet the requirement need before can be stored inside UTeMCV database. There are special heuristic technique will be used to extract, transform and load the latest collection of publcations data into UTeMCV.

1.4.2 Statistical Report Generate Function

A new auto generated report function will be added for academician role. It is called "Generate Statistical Report". It will produce a report about total UTeM researches, publications and patents within specific range of date group by faculty or department.

1.5 Project Significance

The academician of UTeM mainly will be benefited from this enhancement. Its hold a high potential as it helps the UTeM academician to save a lot of times preparing the resume for applying research grants and for a job preferment. It is also help UTeM admin to identify the performance of each staff by referring to KPI stated in each resume submitted.

1.6 Expected Output

After the enhancement, UTeM's academician can login and use this system without register. Each UTeM's academician will automatically register. They only need to update their details if necessary. They are also may use the generate academician resume functions provided to get a required resume in standard PDF file format and layouts within a single click.

1.7 Conclusion

This enhancement project of UTeMCV provide a friendly user system which easy to be used and understand by the user. Several functions and record of data must be enhancing for UTeMCV to be more efficient and effective. After this project passes the evolving process, it is hoped to bring the significance to UTeM management and staffs especially the academicians. The main objective of this system is to help and ease the academician to reduce the time taken on creating a resume to apply research grants or for a job preferment use.

CHAPTER II

ANALYSIS

2.1 Introduction

This chapter will discuss about analysis process for enhancing UTeMCV System. Before this system is enhanced, the analysis of current system is important to ensure the new system can fulfill current system weaknesses. A good system supposes helps to ease users run a business process. Therefore several weaknesses were found inside UTeMCV system functionality. The main objective of UTeMCV system is to help academicians preparing a resume for UTeM use. For achieving that purpose, all data about staffs and all contribution they have done for UTeM is required to be stored inside UTeMCV single data repository.

2.2 Problem Analysis

Back to the main purposes of UTeMCV System created. It was develop to helps ease UTeM's academicians preparing their academician resume for UTeM job preferment and for applying research grant purposes. As the purposes to help ease UTeM academicians, detail data about academicians is required to be stored inside UTeMCV. With those data, each of UTeM's academicians may get a profile created inside UTeMCV. This will enable the academicians to login and use UTeMCV System without registration. They may use all basic function provided and generate their basic resume.

For enable each "Academician" profiles to use generate academicians resume functions, the academician information was not insufficient enough. It required detail of contribution to UTeM. There are several types of data contribution can be stored inside UTeMCV. This enhancement project is only focusing on information about UTeM research, publication and intellectual property (patent). Figure 2.1 shows the data requirement for using UTeMCV.

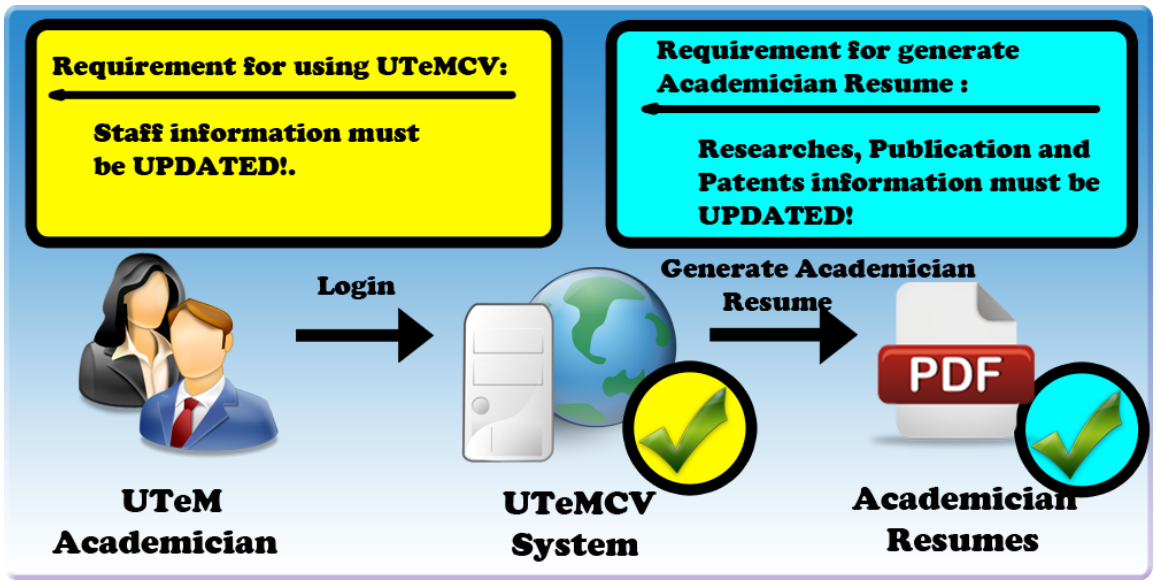

Figure 2.1: Data Requirement for using UTeMCV

Furthermore from UTeM business perspective of views, UTeMCV was only a support or a sub system. Therefore as a support system, integration with the main system is required. For fulfilling the whole objectives stated in Chapter I, integration with other UTeM official systems must exist. From this integration, UTeMCV can have collection of data required from different UTeM's official systems.

2.3 Sources of Data and Perquisite Data Analysis

After doing some interviews with the selected academician, the sources of data have been identified as table 2.1. Table 2.1 shows the detail information about data required and the data sources.

Table 2.1: Information about updates data and the source

No.	Information in UTeMCV	Officially UTeM System involved
1	Staff or Academicians	UTeM Office Automation System (OAS)
2	Publication	UTeM Repository (EPrints)
3	Research	UTeM Research Innovation System (URIS)
4	Patent	Manually stored in excel format (CRIM)

In UTeMCV database, parent child relationship was been forced on design Entity Relationship Diagram between user profile and their contribution. Before user use this system, they need to register to give their detail before can update or insert other data. Therefore as a parent key, it is a perquisite that user profile must exist before other contributions data can be store.

All of the information UTeMCV require can be extract from the sources then transform using a specific heuristic technique before can be load into UTeMCV single database repository.

2.3.1 Staff or Academician Profile Data Collection

Currently in UTeMCV, all users including UTeM academician must register as a new member. By default, all of academicians in UTeM were supposed to be registered automatically inside UTeMCV as “Academician” user role. They do not need to register manually as “Academician” users because UTeM already collected their data via UTeM Sistem Maklumat Sumber Manusia (SMSM).

There is authorization issue for extracting data from SMSM where only staff can use this system and they can only extract their personal detail. Therefore and alternative source were selected via UTeM Office Autometed System (OAS). Figure 2.2 and 2.3 shows the SMSM and OAS Systems view. The unique staff id number will be use as the key of integration process. As the data is unique and not null, it will helps eliminate data redundancy by acting as temporary primary key.

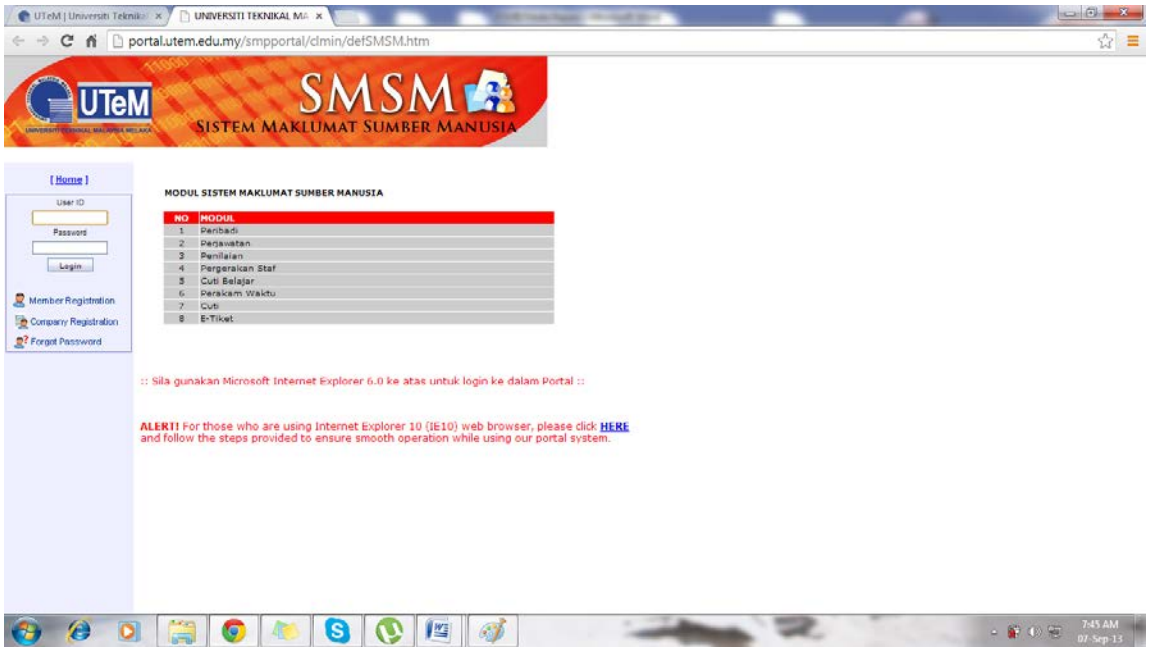

Figure 2.2: UTeM SMSM System view