Staff Development Program (SDP) Management System

by

Nurbasirah bt Ibrahim

A project dissertation submitted in partial fulfilment of

the requirements for the

Bachelor of Technology (Hons)

(Business Information Systems)

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Universiti Teknologi PETRONAS

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CERTIFICATION OF APPROVAL

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Computer & Information Science Programme
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Approved by,

_____

(Mdm Rozana bt Kasbon)

UNIVERSITI TEKNOLOGI PETRONAS
TRONOH, PERAK
MAY 2012

CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.

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NURBASIRAH BINTI IBRAHIM

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LIST OF ABBREVIATION

HOD – Head of Department

HRM – Human Resource Management

OCSLD – Oxford Centre for staff and Learning Development

RAD - Rapid Application Development

SDP – Staff Development Program

UTP – Universiti Teknologi PETRONAS

ABSTRACT

Since the early 1990's, there has been an increasing emphasis on the importance of staff development, training and continuing education in both private and public sector organisations. Effective staff development is the weaving together of many strands. The goal of SDP Management System is to keep track of the progress and update of the staff that pursue their study in Phd. This system also will be equipped with the report for previous staff as reference for admin. Previously, HRM do not have any specific system to update the details of the staff and they still manually update in excel which requires lots of time. This system is designed to ensure that all staff has all the necessary knowledge, skills and competencies. Indirectly, it will ensure that all the staffs are continuously being developed for performance excellence in their current jobs and future responsibilities. The division will ensure that each and every staff is accorded and receive full consideration for developmental opportunities to enhance their competencies, leadership skills and for career advancement. Therefore, it will increase their performances in work hence give the good reputation to the company. This paper will focus on several criteria of staff development system. The system will be able to solve problems such as; the absence of centralized request submission of nomination form collection. The system also will generate report that will be useful to retrieve information. This web based application is a two ways communication between staff and admin that will increase the effectiveness and efficiency of the development of staff.

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CHAPTER 1

INTRODUCTION

1.1 Background

A Staff DevelopmentProgram (SDP) Management System is an application that helps to centralize the information of staff. This system is designed to improve job understanding, promote more effective job performance, and establish future goals for career growth. Indirectly, it also can maintain the reputation of the organisations especially educational institutions. Effective staff development plans are aligned with the district purposes and goals. Staff development is a key strategy for achieving district expectations.

In the scope of UTP, the principal activities of Stafff Development Program are to keep update the performances of staff that pursues study in PhD. Under the scheme of lecturer, the lecturer that pursues study will bond with UTP where they are fully sponsored by UTP. However, there are several requirements that need to be fulfilled by the lecturer before they are qualified to further their study.

 The implementation of this system is aimed to keep track the performance of the lecturer that pursues their study. This system also will be equipped with the report for previous staff as reference for the admin. Thus, it will be easier to manage and control their performance during their studies. Besides that, this system also updates the status of staff that takes sabbatical leave, undergo industrial attachment, doing international posting and special attachment. Overall, this system can be used to monitor the status and progress of the staff of UniversitiTeknologi PETRONAS.

1.2 Problem statement

There are several problems that could occur with that current manual of updating the progress of staff that undergo PhD. Study as stated below :

- Manual and time consuming process

  Do not have any specific system to update the details of their staff and they still manually update in excel which requires lots of time. Apart from that, the staffs need to send their progress report by personally email to HOD unit which is not convenience.

- The information is difficult to be retrieved.

  Do not have any report or summary for the previous staff to make as reference for future needs. They need to search manually in excel which consume times and energy. They do not have any systematic and organised database to be referred.

- Staff do not have any specific medium to communicate or interact

  Distant problem create a barriers for them to update their work. Previously, they usually used email as alternatives to update the progress of the staff.

1.3 Aims and Objectives

The objective of SDP Management System is to develop a system that can provide the following functionalities:

- To keep track the performances and progress of the staff that further their study
- To track the staff that applied to pursue their study in Phd.
- To generate list of report

1.4 Scope of Study

There are two focuses that should be highlights in developing this system as stated below:

- To keep track the progress and performances of staff that furthers their study under the lecturer scheme.

  With the implementation of this system, it will help to systematically update the progress and status of the staff that further their study. By using the web based applications, the staff still can update their work progress by going to the web site as it can widely use all around the world as long as there is internet connection.

- To update staffs that take sabbatical leave, industrial attachment, international posting, and special attachment.

  Instead of updating the status and the progress of the staff that further their study in master and PhD, this system also can be applied to update any progress on staff that take sabbatical leave, undergo industrial attachment, and doing international posting and special attachment. In general, this system can be used to monitor and manage the performances of staff in UniversitiTeknologi PETRONAS.

CHAPTER 2

LITERATURE REVIEW

2.1 Understanding Staff Development

Staff development is normally considered to include the institutional policies, programmes and procedures which facilitate and support staff so that they may fully serve their own and their institution's needs (Wiber, 1994). Despite differences in their origins, 'staff development' and 'professional development' are currently read as one. In tertiary institutions such as universities, staff and professional development has mostly been concerned with educational development which focus more on the development of teaching and learning.

In the past, an educational institution was only concerned and focuses on teaching and learning improvement, usually at the level of the individual academic. According to Warren Piper (1994) , the need to support organizational change and policy development has lead to the changes from 'Model A' that focus more on teaching and learning improvement to 'Model B' which focus on the development of the staff. 'Model B' units will thus become more management and policy-oriented and will serve a 'staff' rather than a narrowly 'educational' development role.

Boud and McDonald (1981) suggested three models which 'educational consultants' might adopt which are professional services, counseling and colleagual. The eclectic approach advocated by Boud and McDonald also finds voice in the partial and fractured nature of the work as it is interpreted in the postmodern condition. In all of this, educational and staff development can be seen to reflect broader areas in the theory of knowledge and the world of ideas.

2.2 Staff Development Program

The literature on staff development contains numerous examples of programs designed to increase teachers' knowledge and awareness. One example is a staff development program designed for institutional improvement that was reported by Kerrins and Bacon (1990). The program helped upper elementary and junior high teachers in the Pueblo School District in Colorado acquire knowledge about effective strategies for teaching content area reading skills to students. In addition to this knowledge objective, the program gave teachers the opportunity to practice the strategies so that they can apply it in the classroom.

As early as 1948, following the British educational system, many anglophone Africanuniversities created teacher training colleges, adult education institutes and extramuralstudies departments as part of their university structures (Omolewa,1975). The Instituteof Education of the University of Ibadan was created in 1961 along with the first Africanschools of education. In 1964, the UNESCO Institute of African Adult Education was created at the University of Ibadan in Nigeria. Its main objective was to introduce adult literacy research into the university, and its activities focus on functional literacy and on evaluation.
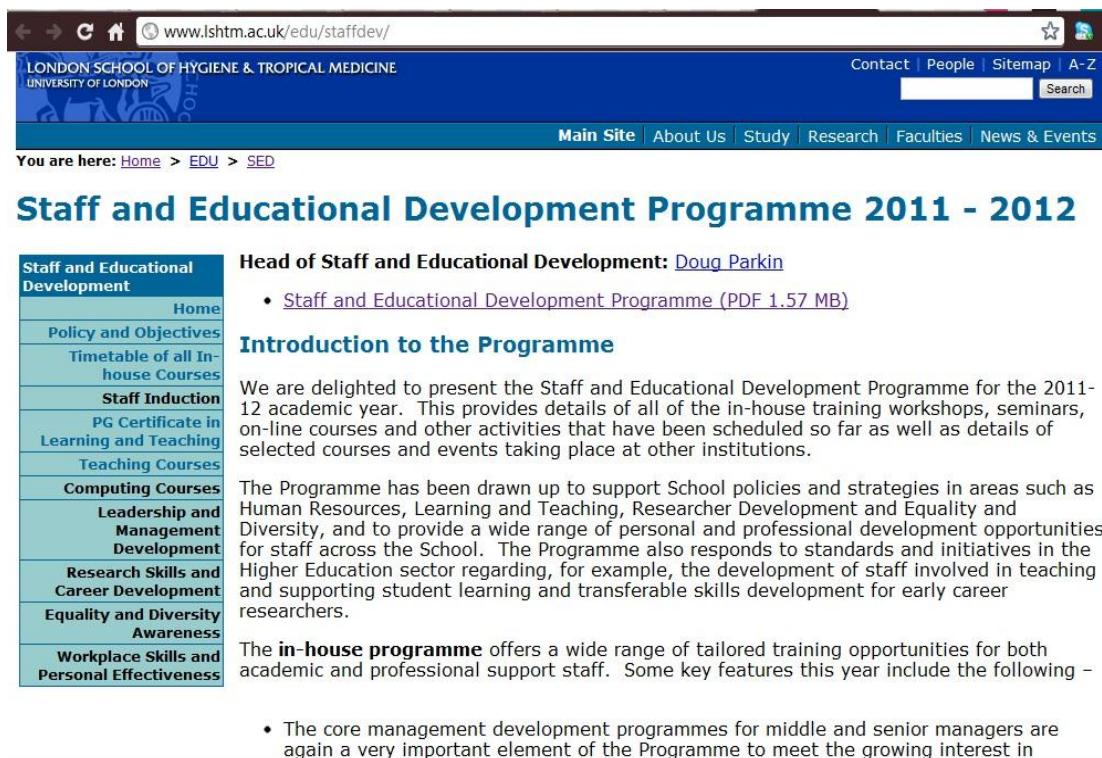
In providing academic and professional training, research, and development in the field ofadult literacy, one should consider three main points which are a crucial part of staff development: (1) the teaching methodology; (2) the choice of the language of instruction; and(3) motivation for learner participation. Staff development is a critical factor in the successor failure of any adult literacy program and of a wide variety of development program which are beyond the confines of education (Okedara, 1993).

2.3 Existing Staff Development at Higher institution

There are many international higher institutions that have implement staff development Program. Below are several examples of higher institutions that have their own website for Staff Development Program.

2.3.1 University of London

University of London is one of the examples of higher institutions that implement Staff and Educational Development Program for its staff. The site as in Figure 2.1 provides details of all events that they provided such as in-house training workshops, seminars, on-line courses. Not only that, they also provide details of selected courses and events taking place at other institutions.

Figure 2.1: The website of University of London

2. 3.2 Oxford Brookes University

Oxford Brookes University has their own website of Oxford Centre for staff and Learning Development (OCSLD). The OCSLD is one of the UK's largest and most established providers for staff and educational development for further and higher education. Currently, they run up to 200 staff development courses each year, drawing on a national network of specialist consultants. The site provides details of the courses currently on offer. They also have consultant that work to design a staff development event, course or program in order to meet their staff's need.
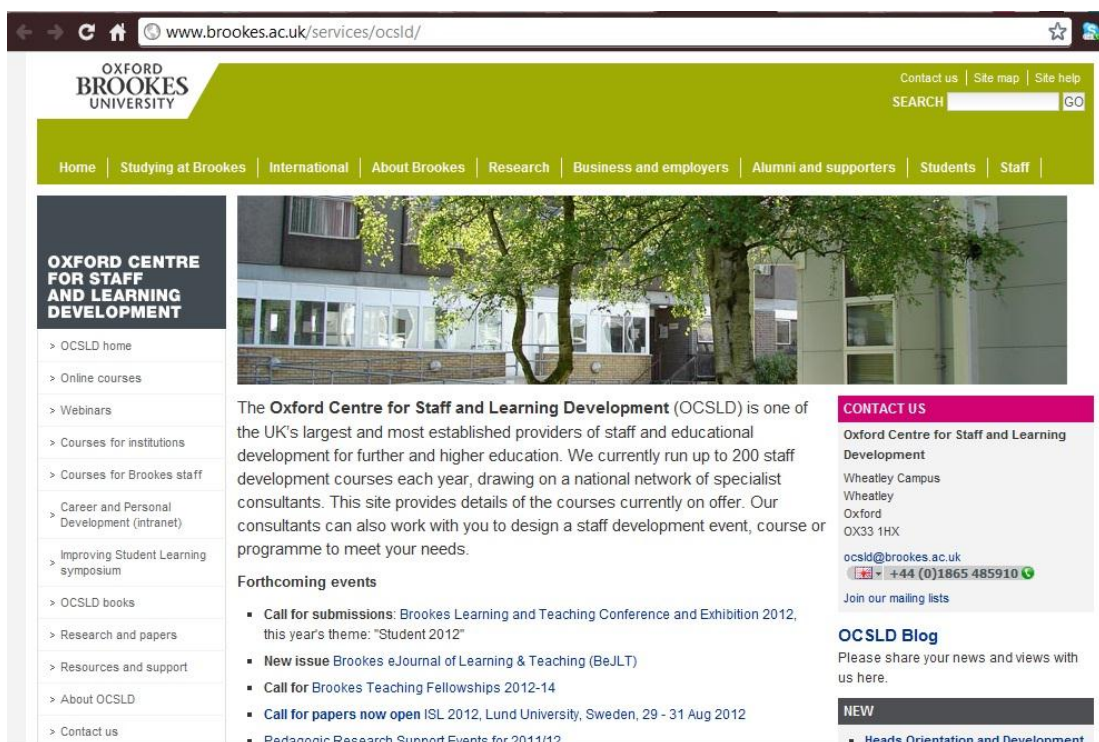
*Figure 2.2 :*The website of Oxford Brookes University

The Staff Development Program web sites for every higher institution are various according to the flexibility and conditions of the place. The events or activities offered also different in addition to the wide range of evens opportunities elsewhere in the programme. In UniversitiTeknologi PETRONAS the staff development program, will be focus more on giving certificate to their staffs.

CHAPTER 3

METHODOLOGY

3.1 Research Methodology

In this project development, the Rapid Application Development (RAD) methodology as shown in Figure 3.1 was adopted as it is iterative and suitable to be used. This model is selected because it provides quick research and development of applications while maintaining high quality standard.
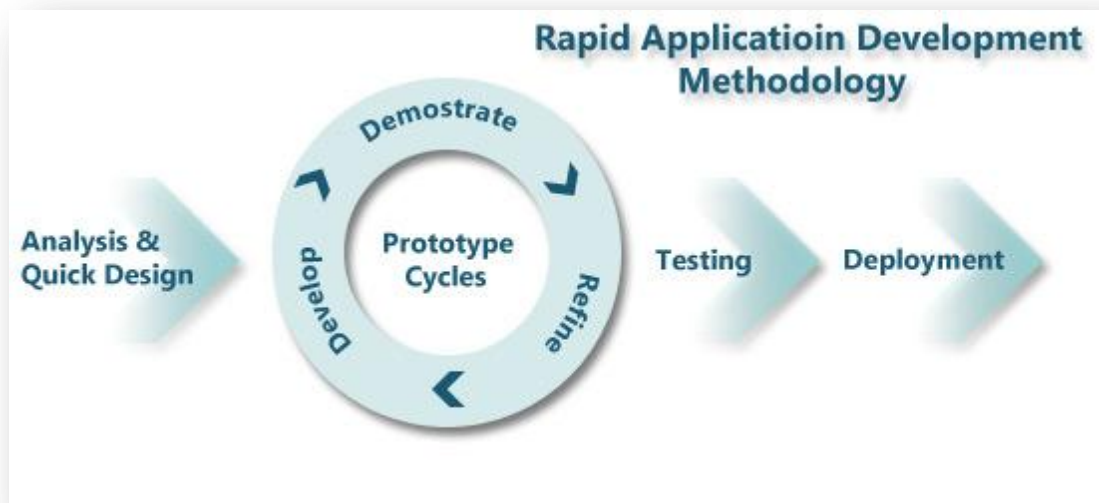

Figure 3.1: Rapid Application Development Methodology

There are three phases that had been used to develop SDP system as stated below:

3.1.1   Planning & Analysis

During this phase, research was made to gather all the information. Apart from that, interview had been conducted with user to collect the entire user requirement and ensure that the system meets the user expectation. Details analysis and research should be made to ensure the relevancy of this project to be implemented in real world and complete within the time frame given.

3.1.2 Design & Development

The design of the system was proceed after all the required information was gathered. User interface was build according the requirement request by the user. The design of the interface should be user-friendly and interactive. The database was design according to the functionalities of the system. The UML class diagram was designed so that the flow of the application can be understood and this UML class diagram would be used as reference.

3.1.3 Testing & Implementation

To ensure the system can be run smoothly, several testing need to be done. The technical testing had been done whereby testing the system by their own. Next, the system needs to be tested with the other person who does not familiar with the system. Lastly, the system needs to be test by the user. Commonly, there should be slightly changes in every test done in order to meet the user expectations. Before the system can be implemented, staffs need to be on how to use the system so that they can be familiar with the system.

Planning & Analysis
- Gather user requirement
- Interview the user
- Make a research
- Make a ganchart for the project

Design & Development
- Design the GUI interface
- Start work out for system development

Testing & Implementation
- Technical Testing
- User Accepatnce Test (UAT)
- Train the staff on how to use the system
- Final project and presentation

Figure 3.2 : Staff Development Program Phases

3.2 User Requirement

Under the scheme of lecturer, there are several requirements that need to be fulfilled by the lecturer before they are qualified to further their study. Currently, all the process flow is updated manually in excel by HRM especially for Nomination form. With the implementation of this system, it will alter the system to be web based application where they can fill up the forms online. Basically, there are four functionalities that will be added in the system.

- Staff can fill up the form in the system for the nomination. Then, HOD will filter the qualified name to be submitting to HRM. HRM will retrieved the completed nomination form from the system and bring it to CPC meeting for approval.

- The system also can generate report summary SDP for reference especially for the previous staff.

- Staff also capable to upload the progress report online. Hence, HRM and HOD can review their PhD progress from time to time through the system.

- Staff also can apply extension online and capable to upload documentation such as progress report, Gantt chart, support letter and memo for extension.

3.3 Flowchart

Figure 3.3 shows the comparison of current and to-beprocess of web based application of SDP Management System. The implementation of web based application will create a two way communication between staff, HRM and HOD.The process can be easier as they can directly communicate or interact with each other. Staffs do not need to personally email their PhD progress report to the HRM and HOD. The process will be more organize and systematic.HRM also can directly issue the offer letter to HOD and both have the authority to view the progress and performances of the staff. Therefore, with the new implementation of this system will enhance effectiveness of the process and at the same time will be less time consuming.
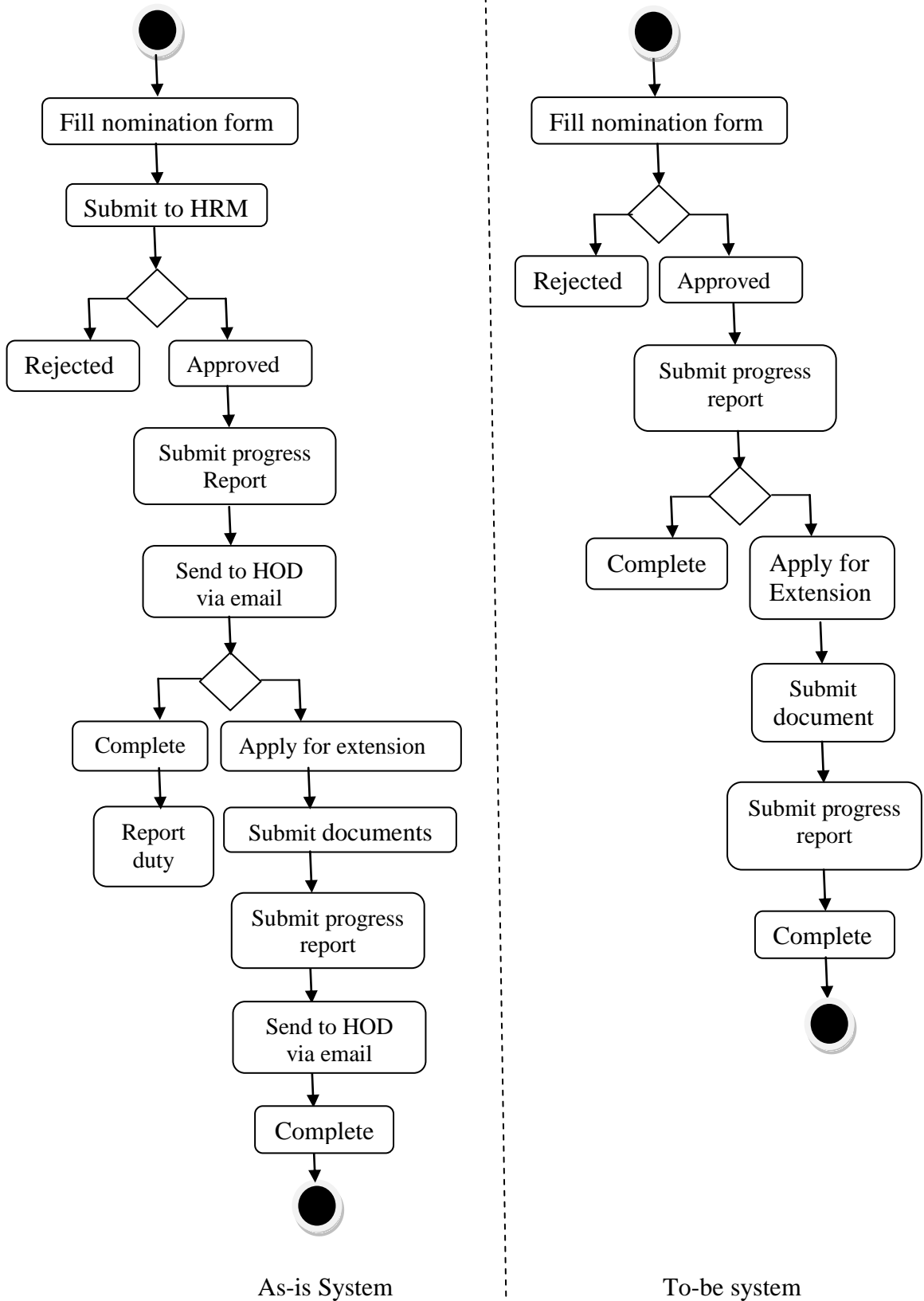
Figure 3.3:To-be system and As-is system of SDP Management System

3.4. Key milestone

Table 3.4 shows key milestone during the development of SDP Management System.

Table 3.4: Key milestone

Date	Activities
8/2/2012	Submission of proposal to research cluster
23/2/2012	Meeting with HRM unit
29/2/2012	Submission of Extended proposal
21/3/2012	Viva: Proposal Defense and Progress Evaluation
11/4/2012	Submission of Interim Report
Week 8	Submission of Progress Report
Week 11	Poster Exhibition and Pre-EDX
Week 12	Submission of Draft Report
Week 13	Submission of Dissertation (soft bound)
Week 13	Submission of Technical Paper
Week 14	Oral Presentation
Week 15	Project Dissertation (Hard Bound)

3.5. Gantt Chart

Table 3.5 show the Gantt chart for the development of SDP Management system starting from January until August.

Table 3.5 : Gantt Chart

3.6. Project Tools

Table 3.6 show the project tools used in development of SDP Management System.

Table 3.6: Project Tools

Prototype Development Environment	
Items	**Prototyping Tools**
Programming Language and GUI Design	Macromedia Dreamweaver, PHP
Database	phpMyAdmin – MySQL database
Operating System	Microsoft Window 7
Computer Browser	Mozilla Firefox, Google Chrome

CHAPTER 4

RESULT AND DISCUSSIONS

4.1 Data Gathering & Analysis

Several interviews had been conducted during the analysis phase in order to gather all the information about staff development program. Three different types of users have been selected as the interviewees; which are staff of Human Resources department, IT maintenance and a postgraduate student.

Table 4.1: Interview Schedule

Date	Activities	Purpose of Interview
23 February 2012 **10.00-11.00am**	Interview with Staff from Human Resource Department	The current process of Staff Development Program at UTP
23 February 2012 **11.00-12.00am**	Interview with Staff from IT	The suitable software to be used which is compatible for UTP server

First interview had been done with Mr. Noor Affendy and Mrs Muizzah from Human Resource Department. The purpose of this interview is to fully understand the current flow of SDP process and gather the requirements for the system. The author gets a lot of information regarding the current staff development program and suggestion and opinions from interviewees in order to enhance the system. Apart from that, they also give their concern and feedback for this project.

Second interview had been conducted with Mr.KhairulBadrishamfrom IT department. The objective of this interview is to get a better view on the suitable software that can be used to develop system for Human Resource Department so that it can be compatible to be used in UTP. Mr.KhairulBadrishamalso explains on the current server and system used in UTP and gives some suggestion on the suitable software to be used. The choosing of suitable software is very important in order to ensure the system will be sustained to be used in future.

4.2 Functional Modelling

After all the information is gathered and analyses, the information is organized and presented in the form of activity diagram and use case diagram. The requirements that are obtained during the analysis phase will be document and systematized by using use case and activity diagra

4.2.1 Use Case Diagram

Use Case Diagram in Figure 4.1 illustrates the activities that are performed by the user of the systems. It is an external or functional view of a process on how user views the system rather than internal process on how the system operates.

There are three actors that play an important role in "Staff Development Program" which are staff, Head of Department (HOD) and admin (HRM).

STAFF DEVELOPMENT PROGRAM (SDP)
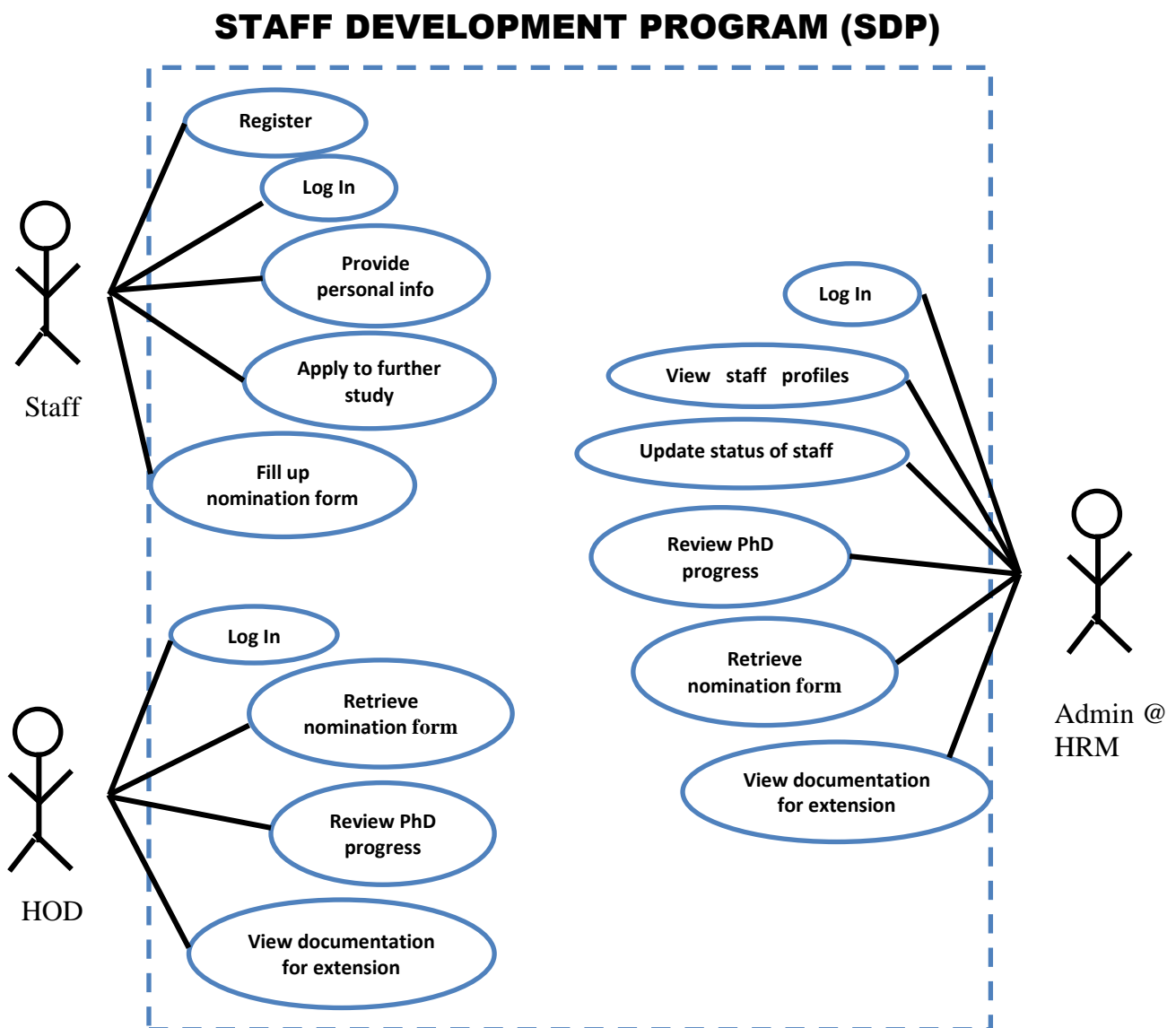
Figure 4.1 : Use Case Diagram for SDP Management System

Table 4.2: Actors in SDP Management System

Staff	Head of Department (HOD)	Admin(HRM)
Provide Personal Info	Fill up nomination form	Edit staff profile
Register	Review PhD progress report of the staff	Update the following status of staff that undergo: -Further study abroad -Take sabbatical leave -Industrial attachment -Special attachment
Log In	Review the documentation of the extension	Retrieve nomination form from HOD
Update/Edit personal info		Review PhD progress report of the staff
Apply to further study		Review the documentation of the extension
Submit PhD research proposal		Generate report summary by date or department
Submit PhD progress report at least twice a year		
If applying for extension, the applicant need to submit documentation for extension such as progress report, Gantt chart, memo and support letter for extension.		

4.2.2 Activity Diagram

Activity diagrams are graphical representations of workflows of components in a system. It can be used to describe the business and operational step-by-step and shows the overall flow of control. Three figure belowsshowed three different activity diagram based on the actor or role that user log in :

- Log in as ADMIN
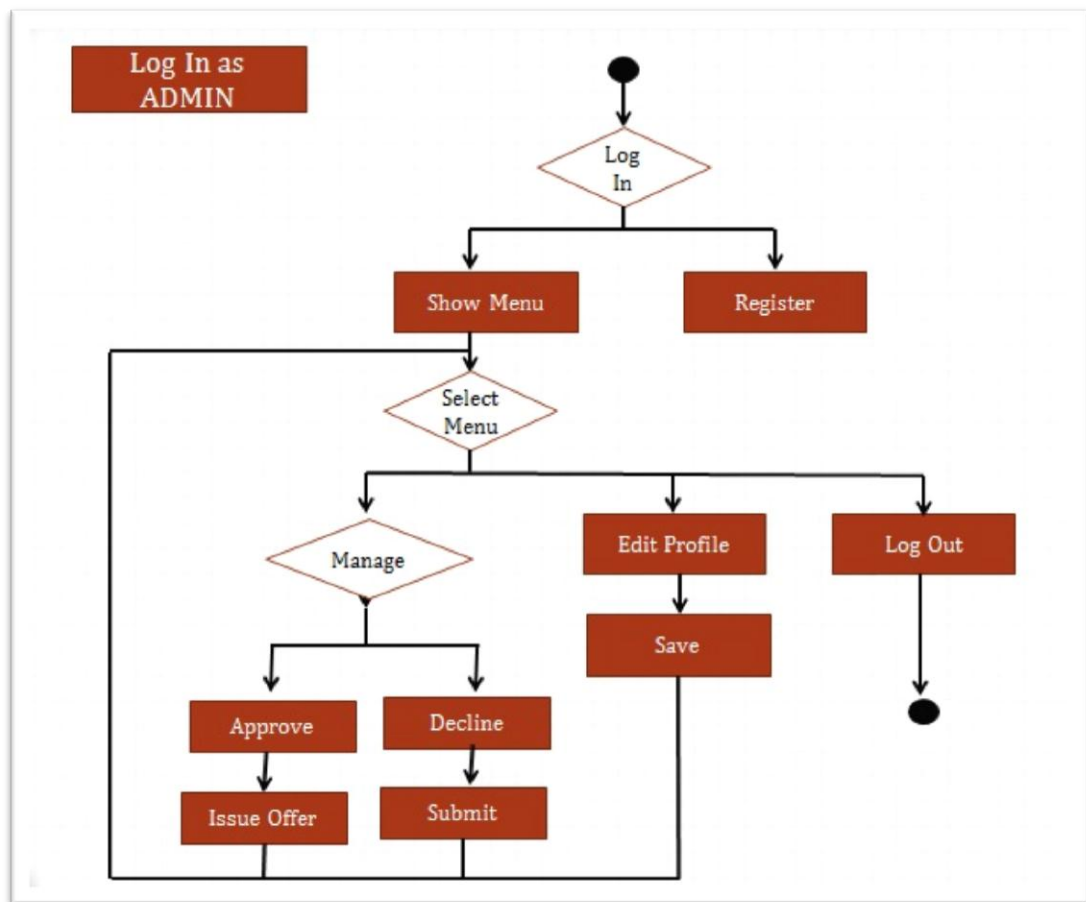
Figure 4.2: Activity Diagram for Admin

- Log in as HOD
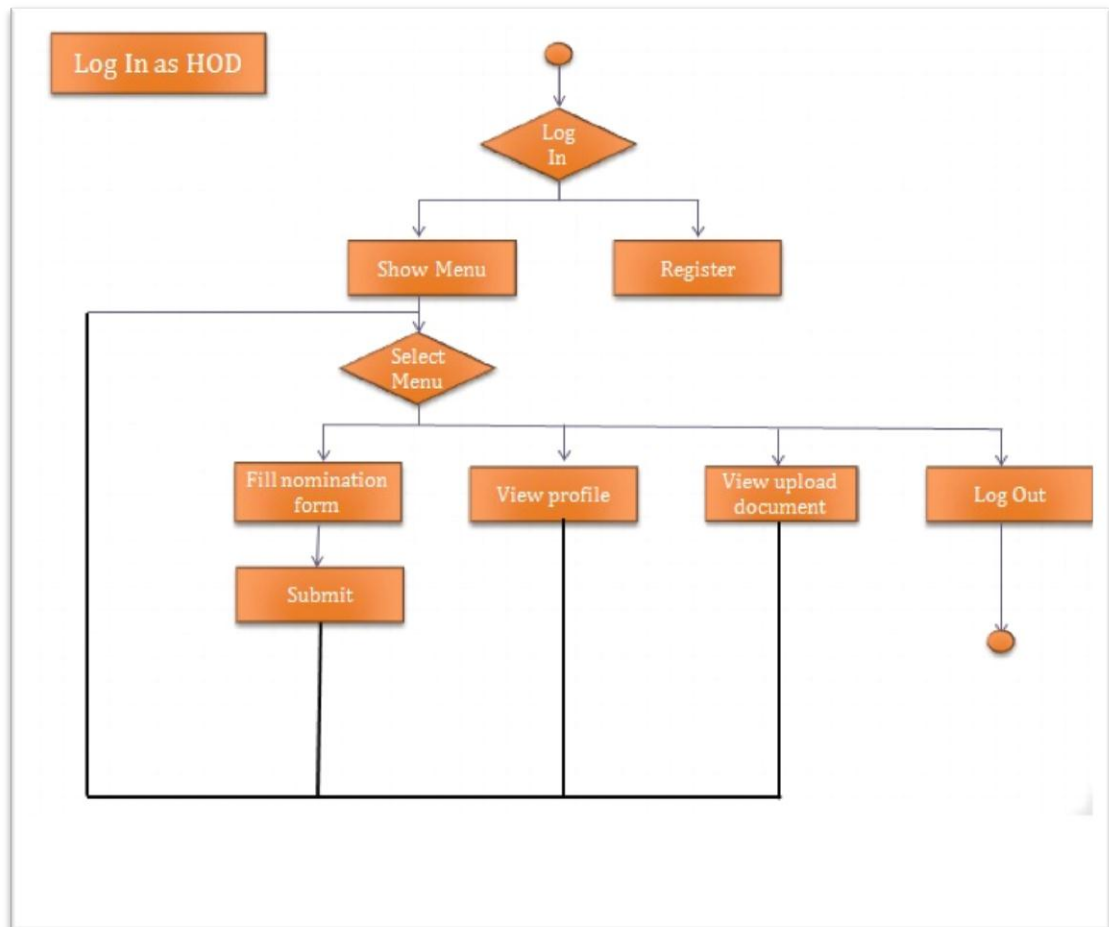
Figure 4.3: Activity Diagram for HOD

- Log in as user/ staff
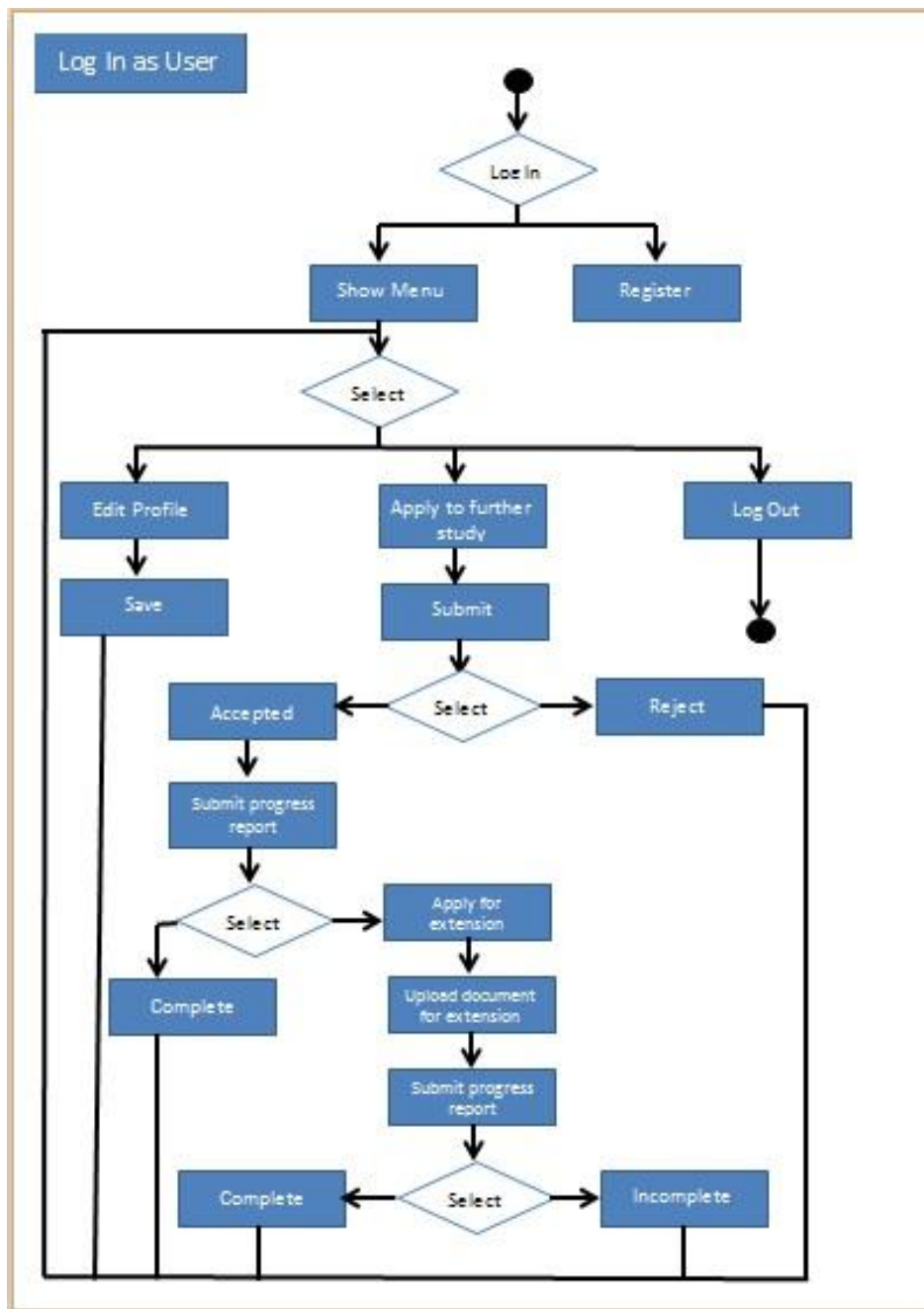
Figure 4.4: Activity Diagram for staff

4.3 System Development

System Development consist prototyping which is used to demonstrate working ideas in constructing the architecture of the system. Staff Development Program has been developed using php programming language while MySQL database is been used as the mechanism to stored data of staff, PhD progress report and also summary of the report. All actors which are system administrator, staff and head of department (HOD) have to play different role in the system.

The system administrator or Human Resource Department is responsible in maintaining and updating database of the staff, to retrieve the nomination form from HOD and view the progress and performances of the staff that further study abroad. Besides that, the system administrator also has full control towards the system website. They can add, delete or update either URL or name of the link. Title, text description and images in the webpage can also be update by admin.

The second actor in this system is head of department (HOD). They can access the website to fulfil the nomination form in order to nominate the selected staff or lecturer that is qualified to further their studies. Apart from that, they also can monitor the performances of the staff by viewing the required documents such as PhD Progress report and documentation for extension uploaded by the staff. Basically, they are responsible in ensuring the staff can accomplish their studies within SDP period.

The staff can manage their account such as updating their profile information by login to the website. They are required to upload any related documentations such as PhD progress report at least twice a year. If they do not manage to finish within required period, they need to apply for extension in order to continue their studies.

4.4 Database Design

Staff Development Program (SDP) has been designed using phpMyAdmin application as a tool that allows the author to administer and maintain MySQL database. Both applications work well in Xampp which is a light Apache distribution.There five related table had been created in the database.

- LogIn Table

Table 4.3 illustrate table Log In where identify the type user of the webpage. There are three type of user which are admin, head of department, and staff. Every user need to have their own account in order to log in to the web page. There are seven attribute in the log in table.

Table 4.3 : Log In Table

- Extension Table

Table 4.4 illustrate the extension table that consist of six attribute. This table store the information of the applicant that applied for extension. This information is needed to be approved by admin and HOD.

Table 4.4 : Extension Table

- Nomination Table

Table 4.5 illustrate the nomination table where it stores the information of applicants that apply to further their study. This table contains thirteen attributes.

Table 4.5 : Nomination Table

- Staff Profiles Table

Table 4.6 illustrate the Staff Profiles table. This table is created to store the details of staff for reference by admin and HOD. This table contains sixteen attributes.

Table 4.6 : StaffProfiles Table

- Report Table

Table 4.7 illustrate the Report table that consist of two attributes. This table is used to monitor the status of progress report of the staff. The HOD will used this report to check and view the progress of staff

Table 4.7 : Report Table

4.5 System Interface

The interface of the website is the form of the system that the user deals with and that form should have the following properties:

1. User friendly   : easy to understand and use
2. Understandable: The language used in the form is simple and easy to understand. The function in the form is simple and not complicated to be used. In addition, the language used should be easy to understand
3. Integrity   : It covers all the operation of the system.

Below are the important part of interfaces in Staff development Program and its description.

4.5.1 Main page

Figure 4.5 show the default page when the user log in to the system. User need to register or log in to access to this system. If the user does not have an account, they need to create a new account. Apart from that, when the user log in through the system, it can identify the type of user where different user has different authorization.
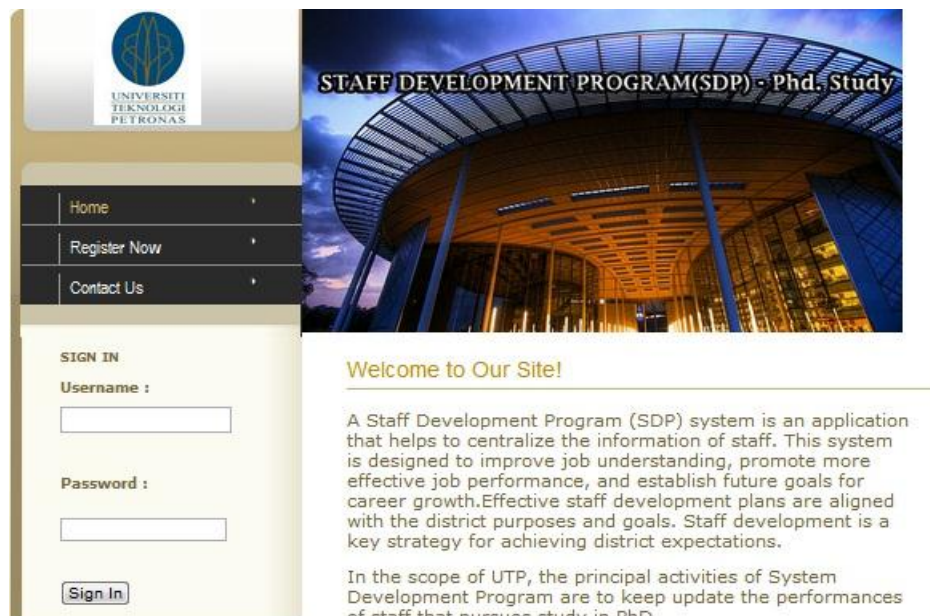
Figure 4.5: Staff Development Program homepage

4.5.2 Staff page description

Figure 4.6 show the default page when the staff login to the system. Staffs need to have their own account to log in at this page.
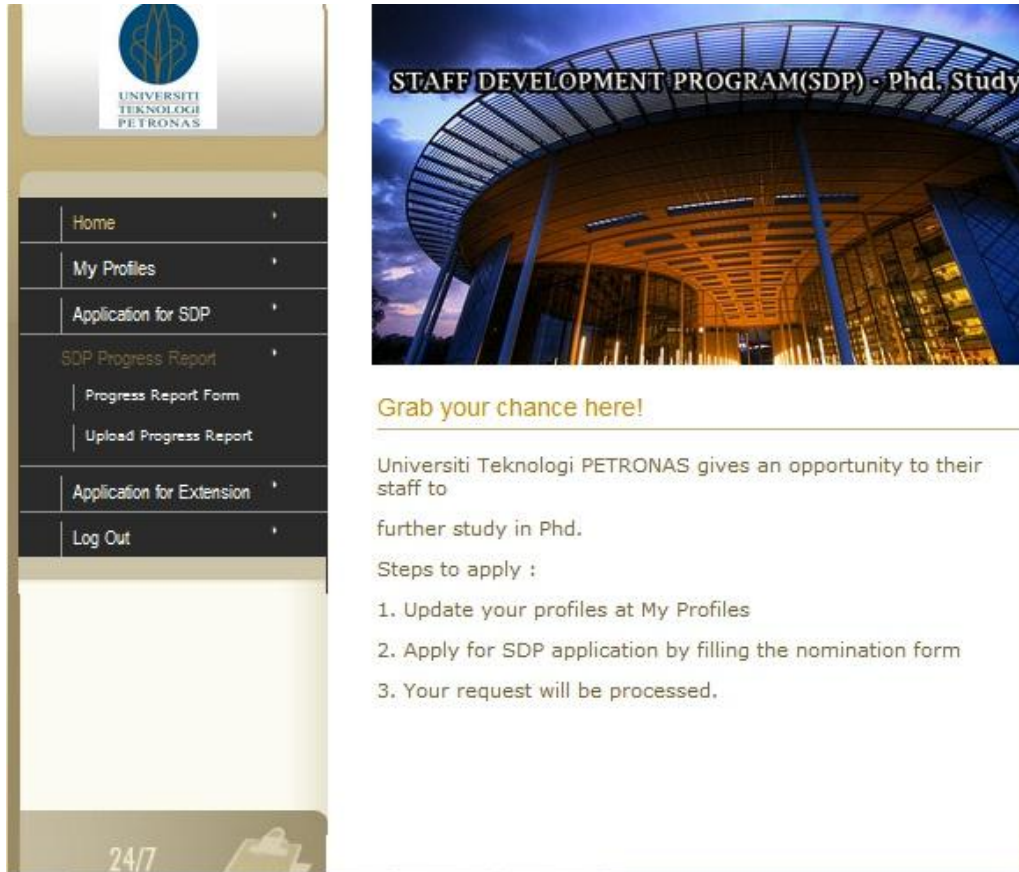
Figure 4.6: Staff Page

- **Staff Profiles Form**

Staffs have an authority to update or edit their personal details. This form can be view by admin and HOD in order to gather or update the information of staff.

Figure 4.7 : Staff Profile Form

- **Nomination Form**

Figure 4.8 show the form that will be filled by the user if they want to apply for PhD. study. They need to submit this form to their Head of Department (HOD) to be nominated. Then, HOD will submit this form to HRM (administrator) to be approved by CPC.

Figure 4.8: Nomination Form

- **Progress Report Form**

Figure 4.9 show theof progress report form that needs to be completed by all staff members that undergo PhD study at least twice a year. They are required to upload this form from this page.
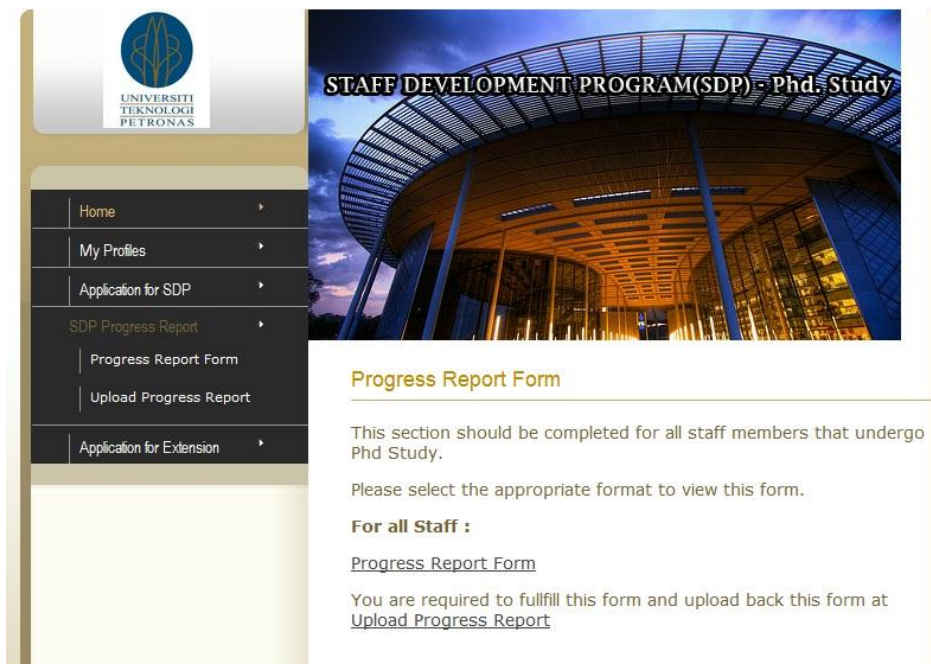

Figure 4.9: Progress Report Form

- **Upload Progress Report**

User need to upload their completed progress report form here to be submit to their Head Of Department (HOD). HOD need to supervise or monitor the progress of their study.
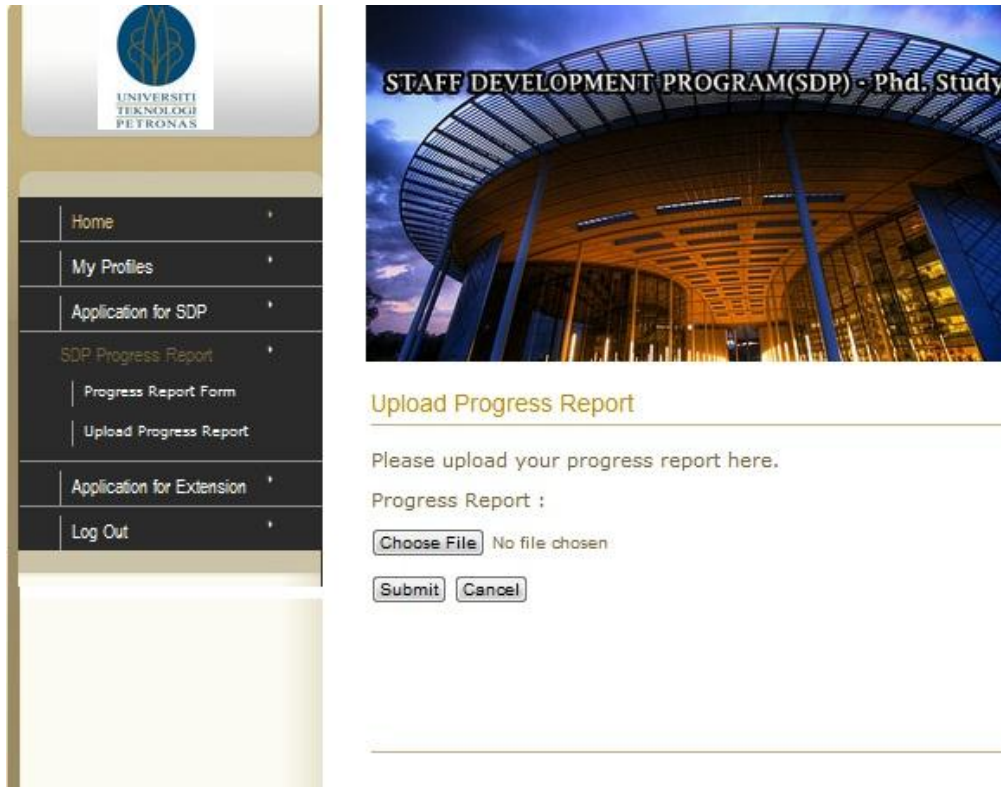

Figure 4.10: Upload Progress Report

- **Application for Extension**

Figure 4.11 shows the page used by the staffs that apply for extension as they cannotmanage to finish their study within the given SDP period. They need to upload documentation for extension such as progress report, gantt chart, support letter and reason for extension at this form.

Figure 4.11: Application for Extension

4.5.3 Administrator page description

Figure 4.12 show the default page when the administrator login to the system. Administrator has high authorization compared to head of department and staff.
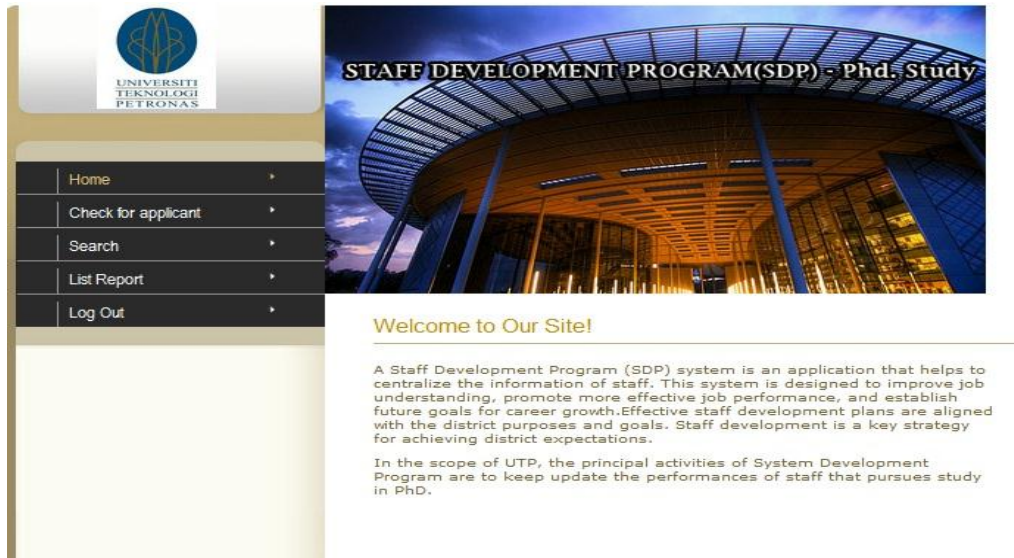

Figure 4.12 : Administrator page
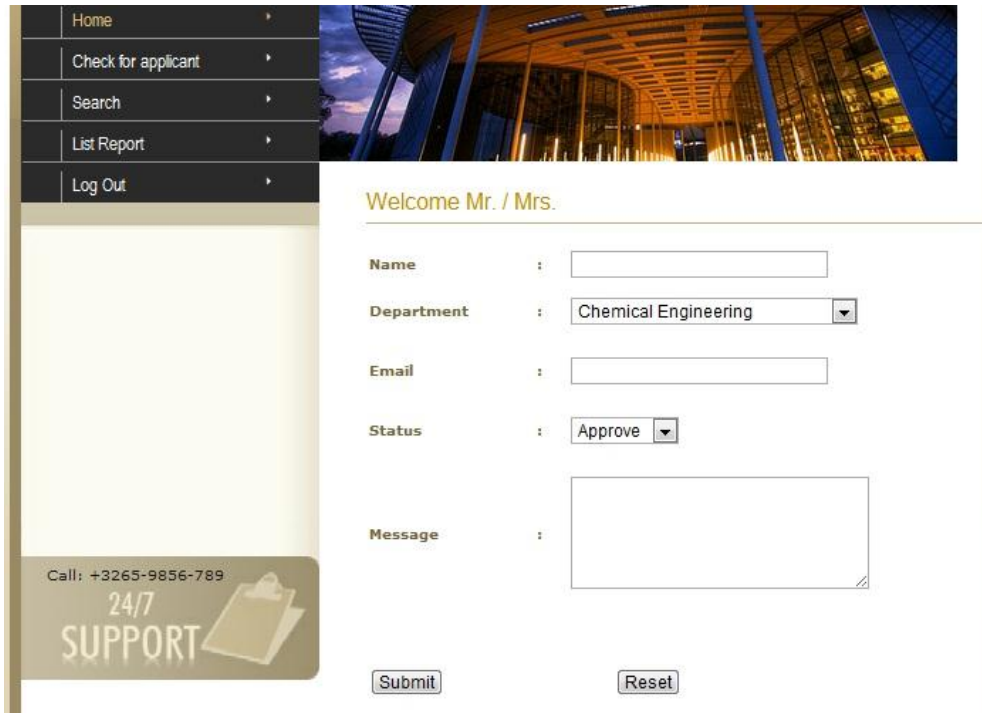
- **List of Applicant**

Figure 4.13 show all the list of staff that applies for SDP. The status column showed that either the application of the applicant had been process or not. Admin will click at the status underline 'Unprocess' at the status column to approve the process of applicants as shown at the Figure 4.13 below.

Figure 4.13: List of Applicant at Admin page

- **Approval Form**

The admin will processed the applicant her by approving or rejecting their application. Admin will notify the staff through this page by clicking the submit button.

Figure 4.14: Approval Form at Admin page

- **Search Form**

Admin can search the staff here by selecting the search criteria either by name, department etc. Apart from that, admin also can check and update the details of applicant by clicking at the Action column as shown in Figure 4.15.
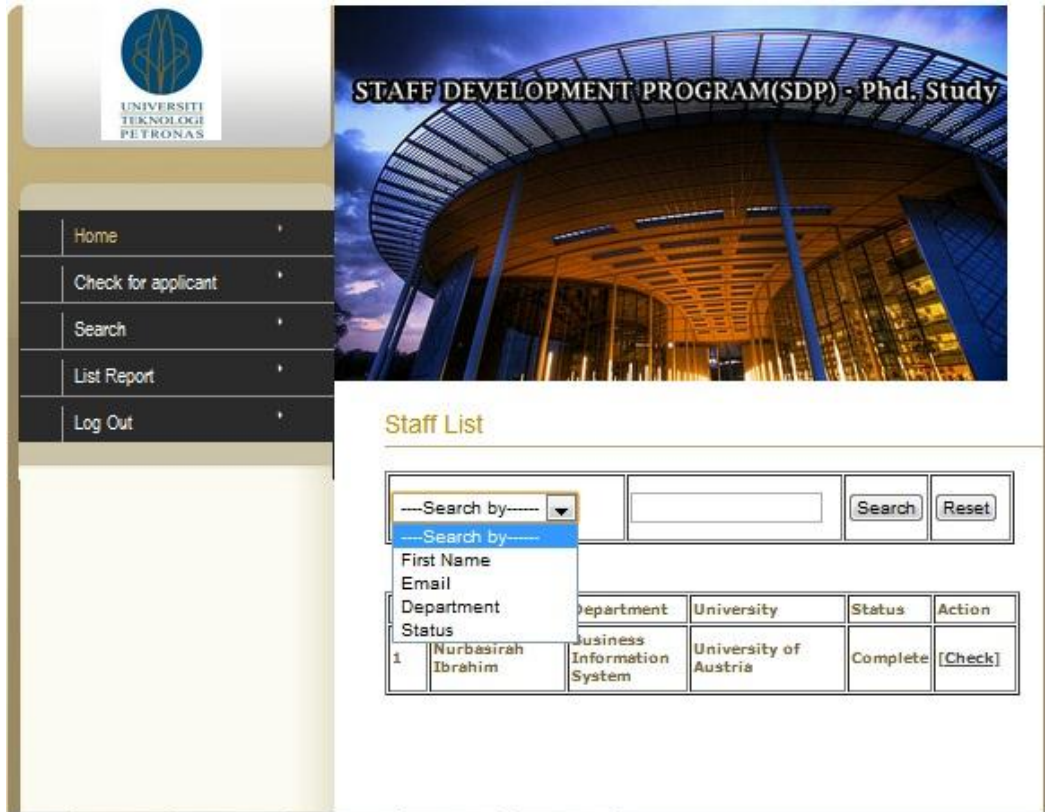
Figure 4.15: Search Form at Admin page

- **Staff Info Form**

Admin can view and update the details of applicants here. This will help them to monitor the progress and performances of the staff.

Figure 4.16: Staff Information at Admin page

- **List Report**

Admin can generate report based on the certain criteria listed in the search box. Not only that, admin also can print the selected report here.

Figure 4.17: List Report at Admin page

4.5.4.1 Head of Department(HOD) page description

Figure 4.18 show the default page when the head of department log in to the system. All the process of the applicants must go through the Head of Department (HOD) first before go the admin to be approved. All the applicants will be filter by the HOD to be proceeding to the next step. HOD will only approve the qualified applicants to give their name to HRM/ admin.
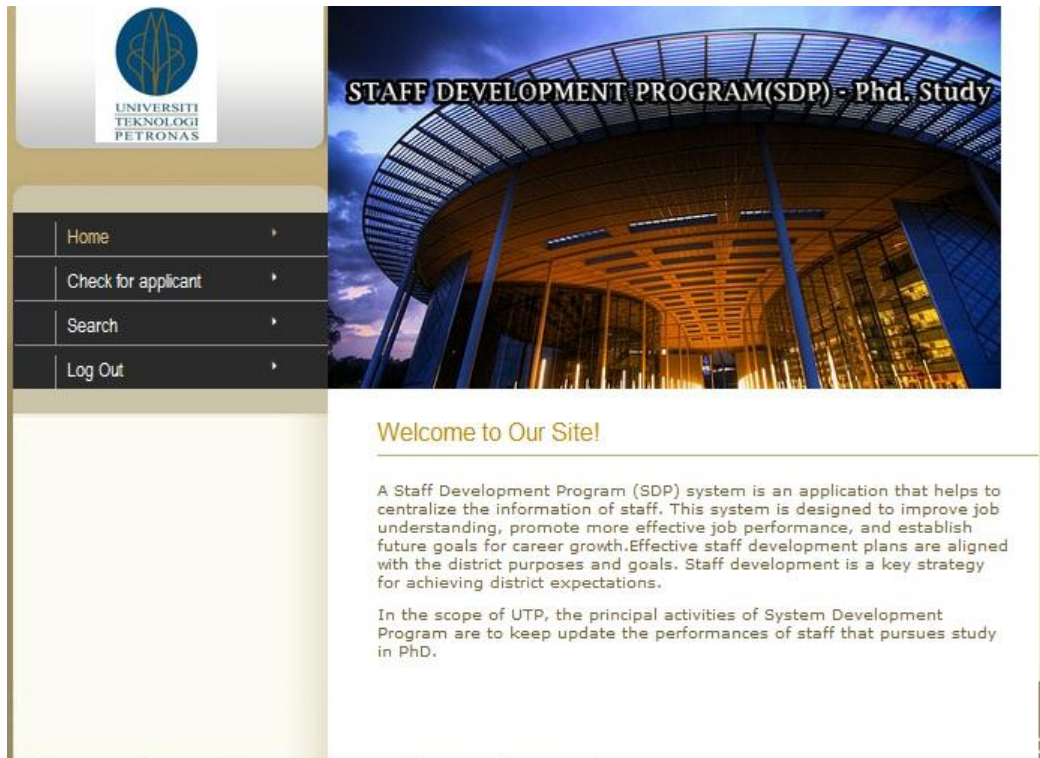
Figure 4.18: Head of Department homepage

- **List of applicant**

Figure 4.19 show all the list of staff that applies for SDP. The status column showed that either the application of the applicant had been process or not. HOD will click at the status underline 'Unprocess' at the status column to approve the process of applicants as shown at the Figure 4.19 below.

Figure 4.19: List of Applicant at HOD page

- **Approval Form**
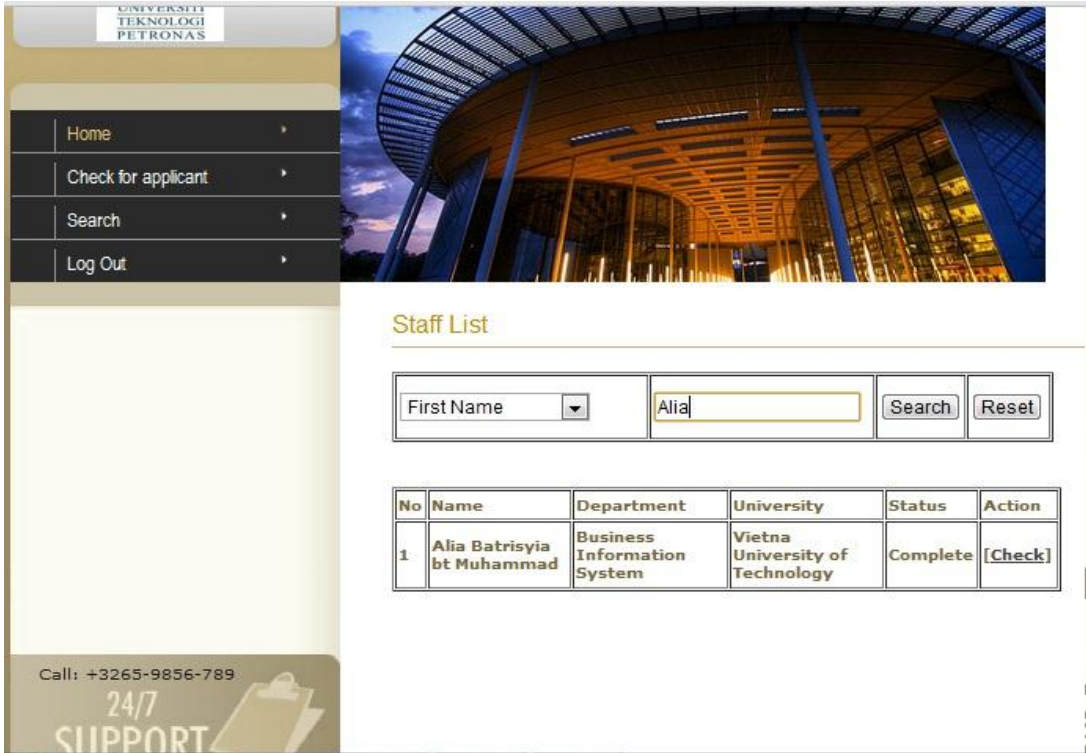
HODwill process the applicant by approving or rejecting their application. HOD will submit only the selected applicants that fulfil the requirement to admin.

Figure 4.20: Approval Form at HOD page

- **Search Form**

HOD can search the staff here by selecting the search criteria either by name, department etc. Apart from that, HOD also can check or view the progress of staff by clicking at the Action column as shown in Figure 4.21.

Figure 4.21: Search Form at HOD page

- **Staff Info Form**

HOD can view and check the progress report of the staff at this page. This will help them to monitor the progress and performances of the staff.
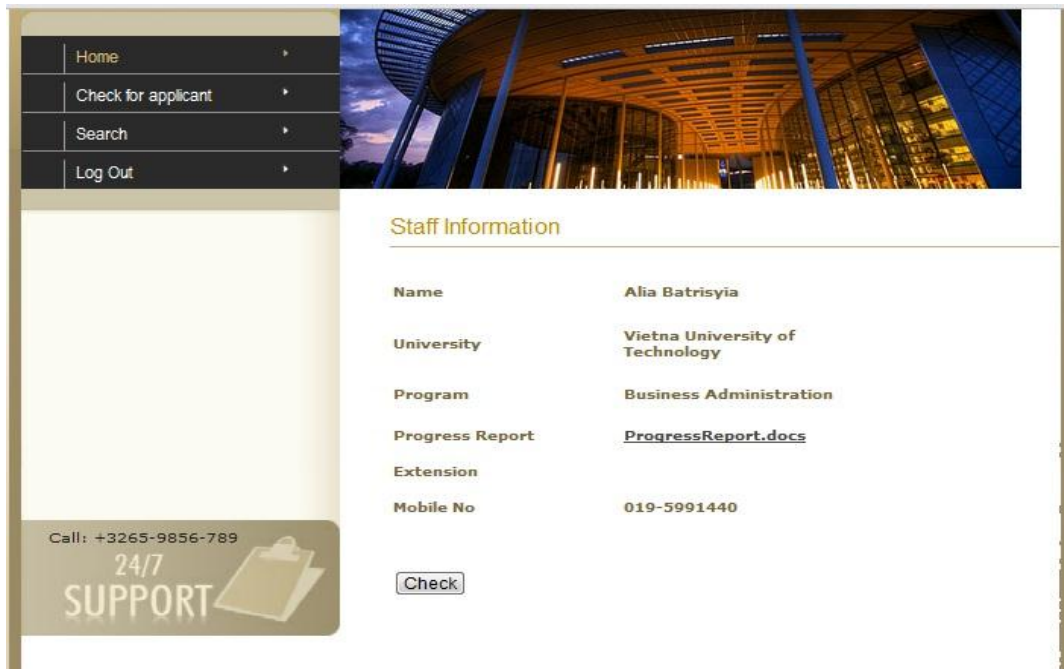
Figure 4.22: Staff Information Form at HOD page

4.6 Testing

Testing had been done with the user, Mrs.Muizzahto ensure that the system meet the expectations from user. Not only that, this test was done to guide the user on how to use all the functionalities provided in the system.

Tester	Mrs.Muizzah			
Test Date	14/8/2012			
Test Case Status	PASS			
Test Case Steps				
Step	**Description**	**Expected Results**	**Actual Results**	**Status**
1.	Open the SDP application.	On Loading, SDP displays home page.	PASS	PASS
2.	Log in to the page as STAFF Insert username and password Click on button **Sign In**	Able to log in as staff	PASS	PASS
3.	Click on **My Profiles** Update profiles	Able to update profiles	PASS	PASS
4.	Click on **Application for SDP** Fill up nomination form Click on button **Submit**	Able to submit the nomination form	PASS	PASS
5.	Click on **Progress Report Form** Fill up nomination form Click onthe link**Progress Report Form**	Able to download the progress report form	PASS	PASS
6.	Click on **UploadProgress Report** Choose File to be upload Click onbutton **Submit**	Able to upload the progress report form	PASS	PASS

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7.	Click on **Application for Extension** Choose File to be upload the selected documents Click onbutton **Submit**	Able to upload all the documents	PASS	PASS
8.	Log Out from the page Click on **Log Out**	Able to log out from the page	PASS	PASS
9.	Log in to the page as HOD Insert username and password Click on button **Sign In**	Able to log in as HOD	PASS	PASS
10.	Click on **Check for applicant** Choose status of applicant to be approved or rejected Click on button **Submit**	Able to view the list of applicant	PASS	PASS
11.	Click on **Search** Search by first name, department, status Insert the value Click on link **[Check]** Click on button **Search**	Able to search the applicant Able to view the details of applicants Able to download the progress report	PASS	PASS
12.	Log Out from the page Click on **Log Out**	Able to log out from the page	PASS	PASS
13.	Log in to the page as ADMIN Insert username and password Click on button **Sign In**	Able to log in as ADMIN	PASS	PASS
14.	Click on **Check for applicant** Choose status of applicant to be approved or rejected Click on button **Submit**	Able to view the list of applicant	PASS	PASS

15.	Click on **Search** Search by first name, department, status Insert the value Click on link **[Check]** Click on button **Search**	Able to search the applicant Able to view the details of applicants Able to download the progress report	PASS	PASS
16.	Click on **List Report**	Able to view the list of applicant that had been approved	PASS	PASS
17.	Log Out from the page Click on **Log Out**	Able to log out from the page	PASS	PASS

CHAPTER 5

5.1 CONCLUSIONS

As a conclusion, this system was able to enhance the current manual system of updating staff to web application. This web based application can be used to keep track the performances and progress of the staff by updating their progress report. Apart from that, the staff can also apply for extension if they did not manage to complete the PhD on time. However they need to submit certain document on the website to be viewed by the HOD and HRM. Not only that. SDP Management System is able to generate report to ease the supervision by admin and HRM. Thus, the development of the SDP Management System will help to optimize the potential of the staff.

5.2 RECOMMENDATION

Further research need to be done in order to enhance the staff development programme especially for local universities in term of their features and activities conducted for development of staff. There are many area of this SDP Management System that can be improvised to fully optimised the system for development of staff. Therefore, with the development of this system could help to give positive impact not only to the development of staff but also to the educational learning as a whole.

REFERENCES

1. Banerjee J. et al, *"Data model issues for object oriented applications"*, *ACM TOIS 5*, 1987.

2. Bieber, M. "On integrating hypermedia into decision support and other information systems."*In: Decision Support Systems* 14 (1995), 251-267.

3. Boud, D. and McDonald, R. (1981). *Educational Development through Consultancy*. Guildford: SRHF.

4. Chakravarthy, S. 1989. Rule management and evaluation: An active DBMS perspective. SIGMOD Rec. 18, 3, 20 –28.

5. Laurillard, D. (1993)."Rethinking university teaching: A framework for the effective use of educational technology". London: Routledge.

6. Liu C. H., Kung D., Hsia P., and Hsu C. T.. "Structure testing of web applications". *InProceedings of the 11th Annual International Symposium on Software Reliability Engineering*,pages 84–96, San Jose CA, October 2000.

7. McNaught, C. & Kennedy, P. (2000). "Staff development at RMIT: bottom-up workserviced by top-down investment and policy". *Association of LearningTechnology Journal,* 8(1), 4-18.

8. Sparks, D. (1984). "Staff Development and school improvement: An interview with Ernest Boyer". *Journal of Staff Development*, 5(2), 32-39.

9. Sparks, D. (1994). "Aparadigm shift in staff development". *Journal of Staff Development*, 15(4), 26-29

10. Warren Pipe, D. (1994). The role of educational development units in universities. *Tertiary Education News (TEI, University of Queensland),* 4 (1,2,3): 1-2.

Website:

1. Oxfrod Brookes University main page: Retrieved 20 February 2012, from http://www.brookes.ac.uk/

2. London School of Hygiene and Tropical Medicine main page : Retrieved 2o February 2012, from http://www.lshtm.ac.uk/