CHAPTER 1

INTRODUCTION

1.1 Background of Study

Neo Synergy Training Centre or known as NSTC is a non-profit based motivational company that was launched on January 2010 and is based at Batu Gajah, Perak. This motivational company was set up by UTP alumni and the executives of the company are mostly consists of students from various well-known universities all around Malaysia and managed by 11 peoples. Neo Synergy Training Centre is offering wide variety of services which are motivational seminars, talks, community services, consultation and training. Clients of NSTC comes from varies levels of communities such as corporate company, higher institution, higher education, orphanage and others. NSTC has been recognised by the mass media and on its steps to further create their future. Their events have been published in the newspaper and one of their annual programs; National Camping 2012 was on aired in Malaysia Hari Ini (MHI). As for October 2012, NSTC has successfully done their program at almost 70 high schools around Malaysia [1].With its credibility, NSTC has received many requests upon being part of the facilitators and has open for the application for membership among university students.

Below is the vision and mission of the company [1]:

Vision:

- Creating the best communities that based on *'Iman, Ilmu dan Amal'*

 Mission:

- We are non-profit based company
- We are providing motivational, training and consultation
- Our main responsibility is to increase the potential among students and communities
- We create relationship with communities through Corporate Social Responsibility(CSR)

1.2 Problem Statement

Neo Synergy Training Centre (NSTC) has been widely recognised among schools. Thus, as to fulfil the requirement of the new facilitators needed to assist and facilitate all the new programs and activities conducted by NSTC, they have open for membership application. However, as the numbers of applications are rising, the administrator had faced with problems of managing the new applicants.

1.2.1 Manual process

The problems arise when new members want to apply for NSTC membership. They need to fill in the manual form and submitted to the respective

person or represeter from NSTC. The admin would then manually key in all the details of the new applicants into the database. This has led to inefficiency task and high potential of data redundancy. Besides, it also cost time, money and unnecessary workload to the admin.

1.2.2 Overdue payment

As required in terms and conditions of the company, any registrations of new members are required to pay for membership fees which is RM30 annually. However, there is problem occur whereby the Admin and Finance division always facing with a problem of receiving the fee scheduled. This is because, once a person fill in the manual form, they have a choice to pay for membership fees at any other time. This issued may lead to the financial problems as the company needs to use the money to support the programs as well as for the maintenance of the company's assets.

1.3 Objectives

There are a few parties involved with Neo Synergy Training Centre which are new applicants and administrator. Thus, the project that would be developed would be fulfilled and satisfied the needs of parties related. The objectives of the NSTC Online Registration System are:

- To develop an online registration system where the new applicants could fill the forms online and able to

pay for membership fees as scheduled. This online registration system would then enhance on the efficiency of the administrator' task to manage the data of new members.

- To study on the current practice of registration system of NSTC. The current system which is the manual system would be explain more

- To study the problem arises from the current registration system. The problems found would be solved through the new system approach which is online registration system.

1.4 Scope of Study

Scope of studies would be around how automated system could enhance the efficiency of admin's task. The system would be tested by the admin of the company. Besides, this online registration system would be applied among university students and high school students who are interested to be part of the NSTC team as facilitators or volunteers.

CHAPTER 2

LITERATURE REVIEW AND/OR THEORY

2.1 Automated system

Nowadays, mostly of the business processes is help and assist by the information technology. With the powerful impact it given, many companies did not hesitate to invest in technologies in order to further enhance their company. Despite the increasing roles in communication, World Wide Web (WWW) allowed any individual or institutions to create a website with unlimited number of links and documents [2]. The Internet has grown rapidly since it was launched in 1969 and was expected to grow 1000% over the next few years [3]. There are a lot more types of databases that brought online and resemble vast arrays of data and information [4]. Thus, many companies use web based technology as it helps the company or seller to only able to reach their customers online without having to face to face with them. Furthermore, with online based company, they could able to save the rental cost and other costs related.

Same goes to the automated system that would able to make life much easier. According to Science-Dictionary.com, automated systems means a system that has been made less dependent on direct human control or management [5]. Besides, in more clear words, automation is having technology do things for

us so that we do not have to [6]. If we could see in other areas such as in the production factory, the automated system commonly contributed to higher production rates and increased productivity, more efficient use of materials, better product quality, improved safety, shorter workweeks for labour and reduced factory lead times. In the factory, higher output and increased productivity are the main reason for the implementation of the automated system [7].

Another advantage of automated system is it could increase the efficiency of the task done by the human before this. Automated system does not require breaks, holidays and of course would do the task more quickly and effectively. The task would be done in shorter time and eliminate the unnecessary workload that the worker need to accomplish. Thus, NSTC Online Registration System has fully utilised the automated system and make lease interruption of human being into the system. The benefits of this online registration are that, it could able to reduce high potential of data redundancy. The administrator has a wide chance to enter a duplicate data into the database.

There are many institutions such as higher education that have practised the online form application. According to www.campusexplorer.com, the main benefit of online application is that it would be more convenient to fill and the process is faster [8].

One of the case study that occur in University of Washington(UW) where they have been implemented the online application review process have shown that they have make much improvements towards the education system. For 10 years, applicants to graduate

programs have been able to submit their application online. If only 40% of the 200 UW's graduate admission administrators switch to online review process, UW could possible save up to 6,400 person hours next year being estimated. Some of the enhancement is that the faster review process would allow the university to make offers to the best candidates more quickly and give them a competitive edge among other rivals in the same industry. They also save countless hours of producing, sorting and tracking the hard copy application file [9].

Thus with the provided case study and the implementation among few institutions have brought a strong reason of this local company to move further as to enhance more improvements to the company.

2.2 Green Technology

It is shown that 70-80% of the organisation's process is still fully utilising papers to manage their company. Go Green Initiative in www.thepaperlessproject.com has come about to convert the manual process into an automated workflows [10]. Although their main objectives are to create business efficiencies and reduce America's reliance on paper based transaction processing, it is a great effort in order to save the environment as well as to save money in printing and supplying the hard copies of any documents required by the company.

Why green technology? Green technology becomes significant recently due to the increasing pressure from

the environment that has been brought by rapid development in the urban as well as in suburban area. The increase level of pollution and global warming that occur needs a solid action to be taken. Thus, comes the green technology awareness among the communities to promote on the effort of reducing the amount of cutting trees. As a case study in UW, they have received more than 30,000 applications each year that covers 25 pages of information for each candidate. If the admin of the university needs to print out all the hardcopies to review for each application, we could imagine how much trees are needed to be cut and the cost it counts for the process of printing and others [9].

According to Sharma.S (2012), the paper is chiefly use for the purpose of writing and printing, In order to create an eco-friendly atmosphere in the office or in any environment, we should go for paperless. While Kranti (2011) mentioned that offices have used vast quantities of papers which would then end up as waste. Thus, would cause more pollution to the environment.

By transforming the manual or hard copy forms into online forms is the best approach in order to save the environment. The amount of cutting trees could be reduced greatly. With the online system, the process of managing the office's task become more effective and efficient while on the other side could help save the environment by consuming less paper [8]. The technology used is simply given us a new options to reduce or eliminate much of the papers that we used today and reap the cost savings (Kupetz, 2008).

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As for conclusion, the NSTC Online Registration System is a best approach to be implemented inside Neo Synergy Training Centre as it could save more cost, time and money. In addition it could eliminate the unnecessary workloads to the admin with the support of protecting the environment.

CHAPTER 3

METHODOLOGY/PROJECT WORK

3.1 System Development Life Cycle (SDLC)

In developing this system, the methodology used is Structured Design Methodology in System Development Life Cycle (SDLC). There are 4 main phases which are planning, analysis, design and implementation.
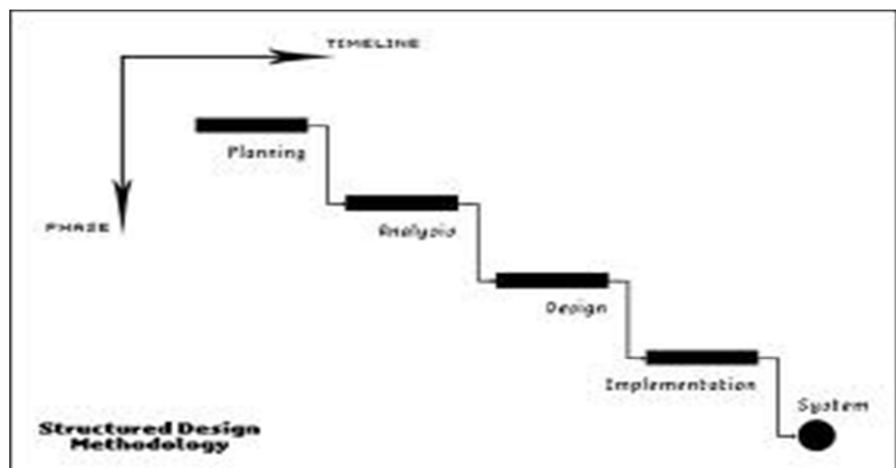
FIGURE 3.1: Structured Design Methodology in SDLC

3.1.1 Phase 1: Planning

Neo Synergy Training Centre is facing with a few problems which are:

1. The admin key in the details of the new applicants manually into the database.

2. The payment of the membership fees often overdue and not collected as scheduled.

Thus, by getting and analysing the problems of current registration process of NSTC, it is found that by developing an online registration system would able to help encounter the problems faced by the company.

For the data and information requirement process, the author has been conducted an interview with an administrator of Neo Synergy Training Centre (NSTC) regarding the current registration process. According to her, there are a few parts of the current manual system that need to be improved in order to ensure a smooth registration flow process of the new applicants. As time goes by, there would be more new applicants that would interested to apply for NSTC membership. Thus, a quick action needs to be done. Based on the open-ended questions that have been made, it can be concluded as stated before.

- The admin needs to manually key in all the details from the hard copy form into the database. This action might lead to the data redundancy.

- Besides, this manual process would eventually lead to the unnecessary workloads, costing time and money.

- Furthermore, the payments of membership fees are often overdue. This is because, there are no automated system that would pending their membership application if they did not pay for the fees.

Thus, it is urgently needed for the company to have an online registration system onwards. Apart from

interviewing the administrator, the author also randomly takes 10 new NSTC members to have a feedback regarding the current manual registration form. Among the 10 members, all of them said that although it is easy to fill in the form manually, they did not know or there is no specific placed has been mention for them to submit the registration form. They need to wait until the next program handled by NSTC and give to the authorised person available. Besides, the form might also lose.

As to develop this system, below is the Gantt chart for NSTC Online Registration System. The phases are divided into 4 phases which are planning, analysis, design and implementation.
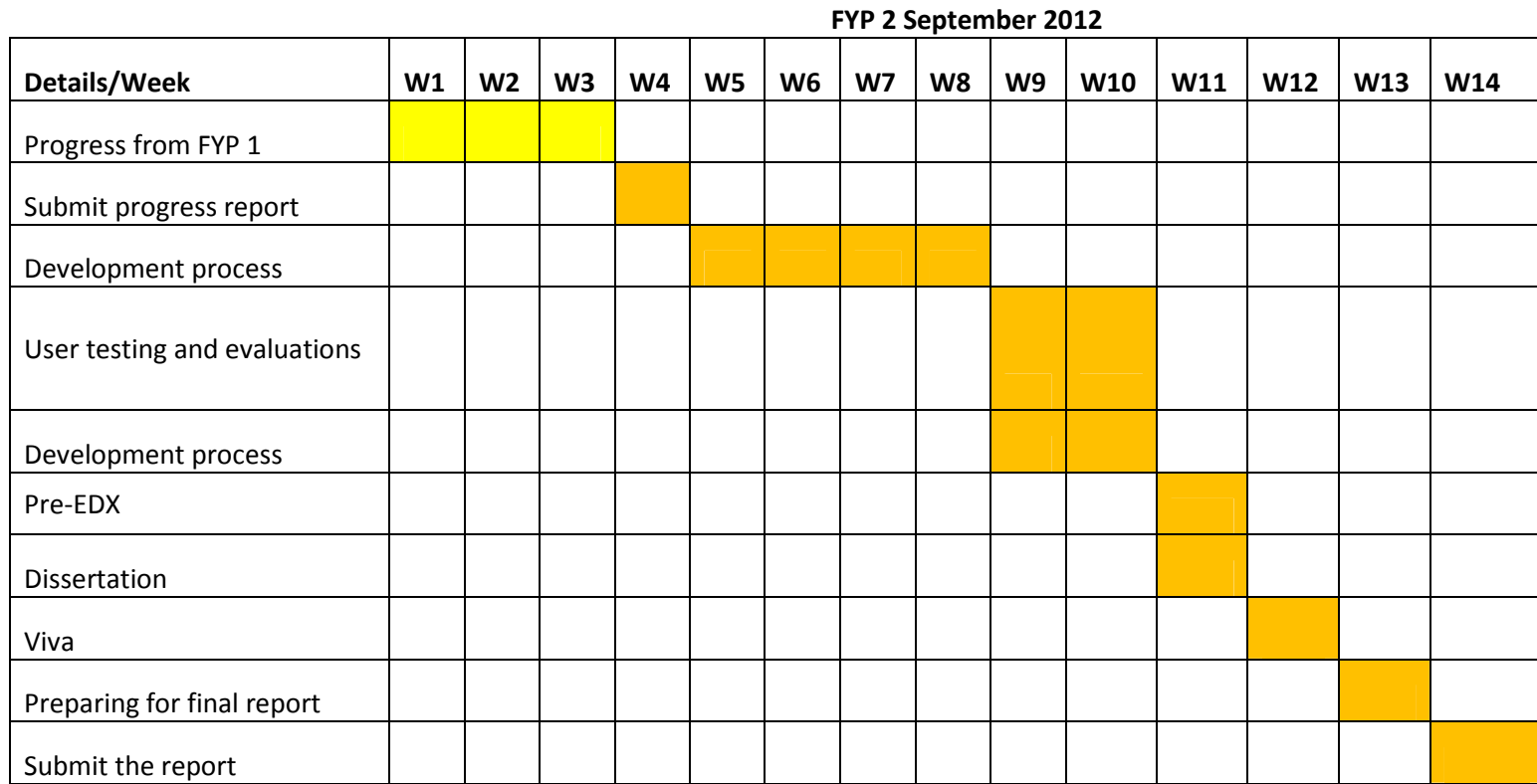
Gantt chart for FYP II

Details/Week	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
FYP 2 September 2012														
Progress from FYP 1	■	■	■											
Submit progress report				■										
Development process					■	■	■	■						
User testing and evaluations									■	■				
Development process									■	■				
Pre-EDX											■			
Dissertation											■			
Viva												■		
Preparing for final report													■	
Submit the report														■

FIGURE 3.2: Gantt chart of NSTC Online Registration System

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Upon the progression of the project, there are mainly key project activities that would be done along the project. The project activities are:

1. Define research problems
2. Review concept and theories
3. Requirement and data gathering
4. System Design
5. System Development
6. System Testing
7. System Deployment

3.2.2: Analysis Phase

Based on the interview done with the admin, Ms.Umi Fathin the user requirements have been identified. There are 3 forms that needed to be develop which are:

- Login form. Elements in login form are:
  a. Email
  b. Password

- Registration form. Elements in registration form are:
  a. First Name
  b. Last Name
  c. Primary Email
  d. Password
  e. Retype Password
  f. NRIC No.
  g. Phone No.
  h. Home Address

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i. Former School

j. Current University

k. Course Taken

l. Interest

m. How know NSTC

- Application form. Elements in this form are:
    a. Size

The function of login form is to only allow the admin of the website or the company to access into the database. The purpose of the registration form is to collect the details of new applicants. The new applicants need to fill this form in order for them to become part of NSTC members. While for application form, the details are needed in order for the admin to identify and give a correct vest to the new members.

Below is the current flow or As-Is Diagram of NSTC Registration Process.
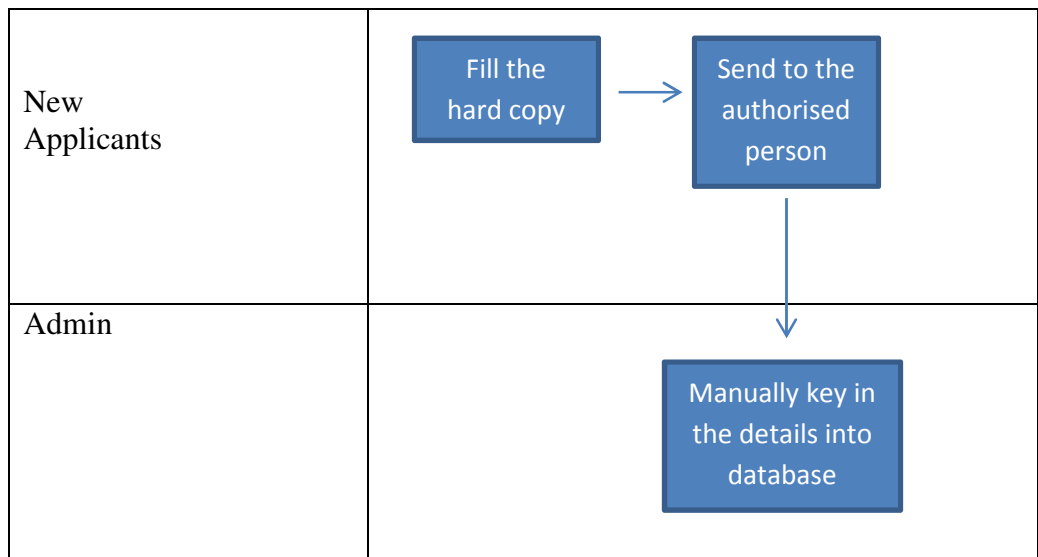
FIGURE 3.3: As-Is Diagram for current workflow

The figure above shows the current process of the registration system made by NSTC. As we can see, the applicants need to fill the hard copy form whereby they can get at any programs held. After the process, the applicants would need to send the form to the authorised person that can be from the facilitators itself. The facilitators would then send the form to the admin. At this stage, there are many possible drawbacks that would be faced. The forms might be loss as the facilitators need to give the form to the admin, Usually, they would keep the form for a maximum time of 2 to 4 weeks until the monthly meeting is held. After receiving the form, then the admin would start manually key in the details of new applicants into the database. As mention before, this stage might lead to the data redundancy and some data missing. This is because, there might happen more than one time a person is participate in the programs and send the form twice. Thus, lead to the invalid data taken.

In the next phase, the to-be system is being design and analyse to suit with the objectives of the project.

3.2.3: Design Phase

At the design phase, NSTC Online Registration System is divided into 2 designs which are user interface design and database design.

i. User interface
   a. Home
   b. Register
   c. Application
   d. Contact Us

ii. Database
   a. Login form

TABLE 3.1: Log in Form

	Size	Data type
Email	15	varchar
Password	15	varchar

b. Registration form

TABLE 3.2: Registration Form

	Size	Data type
FirstNam		text
Last name		text
Primary Email	30	varchar
Password	20	varchar
NRIC No.	15	varchar

Phone No.	15	varchar
Home Address	50	varchar
Current University	30	varchar
Course Taken	40	varchar
Interest		text
How Know		text

c. Application form

TABLE 3.3: Application Form

	Size	Data Type
Size		text

New applicants	Fill the online form → Online payment → Submit form ↓
Admin F i g u r e	Automatically update the new applicants
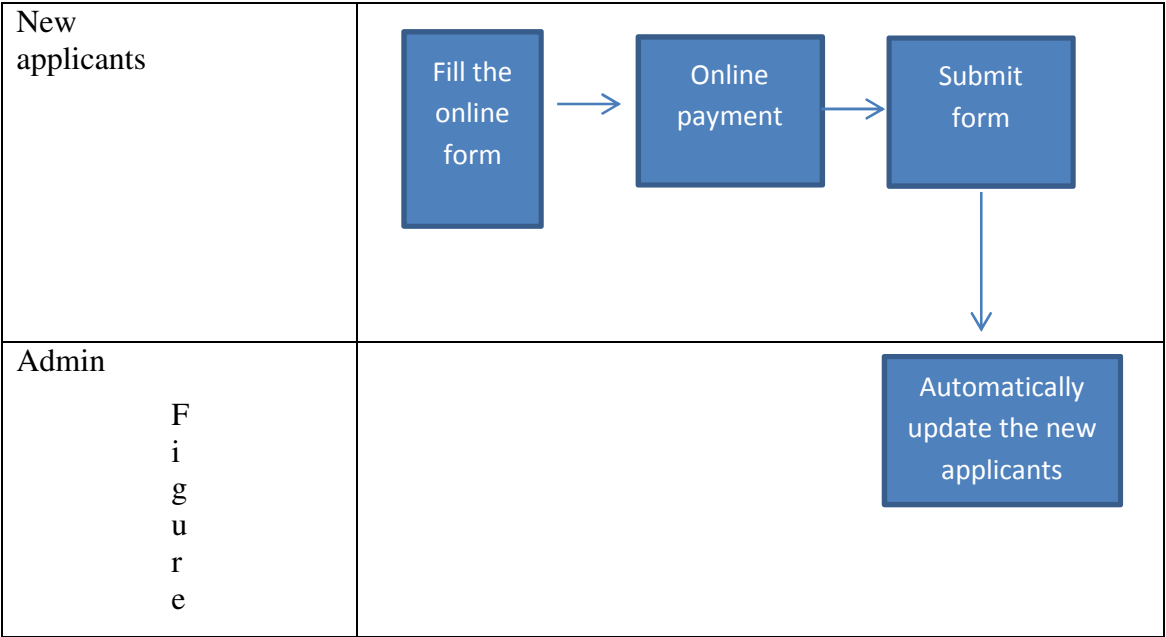
FIGURE 3.4:To-Be Diagram for registration system

The above diagram shows that with the new online registration process, the admin does not need to manually key in all the details of new applicants. The details of new applicants would then be updated automatedly.
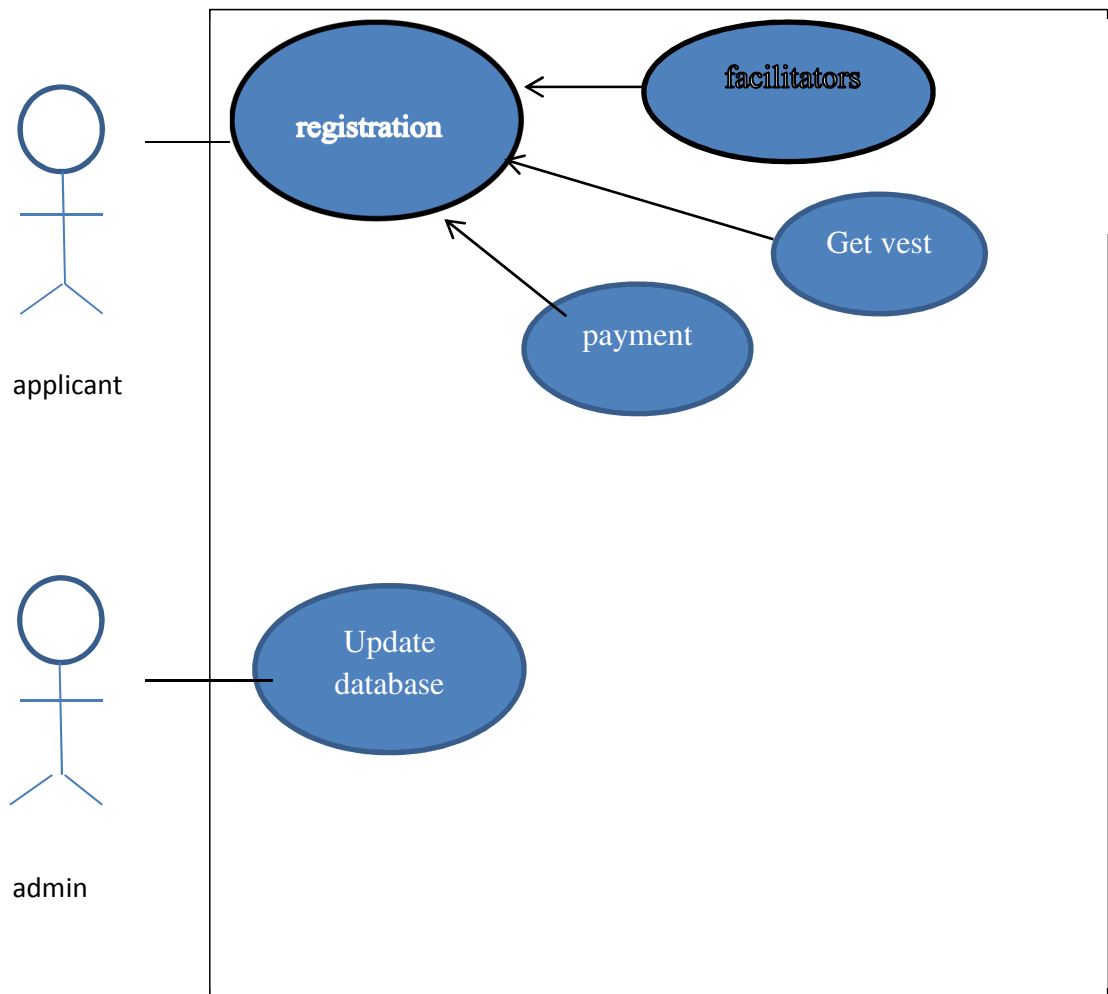
FIGURE 3.5: Use Case Diagram for
NSTC Online Registration System

The Use Case Diagram above shows two actors which are the applicant and the admin. The applicant must register first before he/she can become part of the members or the facilitators, to get vest and also to make payment. While for the admin, he/she would then update the database.

Registration Form
First name
Last name
Primary Email
Password
Retype
Password
NRIC No.
Phone No.
Home Address
Former School
Current
University
Course Taken
Interest
How Know
getDetails()

Application Form
Size
getDetails()

Login Form
Email
Password
getDetails()
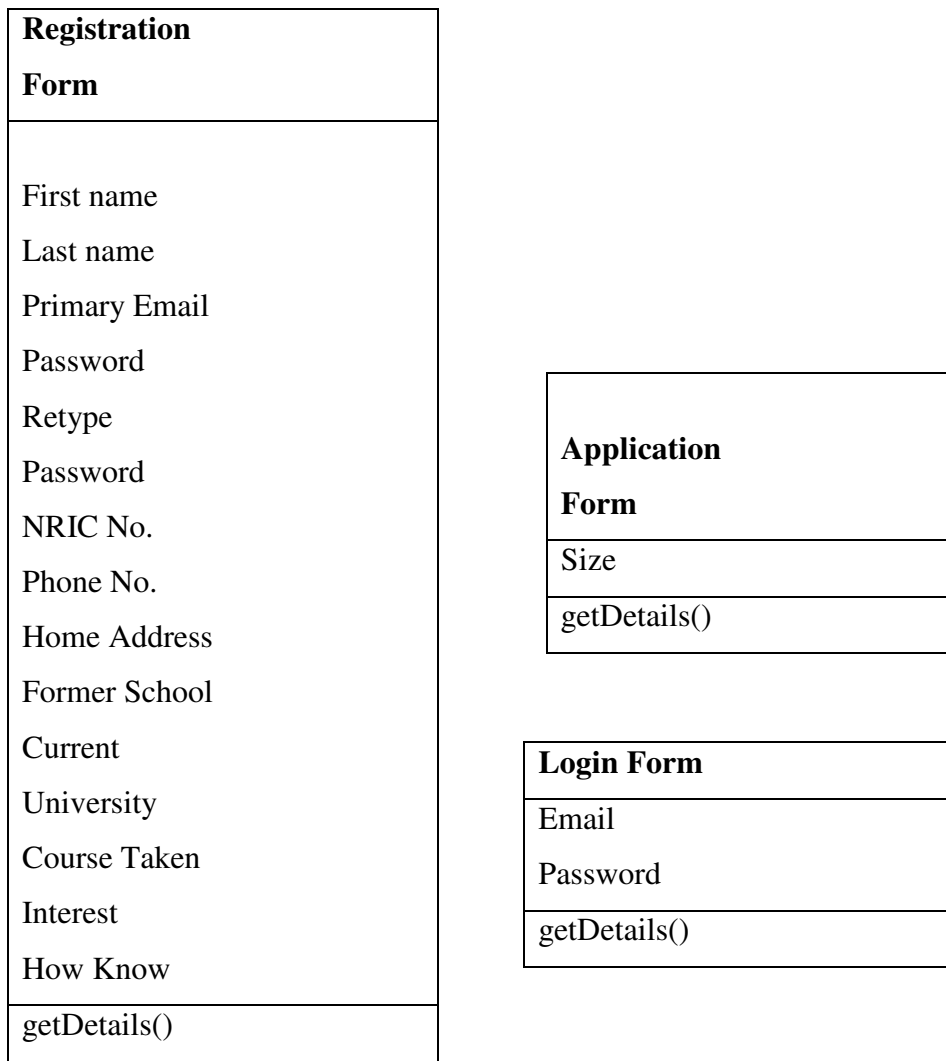
FIGURE 3.6: Object Diagram

From the above figure, the object diagram shows the elements needed in each online form. All the forms would serve for different functions.

Same goes with the class diagram for 3 forms which are log in form, registration form and application form.

Login Form
Email
Password
getDetails ()

Registration Form
First name
Last name
Primary Email
Password
Retype Password
NRIC No.
Phone No.
Home Address
Former School
Current University
Course Taken
Interest
How Know
getDetails()

Application Form
Size
getDetails()
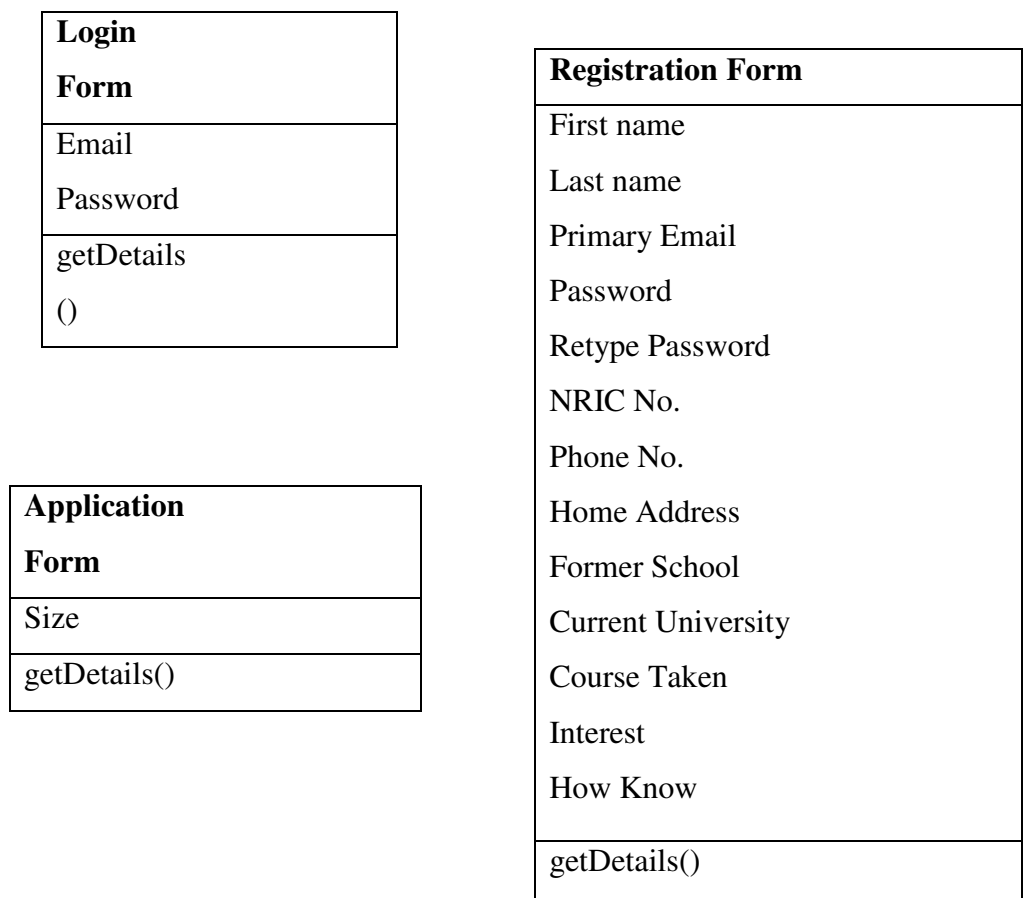
FIGURE 3.7: Class Diagram for 3 forms

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Student　　　　　login page　　　　　registration form　　　　database

getDetails()　　　　　save item
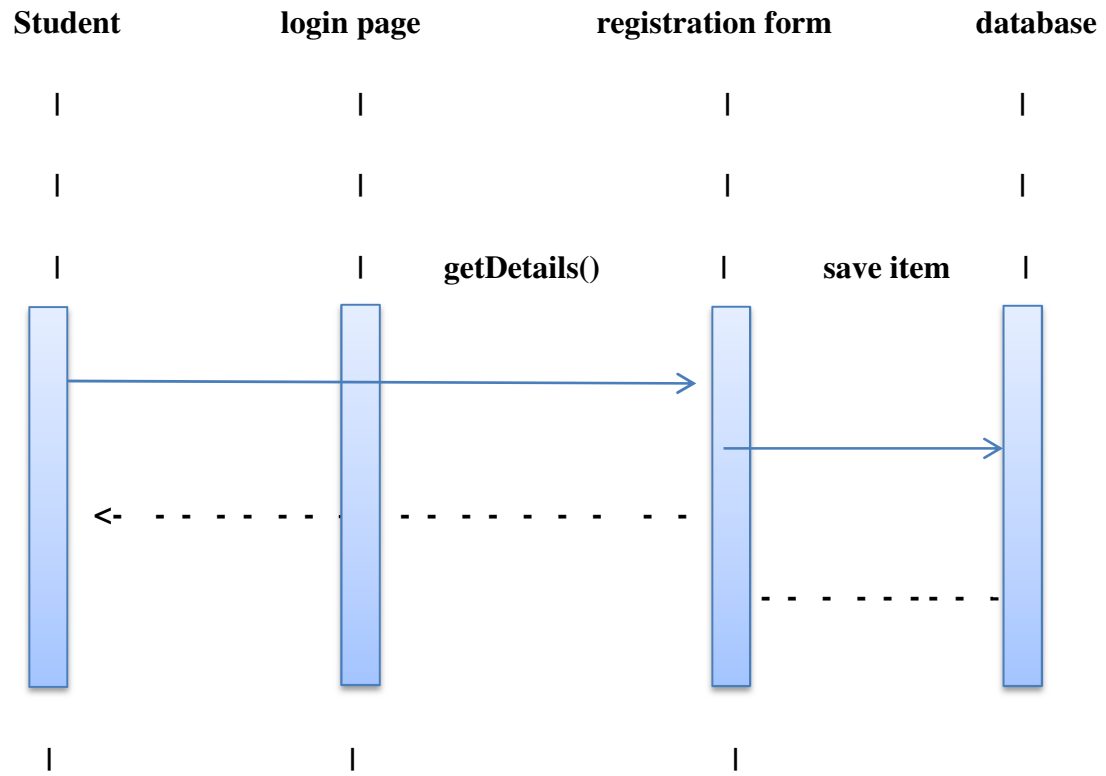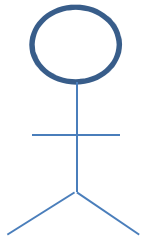
FIGURE 3.8: Sequence Diagram of Registration Form

3.2.4: Implementation phase

In order to develop this system, there are a few technical parts that need to be considered.

The software used is:
- Adobe Dreamweaver CS5
- XAMPP
  - Php
  - MySql
- Windows 7

The hardware used is:

- HP Mini

Adobe Dreamweaver CS5 is used compared with other website designer because of its powerful capabilities of building a website which is more interactive and flexible. Adobe Dreamweaver give the designer to have more flexibilities and functions to build a good and nice website.

XAMPP is the acronym of Apache,MySQL,PHP, Perl. It is a development tool that allows web designers to test their programs/work on their own computer without any access to the internet. According to Wikipedia.org, XAMPP provide support for creating and manipulating databases in MySQL. When XAMPP is installed, it is possible to treat a local host like a remote host by connecting using an FTP client. Thus, by using XAMPP, the write would able to create the website more easily and able to store the database by using phpMyAdmin.

The user requirement gathered in analysis phase and the design architecture in the design phase should be built exactly as what has been required.

CHAPTER 4

RESULTS AND DISCUSSIONS

To overcome the problems of current registration system, the online form has been developed. The forms are consists of login form, registration form and application form. In log in form, the new applicants would enter their email and id to proceed to the registration page. In the registration form, the applicants need to fill in the online form. The details are explained and shown in the above. These details would then be stored in the database. In current system, the admin needs to manually key in the data into the database where it have a high chance to data redundancy. In application form, the applicants need to enter the size of the vest whereby they need to buy the vest for the requirement in any of the programs organized by NSTC.

Before developing NSTC Online Registration System, Adobe Dreamweaver CS5 and XAMPP need to be installed.
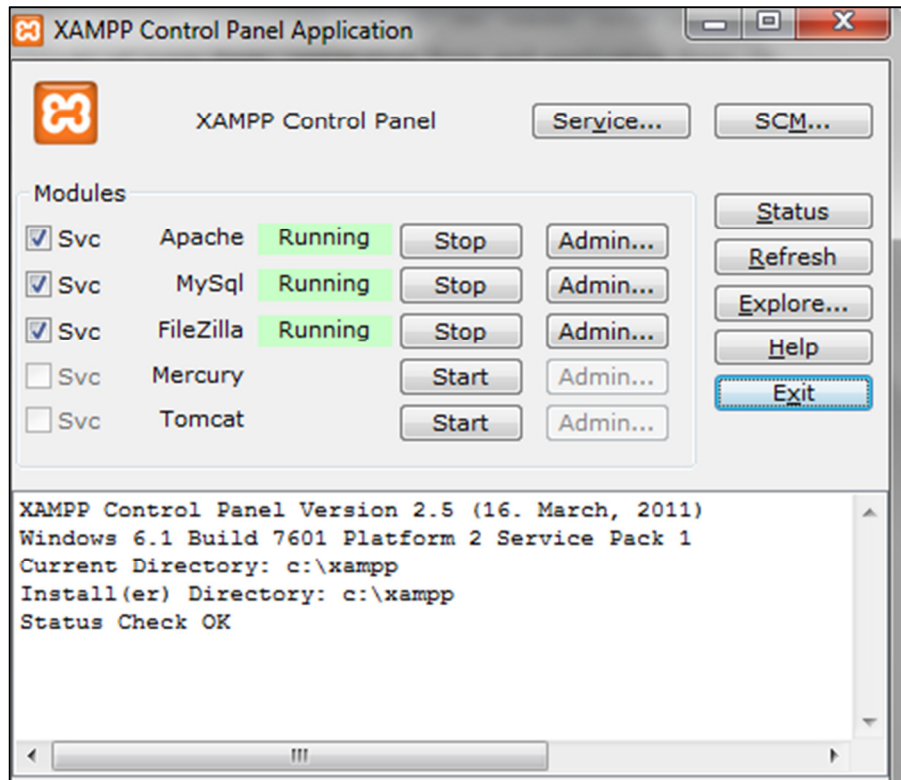
FIGURE 4.1: XAMPP Control Panel

FIGURE 4.2: XAMPP 1.7.7 installed
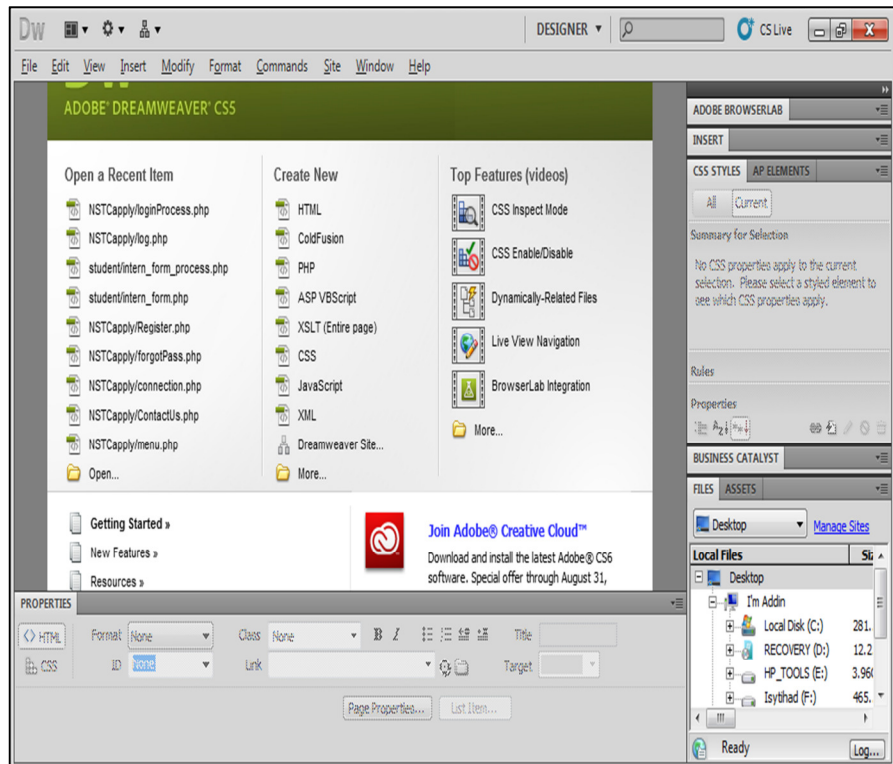
FIGURE 4.3: Adobe Dreamweaver CS5
installed

After these 2 main development tools have been installed, the design phase of the website is started. There are 3 main parts in the design phase contains in Adobe Dreamweaver which are code, split and design. These features help the designers to easily plan and design their website properly.
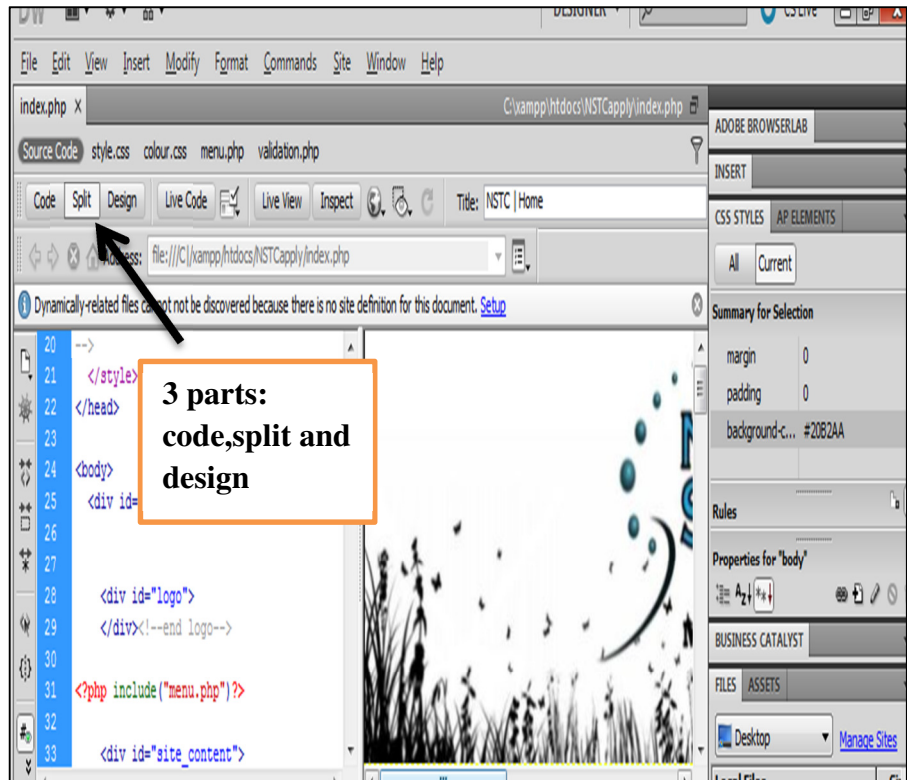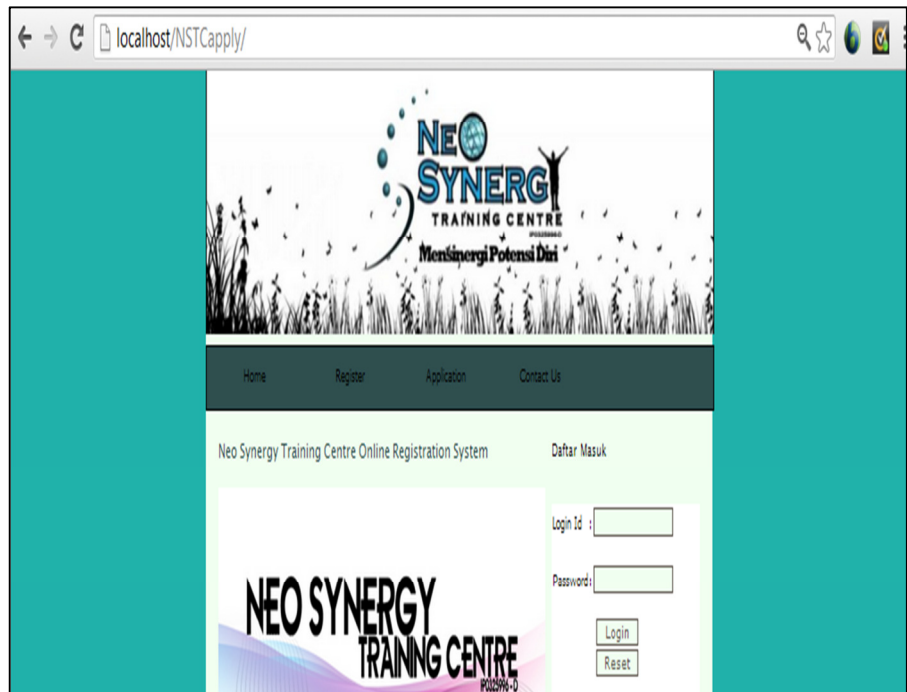
FIGURE 4.4: Code and design of NSTC

Home page

FIGURE 4.5: Home Page of NSTC Online

Registration System

The theme colour or concept of NSTC is blue in colour. By choosing this colour, the identity of NSTC would be more appeal.
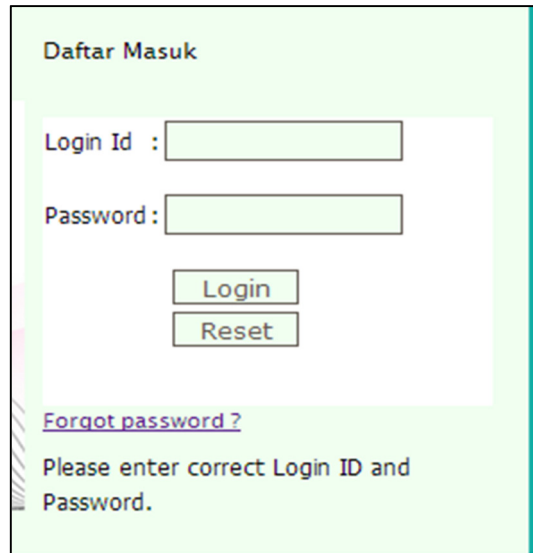
FIGURE 4.6: Log In Page

When the user or the applicant enters the login ID and password, the user would then directly go to the registration page to register and fill in their details.
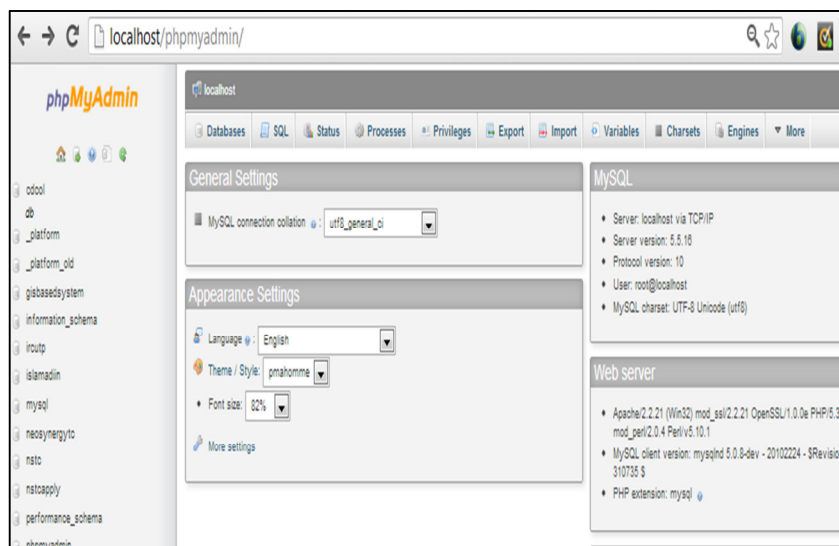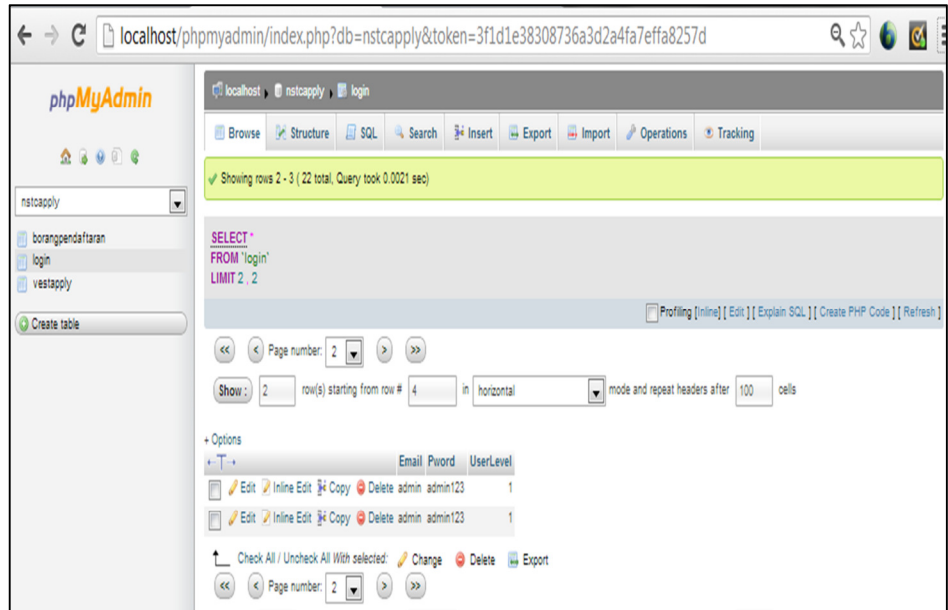

FIGURE 4.7: phpMyAdmin, medium to
manage and store database

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FIGURE 4.8: Database for Log

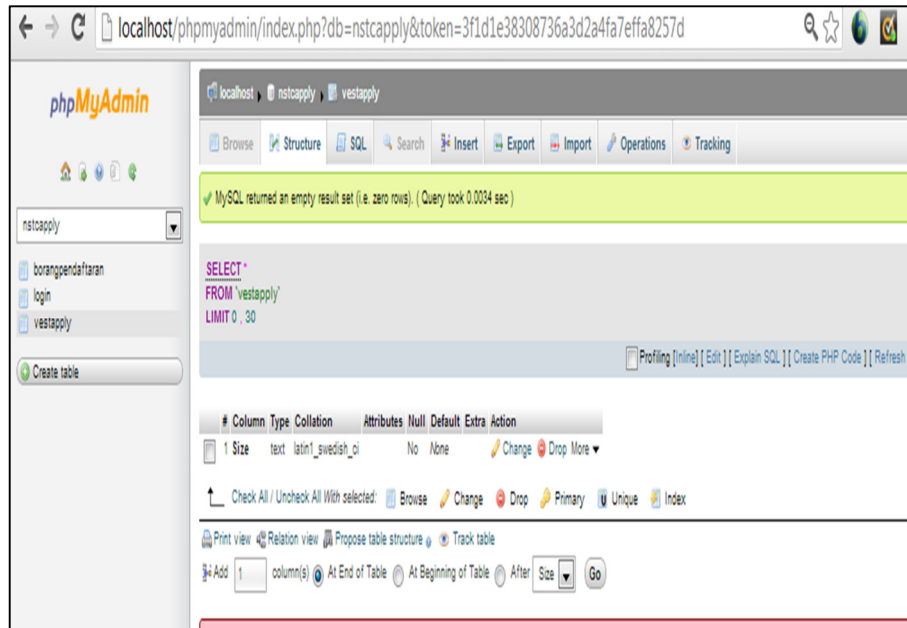In Form
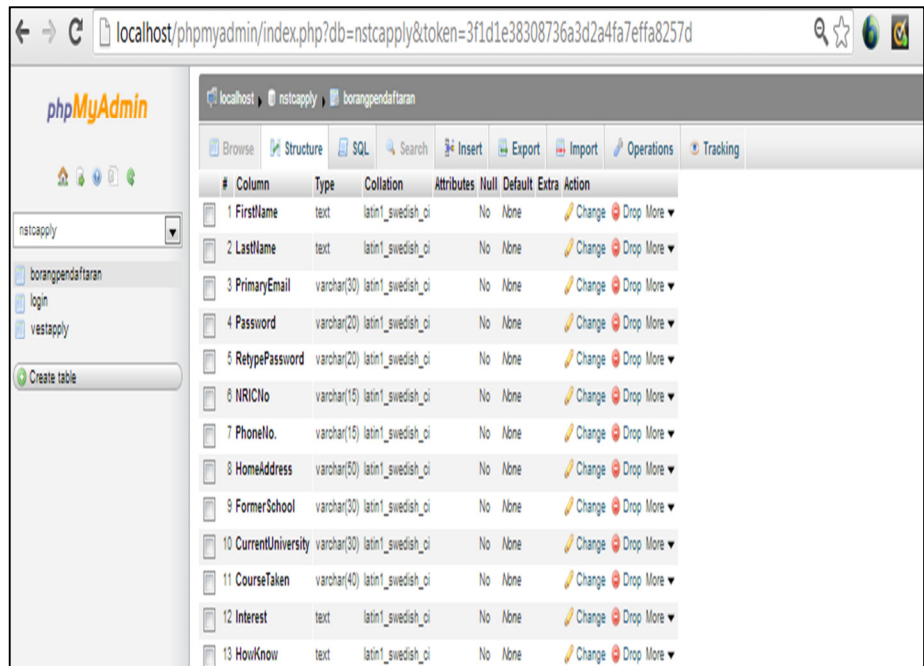
FIGURE 4.9: Database for registration form

FIGURE 4.10: Database for

Application Form

If the applicant did not able to log in, the forgot
password page would appear.

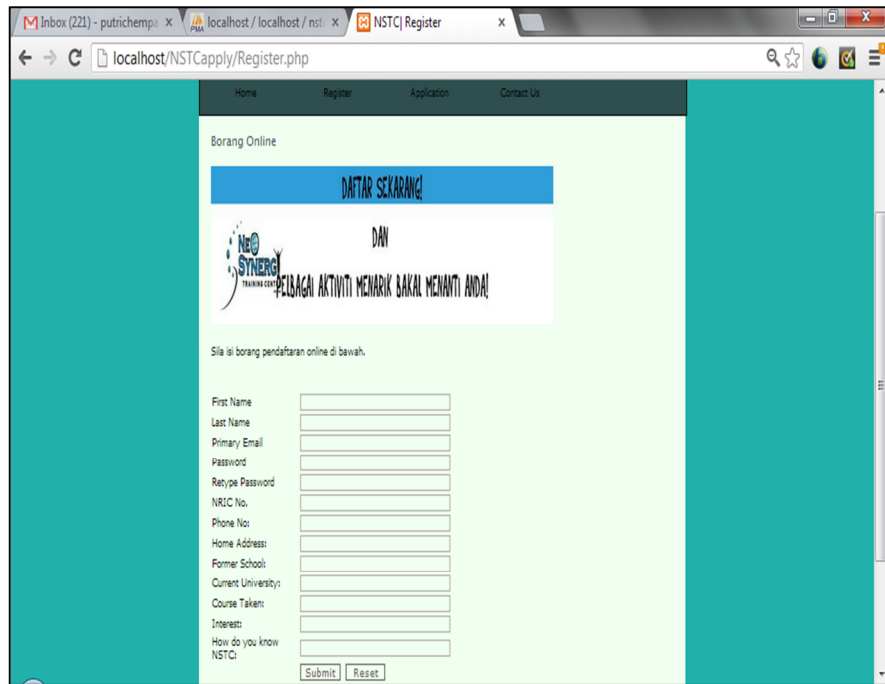

FIGURE 4.11: Forgot password page

FIGURE 4.12: Registration Form

Once the applicants fill this form, then the details would go to the database.
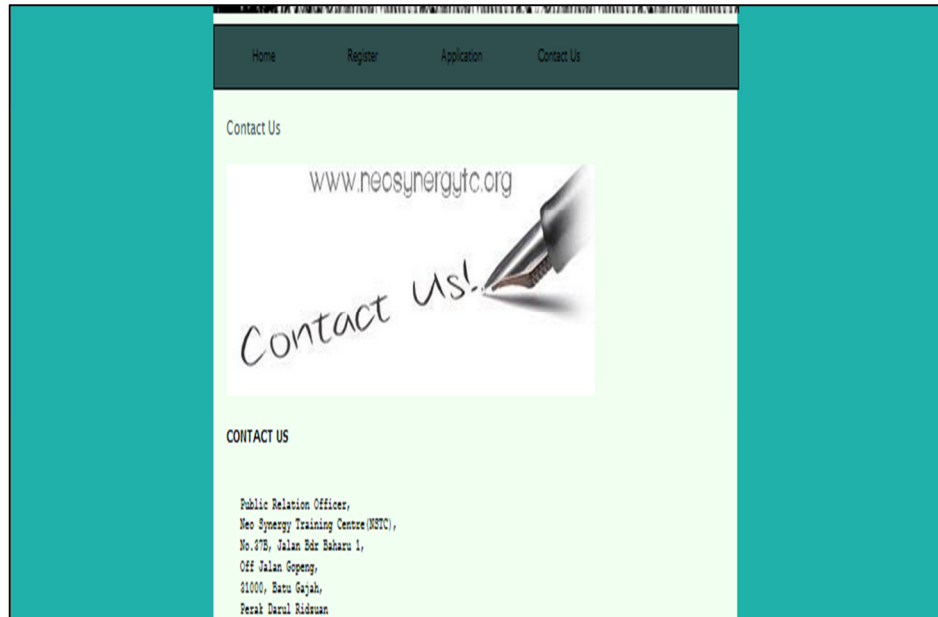

FIGURE 4.13: Application form

FIGURE 4.14: Contact Us page

The Contact Us page would enable the applicants to contact, comment and also allow them to visit all the website and blogs owned by Neo Synergy Training Centre and its associates.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, NSTC Online Registration System helps to overcome the problems faced by NSTC admin to cater all the manual forms send by the applicants. With this system, the unnecessary tasks would be reduced, able to save time and as well cost.

However, there are certain parts of the system that need to be improved further for a more functioning system. For the payment parts, the author would need to add on the types of online payment that could be used by the applicants to pay online. Such medium that can be used is PayPal. Besides, the required field for the registration system could be put to a certain rules to ensure a valid data input from the applicants.

Besides, this registration system would then be linked to Neo Synergy Training Centre (NSTC) website. When anyone visits the website, they could able to directly apply for the membership. With such features, this system could be further develop by sending a notification through email towards selected facilitators who are being request to participate in the programs held at certain region.

Further development and improvements of the system need to be done to provide a fully functioning system.

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