

SCHOOL STUDENT ADMINISTRATION SYSTEM

MOHD RIDHUAN BIN HUSSAIN

CA10070

**THESIS SUBMITTED IN FULFILMENT OF
THE DEGREE OF COMPUTER SCIENCE
(COMPUTER AND NETWORKING)**

**FACULTY OF COMPUTER SYSTEM &
SOFTWARE ENGINEERING UNIVERSITI MALYSIA PAHANG**

2013

SUPERVISOR'S DECLARATION

“I hereby declare that I have read this thesis and in my opinion this thesis is sufficient in terms of scope and quality for the award of the Degree in Computer Science (Computer System & Networking)”

Signature:

Name of Supervisor: Che Yahaya Bin Yaakub

Date:

STUDENT DECLARATION

I hereby declare that this thesis en titled “School student administration system ” is the result of my own research expect as cited in the references. This thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

Signature:

Name: Mohd Ridhuan Bin Hussain

Date:

ACKNOWLEDGMENTS

Alhamdulillah, I am very grateful and thankful to Allah SWT for giving me strength, patience and ability to complete this thesis project. Without His help, this thesis would not be possible for me to complete.

First and foremost, I would like to give special thanks to my supervisor Sir Yahaya Bin Yaakub for his guidance, encouragement and criticism. This thesis would not have been the same as presented here without his support and interest.

Besides, I would like to thank teachers at school An-NUR because of their moral support and guidance. To me, those are something that cannot be easily forgotten.

To my beloved family, especially to my sister, Nor Hasmiza Binti Hussain for giving me her blessings, unconditional love, financial support and also understanding on my conditions that I can't visit her very often.

Last but not least, my sincere gratitude extends to all individuals who have contributed either directly or indirectly in ensuring the success of this thesis.

ABSTRACT

In this paper, a system that can manage the registration process of the students, convey information about the school activities by sending SMS to their parent and student attendance will be record automatically. Student's management in an organization is very complex. When talking about learning, student registration is a matter of a compulsory and usually taking registration takes a long time to fill out many forms. In addition, many letters will be given to the parents via students. Due this reason, a system was designed to overcome this problem. This system to register students, convey information about school activities by sending SMS. No longer need all the forms, letters statements, stationery and a list of students to record student attendance. In fact, this system can replace the old system to a more systematic and computerized.

ABSTRAK

Dalam kertas kerja ini, satu sistem yang boleh menguruskan proses pendaftaran pelajar tahun satu, menyampaikan maklumat mengenai aktiviti – aktiviti sekolah dengan menghantar SMS dan kedatangan pelajar akan direkodkan secara automatic. Pengurusan pelajar dalam sesebuah organisasi sangat rumit. Apabila bercakap tentang pembelajaran, pendaftaran pelajar tahun satu adalah satu perkara wajib dan kebiasaanya pengambilan pendaftaran mengambil masa yang lama untuk mengisi banyak boring. Selain itu, banyak surat yang akan diberikan kepada ibu bapa melalui pelajar - pelajar. Disebabkan alasan ini, satu sistem telah direka untuk mengatasi masalah ini. Sistem ini mendaftar pelajar, menyampaikan maklumat mengenai aktiviti sekolah dengan menghantar SMS. Malahan, system ini dapat menggantikan sistem yang lama kepada yang lebih sistematik dan berkomputer.

TABLE OF CONTENT

| | Page |
|--|-------------|
| DECLARATION | iii |
| SUPERVISOR DECLARATION | iv |
| ACKNOWLEDGMENT | v |
| ABSTRACT | vi |
| ABSTRAK | vii |
| TABLE OF CONTENTS | vii |
| LIST OF TABLES | xii |
| LIST OF FIGURES | xii |
| LIST OF ABBREVIATIONS | xv |
| | |
| CHAPTER I INTRODUCTION | |
| 1.2 Problem Statement | 3 |
| 1.3 Objective | 3 |
| 1.4 Scope | 4 |
| 1.5 Conclusion | 4 |

| | | | |
|-----|-------|-----------------------------------|----|
| | 3.3.4 | Implementation | 26 |
| | 3.3.5 | Maintenance | |
| | 3.3.6 | Testing | |
| 3.4 | | Software and Hardware Requirement | 27 |

CHAPTER IV RESULTS AND DISCUSSION

| | | | |
|-----|-------|-------------------------------------|----|
| 4.1 | | Introduction | 28 |
| 4.2 | | Development of Interface | 29 |
| 4.3 | | Database Architecture | 29 |
| 4.4 | | Development of System | 30 |
| | 4.4.1 | Coding for Registration Parents | 31 |
| | 4.4.2 | Coding for Application Registration | 33 |
| | 4.4.3 | Coding for Confirmation and Update | 35 |
| | 4.4.4 | Coding View Registration | 35 |
| | 4.4.5 | Coding View Activities | 37 |
| | | Conclusion | 37 |
| 4.5 | | | |

CHAPTER V RESULT AND DISCUSSION

| | | | |
|-----|--|----------------|----|
| 5.2 | | Testing result | 39 |
|-----|--|----------------|----|

| | | |
|----------------------------------|-------------------------------|----|
| 5.3 | Result Analysis | 40 |
| 5.4 | Constrain | 47 |
| | 5.4.1 Development Constraint | 47 |
| | 5.4.2 Documentation Constrain | 47 |
| 5.6 | Lesson Learn | 48 |
| CHAPTER VI CONCLUSION | | 49 |
| REFERENCE | | 50 |
| APPENDIX | | 51 |

CHAPTER 1

INTRODUCTION

This chapter will explain briefly about the project introduction, the problem statement, objective and the scope of this project. This chapter also will introduce about what system that will be develop and the concept that will be used.

1.1 Overview

The modern world is full of technological advances, mostly all also change towards more advanced. Many things have been up upgraded to the more advanced and more professional than before. Every school there are certain term of managing the registration, meeting annual activities and so on. All school in Malaysia or other country, no matter whether primary or secondary, each of them have own registration system. There also has their own system registration where to fill in manually or by filling out the form by using the internet. There has advantages and disadvantages in accordance with the way the system in used. A school Sekolah Rendah Islam An-Nur at Kota Bharu Kelantan has been selected to upgrade their registration system to more simple and organized that has been used previously. Majority schools in Malaysia enroll their new students, a blank form to be filled to store in a book of student enrollment. This school selected does not have a specific

system, but just only using a system registration form. All information about the new student that wants to enroll in this school, parents need to complete on the form provided by the school authorities. The weakness of this approach is the form might be missing, this will cause a problem to the school administration and the parents of the students have to fill in the information for their children again. By use the registration online system will facilitate both sides in registering students. System to be used in this school is online registration. This technique allows parents to register their children without wasting their time goes to school for register, wait and line up to register their child. Using this system parents must create their own account. After creating the account, they can put the information like their children information or any relative's information. When they have their own password so that they can edit if there are any problem before submit the form. Also the system checks if the form not full fulfill, parents cannot submit the form, error will occur when the form submitted.

Generally, all announcements would be posted on the advertisement board or on any social media like tweeter or Facebook.in office, they got their own way to inform their employee or top management regarding their forthcoming activities like company's website where all the information would be placed regularly according to their priority or through the old ways like posted on the advertisement board. In high level institution like universities, students have their own way to updates any new news related. Usually, they need to log in using their own password then after verified, they can access to all information's like course results, notes, merits and memos plus nowadays they can access to their study material everywhere as long as there is an internet. This is called e-learning or online learning and being practiced in many universities around the world. In oversea universities such as Stanford universities, they can interact with their lectures through video conference without having to go to classrooms. In this way, all the marking, all the quizzes and assignments and test just assigned straightly and student would complete it within the time. In lower education such as secondary school and primary school, all activities will be held in schools for examples sports, mutual cooperation, meeting of the PIBG, the school will provide a letter to students to bring back and give to their parents. Unfortunately, this

way is not effective since it exposed to many risk such as letter lost or letter would be kept in a bag for a long time since students at this level still not reach the level where they able to tell their parents the activities that will be held in school and without the proper supervision, parents would be out of dated about important activities like PIBG meeting and etc. To overcome this problem, when there are any activities that will be held at school, short message service (SMS) will be send to parents. A letter that should be given to parent is replaced by message. With this method, parent will easily notice if there is any activity that will be held at school.

1.2 Problem Statement

Parent do not have time to register their children at school because busy with work. Nowadays, peoples are busy with their career especially those that involve in business as they had to face various forms that might cost them too much time. if school kept asked them to fill various form that totally need same information, it would be consume a lot of time and parents would eventually missed to fill those form which would affect their children in school . There are also consequences regarding spread information using a letter. This is because the letter might easily lost or not receive by the parent.

1.3 Objective

The objectives of this system are;

- i. To develop a school web system registration
- ii. To develop school activity system will be send via SMS

1.4 Scope

The scope of this project has been search before the system is build. It is important because to make sure the system meet their requirement and to perform better phase of system under making. The scope is;

- i. Mainly focus on registration, activity and attendance system Sekolah Rendah Islam An-Nur Kota Bharu Kelantan
- ii. Only focus on student year one.
- iii. Only two user can use this system:
 - Admin who will monitor this system:
The admin will monitoring the system by sending SMS to parent when activity have at school
 - Parents students:
Parents will use web based for online registration

1.5 Conclusion

It could be said that, this system would benefit two sides, teacher and parents. Where the time spent more orderly and organized if compared with manual systems. Parents no longer have to go to school to fill out the form, just use the online registration system to register their children. Besides that, as their already fill up their information, the information would be key-in in their database. After that, any latest announcement like sports day or any important day would be informed to the parents straightly through SMS. In that way, parents would never miss any events that concern their children. For the children attendance, parents would know immediately whether their children has skipped class or not through SMS as this program has been designed to send the SMS to their parents if their children not come to school for certain period like a week.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reveal on the literature review that is related with what will be developed later. The literature is very important step in the research process. Literature review is process of reading analyzing, evaluating and summarizing scholarly materials about a specific topic that related with the project want to develop. Two key steps in a literature search are finding source and synthesizing information.

The references of source were merely taken from books, articles, journals, magazines and also other source from the internet.

2.2 Literature Study

There are several articles that related to this topic, overview the three systems:

- a) Design and implementation of the online course registration system at Tsinghua University
- b) Automated Student's Courses Registration Using Computer-Telephony Integration
- c) Attendance Management System using Fingerprint Scanner

2.2.1 Design and Implementation of the Online Course Registration System at Tsinghua University

University Tsinghua is a university offers more than 3000 curriculums per semester and online registration in seven times. It important part in registration activities. Early 2006 a special project was started named by “the modernization of technical platform. It purposes to make to emphasize the student-oriented concept, full meet registration requirements and also to improve the efficiency and quality of course. The registration system already reconstructed the online course new registration mechanism. The system design and architecture method to ensure the system more adaptable and flexible to support all kinds of student and online course. This system now has reached domestic advance level through continuous improvement with proactive cooperation of all teacher student and all academic departments.

2.2.1.1 Method That Used This System Is:

i. Registration Mechanism:

For registration mechanism have three parts. Registration phase, adjustment phase and dropping phase. In the registration phase, this system used willingness method. Adjustment phase student can register via first-come-first-serve if the capacity of the course allows and the dropping phase, student could do nothing but they can drop courses.

ii. Technical architecture:

C/S: C/S architecture is used to implement administration functionalities. Developing environment is Power Build 10.2. The B/S access method is implemented in C/S system by applying Citrix technology.

B/S: B/S architecture is used to implement all kinds of functionalities for the students and teachers by using JAVA. The framework is based on spring and Hibernate. It uses MVC structure which separates view, business and model.

2.2.1.2 Benefit of Design and Implementation of the Online Course Registration

The new system online registration course can solve the unfair problem by drawing lots randomly and performance issues. It implement common registration for both undergraduate and graduate student, supports teaching activities across three semester including fall, summer and spring. The system will be continuously improved to support mobile, abroad student and international visiting students to ensure the teaching activities with the spread and realization of the concept for international education

2.2.2 Automated Student's Courses Registration Using Computer-Telephony Integration

This project system discussed for automated student's courses registration. This system allows students to register the courses with easy without wasting the time waiting in long queues. This system proses is by using entering the identify student registration number. The system automatically checks the courses if opened or closed and the subject already taken it. After a selection made, the system automatically repeats each choice for verification. After complete the registration, a copy courses schedule of students will sent by email. A system will run on 12-port platform.

2.2.2.1 Method That Use This System:

This method use two methods, system hardware and system software.

Hardware can be categorized into three. Those categories are personal computer based, telephony lines and telephony interface (voice card). They have different manufacturer's resources requirement.

Software support also can be divided into three categories. Windows NT or above as environment, voice driver as an interface between the two components (computer and telephone) and telephony toolkit as telephony application programming interface (TAPI). In addition, they have a database for every courses registration.

2.2.2.2 Benefit Of Automated Student's Courses Registration

This system has a lot of advantage and benefits. This system always there for everyone whether day and night. The cost is so efficient the system can be automatically set up to dynamically manage the use of telephone line. Moreover, the power that used is more little time power, as all the data input to CTI system is fed directly to the computer. The data inputted can be can be fully automated. This is due to the very nature of computer telephony, as all the data is fed straight into the computer system. Student will highly experience reduced waiting times before processing during and also upon completion.

2.2.3 Attendance Management System Using Fingerprint Scanner

The current system in lab session or lecturer is the lecturer hand out of the student list name to sign and make sure the student who attends that class. But the student cheat in do student attendance is easily and frequently happened. For example, another student signed her/his friend for attendance. The fingerprint scanner is developing to prevent this problem attendance using biometric fingerprint recognition. It will record and monitor the

attendance of every student in school at the class. This system not develop based on barcode system in student's smart card it because the barcode very easy to duplicate and produce, but fingerprint cannot duplicate and unique for everyone.

2.2.3.1 Method That Use This System:

The method that use in this system is using Microsoft Studio 2005 programming language. It designs the user-friendly interface with extended GUI. The programming language is used to integrate with the Microsoft Power Visual Studio Reader as an input. Also to make the reader to communicate with Microsoft's.NET Framework, the *GrFingerXCtrl Class* toolbox by Griaule is used.

2.2.4 Comparison of the System:

| System | Benefit | Method |
|---|--|--|
| Design and implementation of the online course registration system at Tsinghua University | <ul style="list-style-type: none"> -Solve the unfair problem by drawing lots randomly and performance issues - Improved to support mobile, abroad student and international visiting students to ensure the teaching activities with the | <ul style="list-style-type: none"> - Willingness method - Power Build 10.2 - JAVA |
| Automated Student's Courses Registration Using Computer-Telephony Integration | <ul style="list-style-type: none"> - The power that used is more little time power - Automatically set up to dynamically manage the use of telephone line | <ul style="list-style-type: none"> - Computer based, telephony lines and telephony interface (voice card) - Windows NT |
| Attendance Management System using Fingerprint Scanner | <ul style="list-style-type: none"> -Reduced the prevent cheat in students' attendance - System automatically easy to store, acquire and calculate the student's data and attendance into a personal computer, laptop. | <ul style="list-style-type: none"> - Microsoft Studio 2005 |

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter will be discusses about the concept of methodology use for developing the application to well. This chapter will inform and describe about the system development life Cycle and hardware specification that are need for develop application and implementation for this project. Methodology is a codified set of recommend practices, formal educational programs and diagramming tools. Many methodologies include a diagramming notation for documenting the result of the procedure objective set of criteria.

3.2 Project Method

In this School Student Administration System the methodology that will be use is the Development Life Cycle (SDLC) is the common methodology for system development. The SDLC methodology tracks project from starting of development, through planning, analysis, design, implementation, maintenance and testing. The SDLC method describes more detail about this system flow process in School Student Administration System.

The SDLC model includes the following phase below:

- i. Planning
- ii. Analysis
- iii. Design
- iv. Implementation
- v. Maintenance
- vi. Testing

In the System Development Life Cycle consist 5 phase to ensure the application or system that successfully develop. Figure 3.1 below show the System Development Life Cycles.

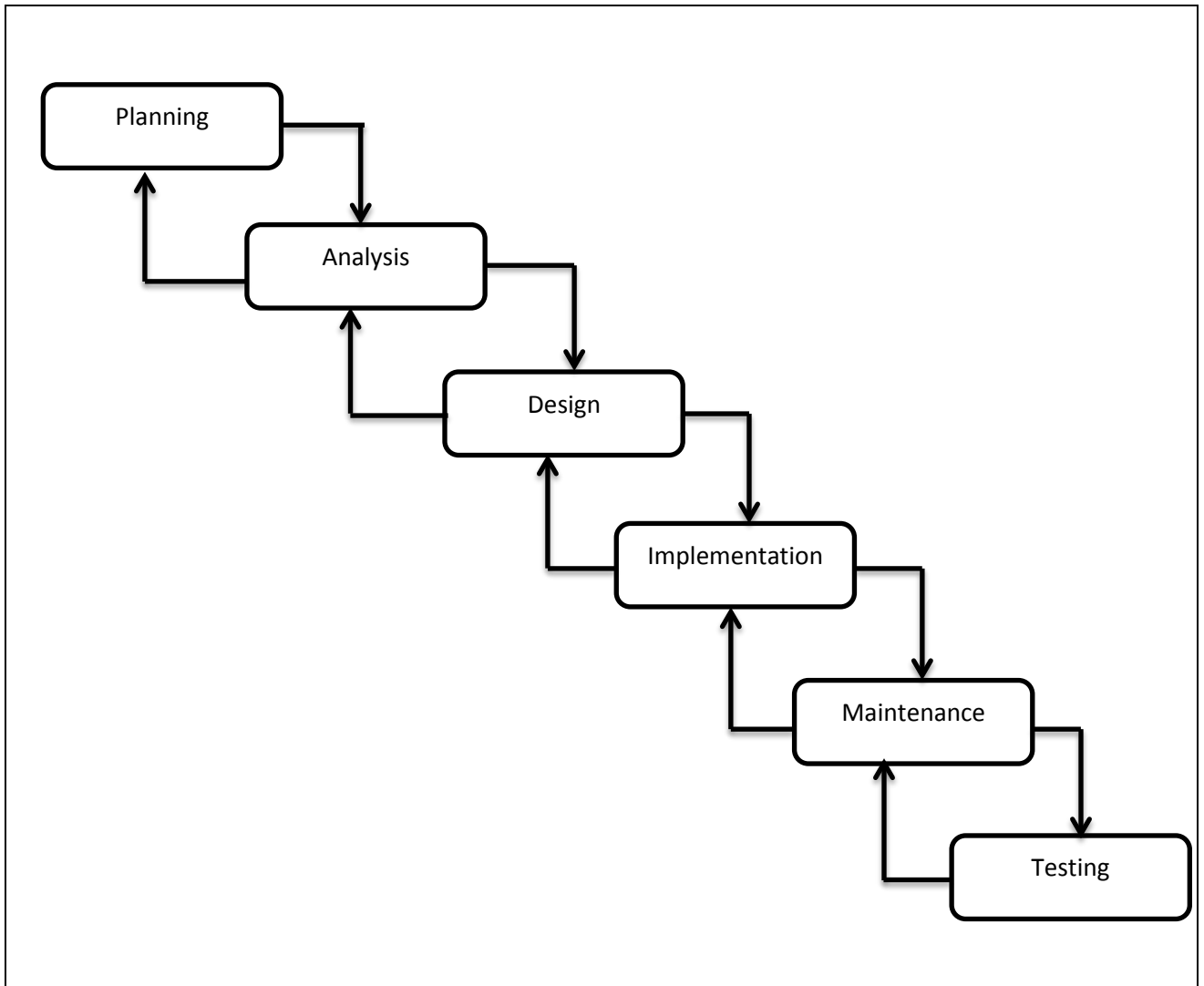


Figure 3.2: System Development Life Cycles (SDLC)

System Development Life Cycle (SDLC) selected for this project develop because the project can return to earlier phase if have necessary this method provides consistent frameworks of a task and needed to develop system. Moreover, SDLC also possible to complete some activities in one phase with some activities of another phase.

3.3 Step in System Development Life Cycle (SDLC)

3.3.1 Planning

In this phase, first step to do is select or choosing one system in around that need to upgrade to more attractive. Then, define a title for the system that wants to develop. After that, think to get the objective to develop that system. Get the more information to identify the current system to define the problem. The final step is brainstorm about the idea and obtains information in developing the system.

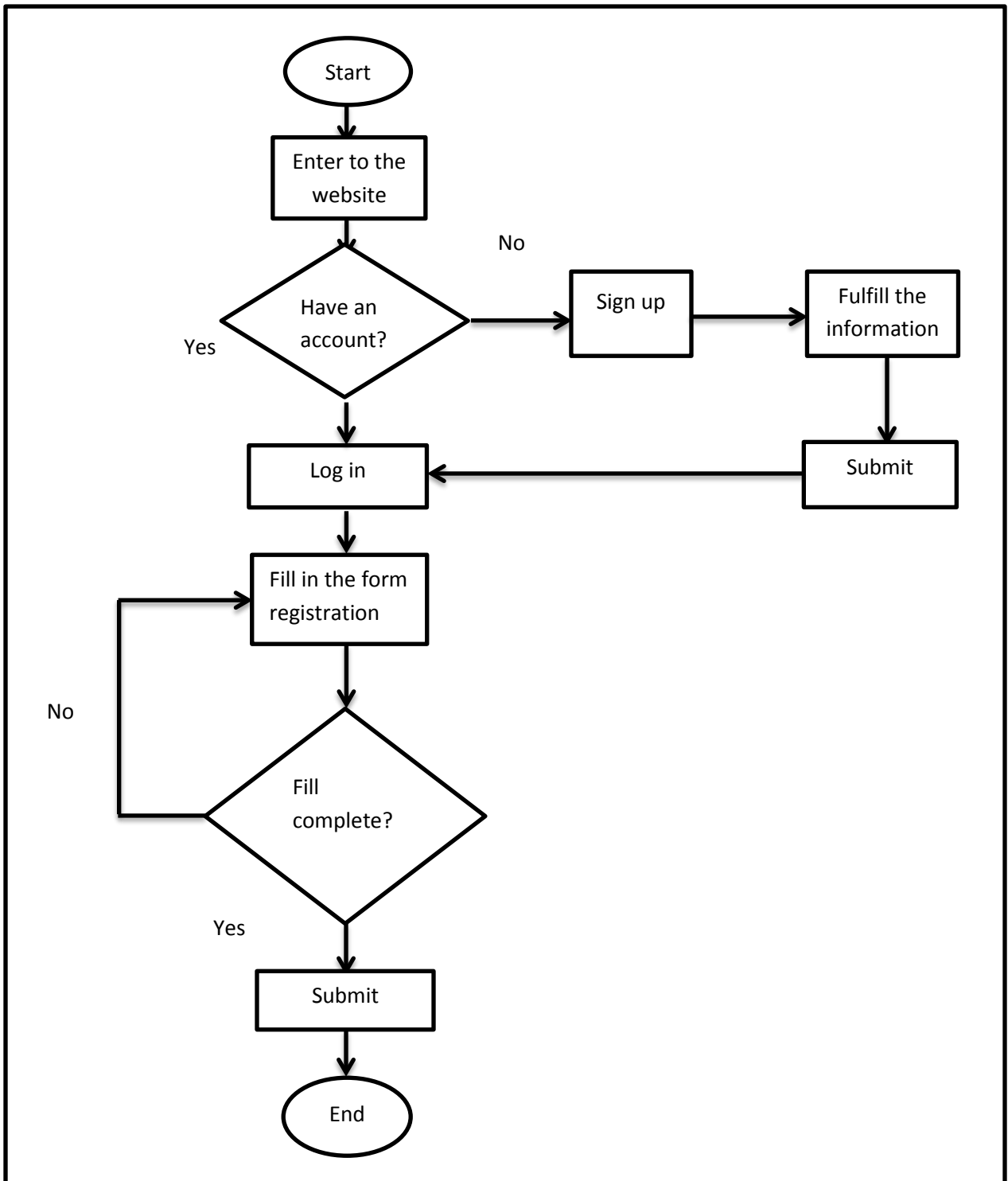
This phase is to establish a high-level view the project determine and planning its goal. The Gantt chart is use to plan or schedule the activity that will be involved during development project. Gantt chart is necessary to determine whether the project can be done or not within the all allocated.

3.3.2 Analysis

The main objectives of these activities are to make developers to understand their proposed project, build a solid foundation and ensure it will support business requirements for the systems design phase. It also includes refines project objective or target into operation application and defines functions.

- i. Using the Microsoft World 2010 to draft the context diagram will be created. Using Notepad ++ to created interface diagram. The external and process entities are that involve with the system is define.
- ii. After that, the flowchart of this system will also be created that will show the interaction basic flow of the system during a specified period

3.3.2.1 Flow Chart



The figure 3.1: Flow chart process login system and Confirmation Registration

Parents register their child first day.

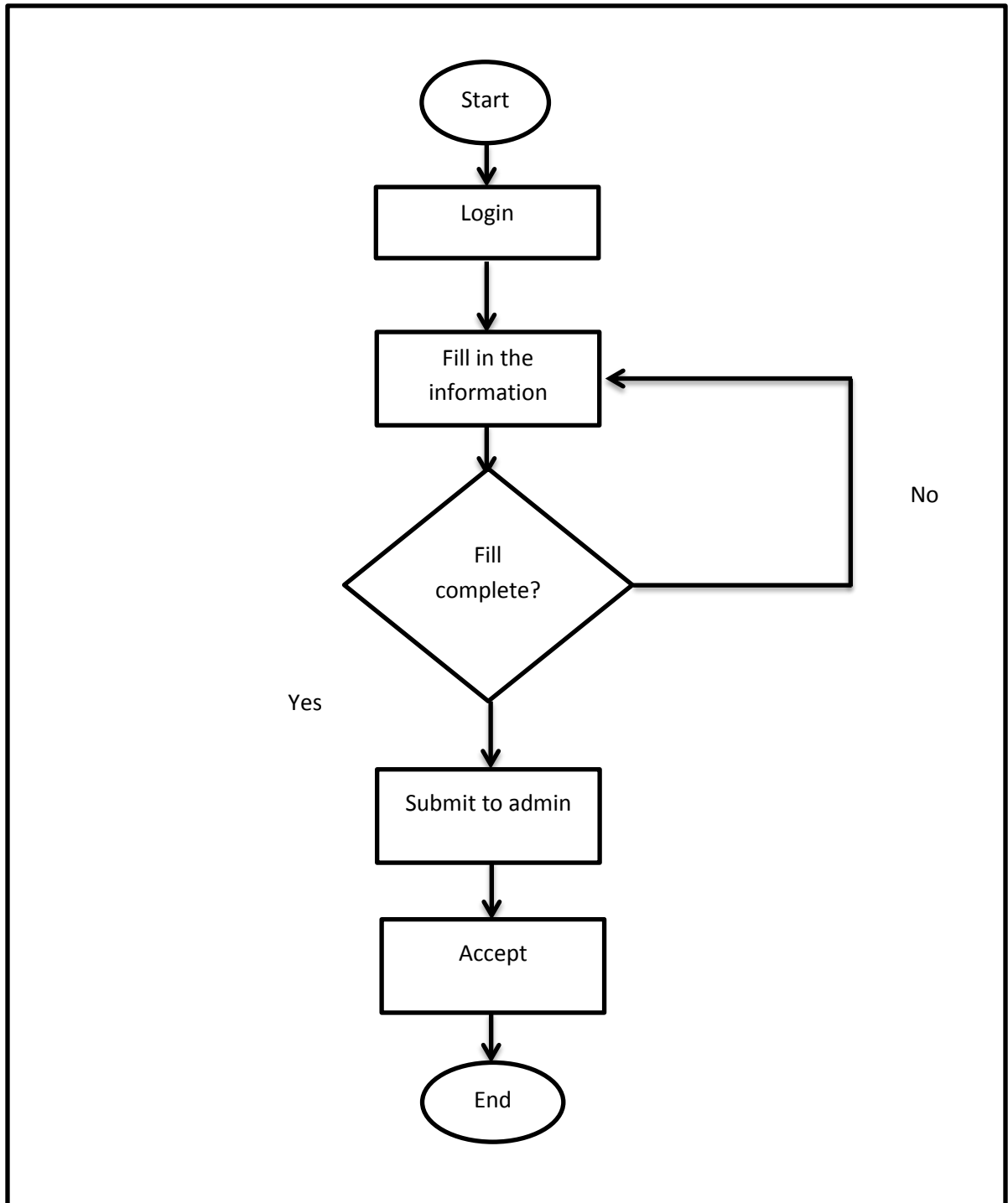


Figure 3.3: Flow chart (First day registration)

For admin to send information to parents or the activity school.

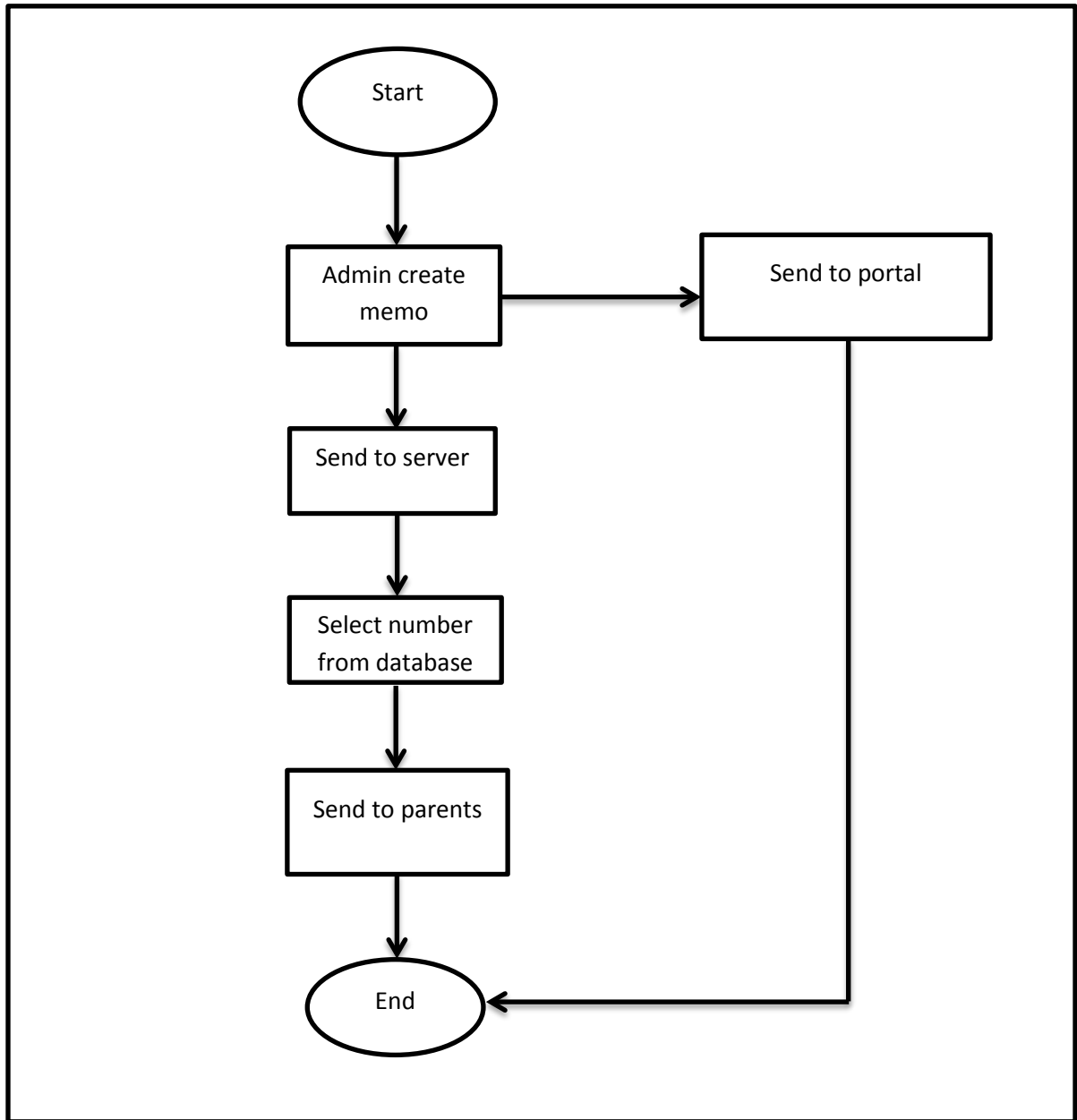


Figure 3.4: Flow chart (admin send information through SMS)

3.3.3 Design

System design is to describe desired operation and features in detail. It also was including documentation, flow of the process and interface layout. This phase ensure the design is built carefully to make sure the development is based on the user requirement. The output of this phase is a prototype of the system that wants to develop of the system will be test in the next phase implementation process.

3.3.3.1 Database Design

Database is collection of related data for the information from users. Example of database design show in the table below.

| No | Field Name | Data types | Constrain |
|----|-------------|--------------|-----------|
| 1 | name | varchar (30) | PK |
| 2 | username | varchar (15) | |
| 3 | password | varchar (30) | |
| 4 | userid | varchar (30) | |
| 5 | userlevel | tinyint(1) | |
| 6 | email | varchar (30) | |
| 7 | timestamp | int(11) | |
| 8 | matrix | varchar (12) | |
| 9 | gender | varchar (10) | |
| 10 | designation | varchar (20) | |
| 11 | phone | Varchar(12) | |
| 12 | date | date | |

Table 3.1: Login table

Table 3.1 shows the user level. All information parents will be stored in database.

| No | Field Name | Data types | Constrain |
|----|---------------|---------------|-----------|
| 1 | id | int (10) | PK |
| 2 | username | varchar (20) | |
| 3 | sesi | varchar (10) | |
| 4 | nsek | varchar (45) | |
| 5 | npel | varchar (30) | |
| 6 | suratb | varchar (10) | |
| 7 | tempatl | varchar (30) | |
| 8 | tarikhl | varchar (10) | |
| 9 | jantina | varchar (15) | |
| 10 | bangsa | varchar (10) | |
| 11 | agama | varchar (15) | |
| 12 | telbimpen | varchar (12) | |
| 13 | alamat | varchar (50) | |
| 14 | bandar | varchar (30) | |
| 15 | poskod | varchar (20) | |
| 16 | negeri | varchar (15) | |
| 17 | Namabapa | varchar (30) | |
| 18 | nokpbapa | varchar (14) | |
| 19 | perkejaanbapa | varchar (30) | |
| 20 | gajibapa | varchar (10) | |
| 21 | telbimbapa | varchar (12) | |
| 22 | namaibu | varchar (30) | |
| 23 | nokpibu | varchar (12) | |
| 24 | pekerjaanibu | varchar (30) | |
| 25 | gajiibu | varchar (10) | |
| 26 | telbimibu | varchar (12) | |
| 27 | namapenjaga | varchar (30) | |
| 28 | nokppenjaga | varchar (12) | |
| 29 | hubungan | varchar (10) | |
| 30 | telbimpenjaga | varchar (12) | |
| 31 | sbbmemilih | varchar (100) | |

Table 3.2: Registration table for registration new student

Table 3.2 shows the database of registration student. All data information will be stored at this table.

| No | Field name | Data types | Constrain |
|----|------------|---------------|-----------|
| 1 | id | int (11) | PK |
| 2 | name | varchar (25) | |
| 3 | email | varchar (35) | |
| 4 | message | varchar (250) | |
| 5 | date | date | |
| 6 | time | time | |

Figure 3.3: Feedback table for parents

Table 3.3 shows the table feedback. Parents can comment or leave a message at the page feedback about the school management.

| No | Field name | Data types | Description |
|----|-------------|--------------|-------------|
| 1 | id | int (11) | PK |
| 2 | title | varchar (50) | |
| 3 | name | varchar (30) | |
| 4 | date | date | |
| 5 | description | text | |
| 6 | phone | varchar (12) | |
| 7 | username | varchar (30) | |
| 8 | image | varchar (50) | |

Figure 3.4: Activities table

Table 3.4 shows the activities table. All activities will hold at school, the data activities will stored at this table.

| No | Field name | Data types | Constrain |
|----|------------|--------------|-----------|
| 1 | username | varchar (30) | PK |
| 2 | timestamp | int (11) | |

Figure 3.5: Active user table

Figure 3.5 shows the table active user. This table will record the time user login the system.

| No | Field name | Data types | Constrain |
|----|------------|--------------|-----------|
| 1 | ip | varchar (15) | PK |
| 2 | timestamp | int (11) | |

Figure 3.6: Active guest

Figure 3.6 shows the active guest. All data will record at this table if have a guest view this system.

3.3.3.2 Interface Design

Interface design important in any web base system, it show the interface that system. Interface design is to make user interaction simple and effective as possible. Interface design process by user-centered and interact with user in their terms, should be logical as facilities to help users with the system and cover their weakness.



Figure 3.6: Login system

Figure 3.6 is a main interface, it have two categories for parents and admin. Admin can login this system and manage this system. Parents only just can register their child and view the information about this school.



Aktiviti

Utama Kemaskini Aktivit Lihat Aktiviti

Borang aktiviti

Tajuk

Nama

Haribulan 01 - 01 - 2012

No telefon

Hurain

Gambar No file selected.

Notice **File support: JPEG, BMP,SWF**
Max file 3 Mega byte only

Figure 3.7: Interface for admin updates activities

Figure 3.7 show the activities interface. Admin will monitor this system and create any information or event to send the information to the parents.

Borang Permohonan pendaftaran

A. MAKLUMAT PERMOHONAN

UNTUK KEMASUKKAN SESI*

NAMA SEKOLAH/TADIKA TERAKHIR

B. MAKLUMAT PELAJAR

Nama Pelajar*

No Surat Beranak Eg. Y9000129

Tempat Lahir*

Tarikh Lahir*

Jantina/Bangsa/Agama*

Tel. Bimbit* (Penjaga) Eg. 0123456789

Alamat Rumah *

Bandar*

Poskod*

Figure 3.8: Application registration

Figure 3.8 show the application interface registration. Parents must register their child two month early before school opening.

Borang Pengesahan Pelajar

A. MAKLUMAT PERMOHONAN

UNTUK KEMASUKKAN SESI*

NAMA SEKOLAH/TADIKA TERAKHIR

B. MAKLUMAT PELAJAR

Nama Pelajar*

No Surat Beranak Eg. Y9000129

Tempat Lahir*

Tarikh Lahir*

Jantina/Bangsa/Agama*

Tel. Bimbit* (Penjaga) Eg. 0123456789

Alamat Rumah *

Bandar*

Poskod*

C. MAKLUMAT BAPA

Nama*

No KP* Eg. 000000-00-0000

Pekerjaan*

Gaji* (RM)

Figure 3.9: Form first day registrations

Figure 3.9 show the form is for first day registration. Parents just only fill the form and proceed to fill the next information to confirmation registration. All information will automatically check, if not fulfill, error will occur.

3.3.4 Implementation

The implementation stage of software development is the process of converting the system specification into an executable system. This target of this phase is to convert the physical system into reliable software and working and document the work has been done.

System School Student Administration development process involves three important processes that are design interface, create database and implement coding process. Database that had produced are based on the interface. The interface created need to consider to user requirement. The physical design of System School Administration turned into working computer code using VB.NET as programming language.

3.3.5 Maintenance

The last is maintenance phase, this phase is quite difficult than the implementation phase. In maintenance, not only design but also need to repaired the system if have lack for this system and made it more complex and can process to get the right output. Maintenance is the final phase on SDLC methodology, to obtain a complete system and produce the correct output, it should be done in a long time.

3.3.6 Testing

After the system has been developed, the system must be tested. In this phase every module should be tested. Although testing, process can begin in parallel as coding has begun but at this phase, the entire project need be tested.

The activities in this phase are the support from user. It is important to finalization of documentation and training program.

3.4 Software and Hardware Requirement

To develop the system, the hardware and software were also important things to be stated on the system development. Bellows are the list of software and hardware specification this required in develop this system.

| Hardware | Purpose |
|--|---|
| Personal pc 1. Intel(R) Core(TM) i5 CPU M 450 @ 2.40GHz 2. DVD Writer | Prepare proposal and documentation. Design and develop the system Backup data and files |
| Thumb Drive 8GB | Backup data and files |
| Canon Pixma ip1980 | Printing the report and draft |
| Modem | To send SMS for notification |
| CD 700 MB/48X | Backup data and system delivery |
| Random Access Memory - 2.00GB | Performance to running windows server |
| Hard Disk -380GB | File and document storage. Backup support storage |

Table 3.1: Hardware Requirement

| Software | Purpose |
|---|---|
| Windows 8 Professional | Work as Operating System (OS) for the whole development phase |
| -Microsoft Office 2010 -Power Point 2010 -Microsoft Visual Studio 2010 -Microsoft Project 2010 | Documentation/ Presentation/ Planning project/ Drawing Create presentation slide Design interface |

Table 3.2: Software Requirement

CHAPTER 4

IMPLEMENTATION PLAN

4.1 Introduction

Introduction phase includes the activity of coding the system and database. The main purpose of this chapter was to record all those that was involved in the project development. Generally, this chapter will give details more about the design that was apply in this project. The implementation involve are

- i. Interface
- ii. Database
- iii. Event executions (insert, delete, edit)

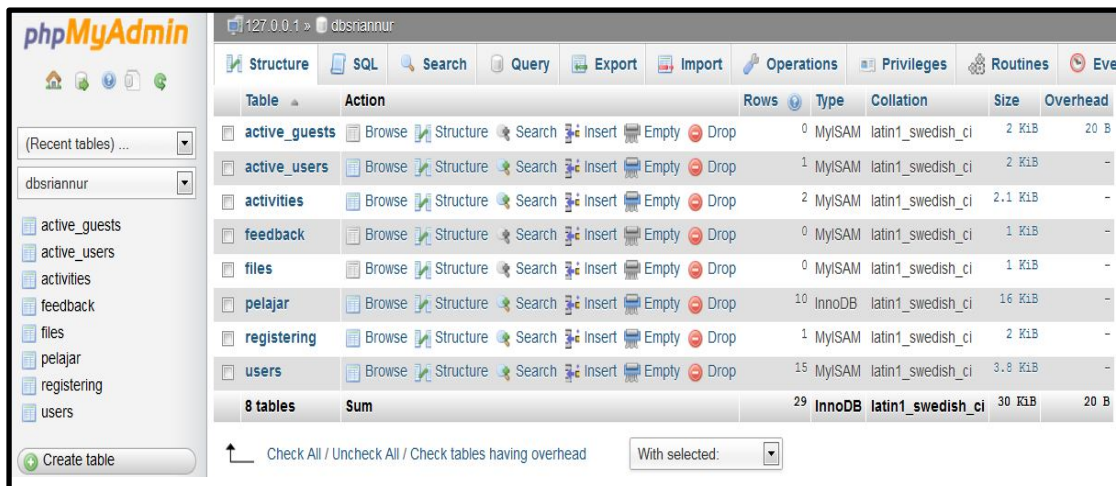
Source code and object code refer to “before” and “after” versions of a computer program that is compiled before it is ready to run in a computer. The source code comprises the programming statements that are created by a programmer with a text editor or a visual programming tool and then saved in a file.

4.2 Development of Interface

Interface is the principle component of one system. It must be develop to ease the user to communicate with the system. Developer should develop a user friendly interface so that user will feel comfortable to use it. An interface design should have navigation design, input design and output design. The interface of school registration system of Sekolah Rendah Islam An-Nur will be attached in Appendix.

4.3 Database Architecture

Database design is the process of making a detail data of a database. It is development of the conceptual, logical and physical structures of a database in order to meet user requirement. The term database design can be used to describe many different parts of the design of an overall database system. Principally and most correctly it can be thought as the logical design of the base data structures used to keep data. The database for this system is My SQL.



The screenshot shows the phpMyAdmin interface for a database named 'dbsriannur'. The main area displays a table structure with the following data:

| Table | Action | Rows | Type | Collation | Size | Overhead |
|---------------|---|------|--------|-------------------|---------|----------|
| active_guests | Browse Structure Search Insert Empty Drop | 0 | MyISAM | latin1_swedish_ci | 2 KiB | 20 B |
| active_users | Browse Structure Search Insert Empty Drop | 1 | MyISAM | latin1_swedish_ci | 2 KiB | - |
| activities | Browse Structure Search Insert Empty Drop | 2 | MyISAM | latin1_swedish_ci | 2.1 KiB | - |
| feedback | Browse Structure Search Insert Empty Drop | 0 | MyISAM | latin1_swedish_ci | 1 KiB | - |
| files | Browse Structure Search Insert Empty Drop | 0 | MyISAM | latin1_swedish_ci | 1 KiB | - |
| pelajar | Browse Structure Search Insert Empty Drop | 10 | InnoDB | latin1_swedish_ci | 16 KiB | - |
| registering | Browse Structure Search Insert Empty Drop | 1 | MyISAM | latin1_swedish_ci | 2 KiB | - |
| users | Browse Structure Search Insert Empty Drop | 15 | MyISAM | latin1_swedish_ci | 3.8 KiB | - |
| 8 tables | Sum | 29 | InnoDB | latin1_swedish_ci | 30 KiB | 20 B |

Figure 4.1: Architecture School Student Administration System of Sri An-Nur database

Figure 4.1 shows the architecture of database used in School Student Administration System of Sri An-Nur. There are 8 table involved tin these systems which are active guest, active users, activities, feedback, files, pelajar, registering, users.

4.4 Development of System

Figure 4.2 below shows the source code for connection between tables database with design system. The source code is developed in PHP language.

```
<?php
//connection to mySQL

$dbHost = "localhost";
$dbUser = "root";
$dbPass = "ruff";
$dbDatabase = "dbsriannur";

$link = mysql_connect("localhost", "root", "")or die("Could not connect");
//connection to database
$db = mysql_select_db("dbsriannur", $link)or die("Could not select database");
?>
```

Figure 4.2: Source code for connection between database and design system

4.4.1 Coding For Registration Parents to Login the System

```
<table cellpadding="0" cellspacing="0" border="0" width="100%" class="contentpane">
<tr><td colspan="2"></td></tr>
<tr><td colspan="2"> <p>&nbsp;</p></td></tr>
<tr>
<td width="30%">No k.Pengenalannya: *</td>
<td><input type="text" name="matrix" size="40" value="" class="inputbox" maxlength="12" /></td>
</tr>
<tr>
<td width="30%">Nama: *</td>
<td><input type="text" name="name" size="40" value="" class="inputbox" maxlength="50" /></td>
</tr>
<tr>
<td>Kata nama: *</td>
<td><input type="text" name="username" size="40" value="" class="inputbox" maxlength="25" /></td>
</tr>
<tr>
<td>E-mail: </td>
<td><input type="text" name="email" size="40" value="" class="inputbox" maxlength="100" /></td>
</tr>
<tr>
<td>Password: *</td>
<td><input class="inputbox" type="password" name="password" size="40" value="" /></td>
</tr>
<tr>
<td>Sahkan password: *</td>
<td><input class="inputbox" type="password" name="password2" size="40" value="" /></td>
</tr>
<tr> <td colspan="2"></td></tr><tr><td colspan="2"></td></tr>
</table><br />
<input type="button" value="Daftar" class="button" onclick="submitbutton_reg()" />
```

Figure 4.3: Coding interface for registration parents

Figure 4.3 is show the interface registration for parents. Parents must create an account before they register their son. For create account, parents just fill the identity number, name, username, password, and verify the password.

```
<?php
include "db_connect.php";

$name = $_POST['name'];
$username = $_POST['username'];
$email = $_POST['email'];
$password = md5 ($_POST['password']);
$matrix = $_POST['matrix'];
$date= date("Y-m-d");

$sql2="INSERT INTO users(matrix,name, username, email, password,date)
      VALUES ('".$matrix."','".$name."','".$username."','".$email."','".$password."','".$date."')";
mysql_query($sql2) or die ('Error Update Database: Sila cuba lagi<br>Kata nama sama dalam database!..');

echo "berjaya daftar!<br />";
echo "ke  [<a href='index.php'>Menu utama</a>] untuk masuk..";

?>
```

Figure 4.4: Source code for registration parents

Figure 4.4 is showing the coding insert registration parents into database user.

4.4.2 Coding For Application Registration

```
<h1 align="center">Borang Permohonan pendaftaran</h1>
<p>&nbsp;</p>
<div id="mytitlebg" style="background-color:#66CCFF">A. MAKLUMAT PERMOHONAN</div>
<form id="form2" name="form2" method="post" action="registeractionbapavalidation.php">
<input name="author" type="hidden" size="38"width="70%" value="<?php echo $username;?>">
<table width="100%" cellspacing="0" cellpadding="3" style="color:#669900; font-weight:bold">
<tr onMouseOver="this.bgColor='#FAFAPA'" onMouseOut="this.bgColor=''">
<td width="51%" id="myborder" style="border-top:none;border-left:none;border-right:none;">
UNTUK KEMASUKKAN SESI* </td>
<td width="117%">
<select name="sesi" id="sesi">
<option value="">-Sesi-</option>
<option value="2014" selected="selected">2014</option>
<option value="2015" selected="selected">2015</option>
</select> </td>
</tr><tr onMouseOver="this.bgColor='#FAFAPA'" onMouseOut="this.bgColor=''">
<td id="myborder" style="border-top:none;border-left:none;border-right:none;">NAMA SEKOLAH/TADIKA TERAKHIR </td>
<td><input name="nsek" type="text" size="38"width="70%" value=""></td></tr>
</table>

<div id="mytitlebg" style="background-color:#66CCFF ">B. MAKLUMAT PELAJAR</div>
<table width="100%" cellspacing="0" cellpadding="3" style="color:#669900 ">
<tr onMouseOver="this.bgColor='#FAFAPA'" onMouseOut="this.bgColor=''">
<td id="myborder" width="30%" style="border-top:none;border-left:none;border-right:none;">Nama Pelajar* </td>
<td width="70%"><input name="npel" type="text" id="name" size="38" value=""></td></tr>
<tr onMouseOver="this.bgColor='#FAFAPA'" onMouseOut="this.bgColor=''">
<td id="myborder" style="border-top:none;border-left:none;border-right:none;">
No Surat Beranak </td>
<td><input name="suratb" type="text" id="nosb" onFocus="veric();" value="" size="20" maxlength="7" required="required">
No. V0000100 </td></tr>
```

Figure 4.5: Interface for application registration

```
<?php

include "db_connect.php";
$sesi = $_POST['sesi'];
$username = $_POST['username'];
$nsek = $_POST['nsek'];
$npel = $_POST['npel'];
$suratb = $_POST['suratb'];
$tempat1 = $_POST['tempat1'];
$tarikhl = $_POST['day']."-".$_POST['month']."-".$_POST['year'];
$jantina = $_POST['jantina'];
$bangsa = $_POST['bangsa'];
$agama = $_POST['agama'];
$telbimpen = $_POST ['telbimpen'];
$alamat = $_POST ['alamat'];
$bandar = $_POST ['bandar'];
$poskod = $_POST ['poskod'];
$negeri = $_POST ['negeri'];

$sql2="INSERT INTO pelajar(sesi,username,nsek,npel,suratb,tempat1,tarikhl,jantina,bangsa,agama,telbimpen,alamat,bandar,poskod,negeri)
VALUES ('".$sesi."','".$username."','".$nsek."','".$npel."','".$suratb."','".$tempat1."','".$tarikhl."','".$jantina."','".$bangsa."','".$agama."','".$telbimpen."','".$alamat."','".$bandar."','".$poskod."','".$negeri."');
mysql_query($sql2) or die ('Error Updating Database: Please try again<br>username already in database!..');

echo "Permohonan anda berjaya <br />";
echo "ke [
```

Figure 4.6: source code for application registration insert into table in database

Figure 4.5 is show the coding interface for application registration form. Figure 4.6 also explained the coding about the status of the application registration either the registration successful or fail. This is step only for administrator.

4.4.3 Coding For Confirmation and Update Registration

```
$sql2="UPDATE pelajar SET sesi='$sesi',nsek='$nsek',npel='$npel',suratb='$suratb',
    tempatl='$tempatl',tarikhl='$tarikhl',jantina='$jantina',bangsa='$bangsa',
    agama='$agama',telbimpen='$telbimpen',alamat='$alamat',bandar='$bandar',
    poskod='$poskod',negeri='$negeri',namabapa='$namabapa',nokpbapa='$nokpbapa',
    pekerjaanbapa='$pekerjaanbapa',gajibapa='$gajibapa',telbimbapa='$telbimbapa',
    namaibu='$namaibu',nokpibu='$nokpibu',pekerjaanibu='$pekerjaanibu',gajiibu='$gajiibu',
    telbimibu='$telbimibu',namapenjaga='$namapenjaga',nokppenjaga='$nokppenjaga',
    hubungan='$hubungan',telbimpenjaga='$telbimpenjaga',sbbmemilih='$sbbmemilih'
    WHERE username='$username'";
    $sql3 = mysql_query ($sql2);
}
if ($sql3) {
    header('Location: pengesahanbapa.php');
} else {
    echo "<h2><font color=red>Tidak boleh dikemaskini</font></h2>";
}
}
?>
```

Figure 4.7: source code for confirmation and update registration insert into table database

. Figure 4.7 above show the coding about the confirmation and update registration insert into database. After parents already register their son, they will complete the confirmation form. All the data that fill in previously already stated in application registration form. Parents can edit if have a wrong information.

4.4.4 Coding For View Registration

```
<?php
    $name = $_POST['name'];

    $no = 1;
    $query = ("SELECT * FROM pelajar WHERE npel LIKE ('%".$_POST['npel']."%')ORDER BY sesi ASC LIMIT $selpgQ1 , $selpgQ2");
    $sql = mysql_query($query);

    while ($hasil = mysql_fetch_array ($sql)) {
        $id = $hasil['id'];
        $npel = $hasil['npel'];
        $suratb = $hasil['suratb'];
    }
?>
```

Figure 4.8: Source code for view data from database to design

Based on figure 4.8 above it shows the coding to view registration that has been made by user. Only administrator can view the registration data in order to make selection for the suitable registration.

```
<?php
include "db_connect.php";
if (isset($_GET['id'])) {
    $id = $_GET['id'];
} else {
    die ("Error. No title Selected! ");
}

$query = "SELECT * FROM pelajar WHERE id='$id'";
$sql = mysql_query ($query);
while ($hasil = mysql_fetch_array ($sql)) {
    $id = $hasil['id'];$username = $hasil['username'];$sesi = $hasil['sesi'];$nsek = $hasil['nsek'];
    $npel = $hasil['npel'];$suratb = $hasil['suratb'];$tempat1 = $hasil['tempat1'];$tarikh1 = $hasil['tarikh1'];
    $jantina = $hasil['jantina'];$bangsa = $hasil['bangsa'];$agama = $hasil ['agama'];$telbimpen = $hasil ['telbimpen'];
    $alamat = $hasil['alamat'];$bandar = $hasil['bandar'];$poskod = $hasil['poskod'];$negeri = $hasil['negeri'];
    $namabapa = $hasil['namabapa'];$nokpbapa = $hasil['nokpbapa'];$perkejaanbapa = $hasil['perkejaanbapa'];
    $gajibapa = $hasil['gajibapa'];$telbimbapa = $hasil['telbimbapa'];$namaibu = $hasil['namaibu'];
    $nokpibu = $hasil['nokpibu'];$pekerjaanibu = $hasil['pekerjaanibu'];$gajiibu = $hasil ['gajiibu'];
    $telbimibu = $hasil['telbimibu'];$namapenjaga = $hasil['namapenjaga'];$nokppenjaga = $hasil['nokppenjaga'];
    $hubungan = $hasil['hubungan'];$telbimpenjaga = $hasil['telbimpenjaga'];$sbbmemilih = $hasil['sbbmemilih'];
}
?>
```

Figure 4.9: source code for view all information student

Figure 4.9 above coding to show all information about students. The administrator can search by name, all information will show. Id parents will select from database and show in interface.

4.4.5 Coding For View Activities

```
<?php
include "db_connect.php";
if( isset( $_SESSION['username'] ) )
{
    $username = $_SESSION['username'];
    //echo $username;
$result = mysql_query("SELECT * FROM users WHERE username = '$username'", $link) or die ("Database Error");
while ($row = mysql_fetch_assoc($result))
{
    $userLevel = $row['userlevel'];
    //echo $userLevel;
}
}
if (isset($_POST['Input'])) {
    $id = 'id';
    $title = addslashes (strip_tags ($_POST['title'])); $name = addslashes (strip_tags ($_POST['name']));
    $date = $_POST['thn']. "-" . $_POST['bln']. "-" . $_POST['tgl']; $description = addslashes (strip_tags ($_POST['description']));
    $phone = addslashes (strip_tags ($_POST['phone'])); $username = $_POST['username']; $image = $_FILES['image']['name'];
    if (strlen($image) > 0) {
        //upload
        if (is_uploaded_file($_FILES['image']['tmp_name'])) {
            move_uploaded_file ($_FILES['image']['tmp_name'], "images/" . $image);
        }
    }
    $query = "INSERT INTO activities VALUES('$id','$title','$name','$date','$description','$phone','$username','$image')";
    $sql = mysql_query ($query) or die (mysql_error());
    if ($sql) {
        echo "<h2><font color=blue>Kemaskini aktiviti berjaya!</font></h2>";
    } else {
        echo "<h2><font color=red>Kemaskini aktiviti gagal</font></h2>";
    }
}
?>
```

Figure 4.10: source code for create activities

Based on figure above, it shows the connection have to made to create the network between the system. All information will create to replace the information letter.

4.5 Conclusion

To conclude his chapter, summarize can be made based on the explanations of subtopics and source code above. The activities that involved in implementation phase include interface design, navigation design, input and output design and database design. The expected output is the priority of this place. This chapter also discussed about the system architecture which related to the system.

CHAPTER 5

RESULT AND DISCUSSION

In this chapter, a brief explanation about the interface design for developing the application will be describe. This chapter also illustrates the interface of the system. Constrains in completing will be discussed in this chapter.

5.1 Introduction

This chapter will represent about the result that have been generate from the system based on the methodology that applied previously on chapter 3. After followed the methodology that used in this project, there are an output based on the registration system. This chapter also process to design interface will be describe. User of School Student Administration System of Sri An-Nur is parent where they want to register their son to study at Sri An-Nur. Parents also can know the detail about school in this system. All process to review and select the suitable registration will be done by administrator.

5.2 Testing Result

School student Administration System for Sri An-Nur is web base system that developed specially for parent whom want to register their son to study in Sri An-Nur. School Student Administration System will be run in local host in the testing and developing phase. Error will be detected when the application runs at the browser. To run

this system in local host type http://localhost:8080/SriAn_Nur/ in the web browser. Ensure the http server and MySQL database is already running. The system will free from error after testing the system during development. Table 5.1 below shows the hardware and software involved in test environment of this system.

| Hardware and software | Description |
|------------------------------|----------------------|
| Laptop | Intel I3 |
| Windows 7 Home premium | Operating system |
| Notepad ++ | Interface and coding |
| Xampp | Database |

Table 5.1: Hardware and software requirement for testing environment

5.3 Result Analysis

The developed system, school student administration system has met all the objective of this project, which are:

- i. To develop a web base application for Sri An-Nur



Figure 5.1: Main Page Interface

Figure 5.1 show the main page interface for school student administration system

- ii. Page register for parents to login this system.

The image shows a registration form titled "Daftar" on a light blue background. The form includes a horizontal line below the title and six input fields stacked vertically. The labels for the fields are: "No k.Pengenalalan: *", "Nama: *", "Kata nama: *", "E-mail:", "Password: *", and "Sahkan password: *". A "Daftar" button is located at the bottom left of the form area.

Figure 5.2: Register page for parents

Figure 5.2 shows that the interface register for parents forms. This page functions to help parent to login this system. When parents already register, they can login with specific username and password to make an application for their son.

- iii. Login page for parents and admin to login this system



The image shows a login form with a light blue background. It contains the following elements from top to bottom: a label 'Kata nama:' followed by a white text input field; a label 'Password:' followed by a white text input field; a checkbox with the text 'Kekal dilog masuk' next to it; a grey button with the text 'Masuk'; and at the bottom, the text 'Tidak daftar?' followed by a red link 'Daftar!'.

Figure 5.3: Login page

Figure 5.3 show the interface login. Parents need login this page to make a registration their son. The specific username will help them to login this system, after parents login this system, they can make an application registration

- iv. To develop an application registration for a new student.

The image shows a web form titled "Borang Permohonan pendaftaran" (Application Registration Form). The form is divided into two main sections: "A. MAKLUMAT PERMOHONAN" (Applicant Information) and "B. MAKLUMAT PELAJAR" (Student Information). Section A includes a dropdown for "UNTUK KEMASUKKAN SESI*" (2015) and a text input for "NAMA SEKOLAH/TADIKA TERAKHIR". Section B includes text inputs for "Nama Pelajar*", "No Surat Beranak" (with example "Eg. Y9000129"), "Tel. Bimbit* (Penjaga)" (with example "Eg. 0123456789"), "Alamat Rumah *", "Bandar*", and "Poskod*". It also features dropdown menus for "Tempat Lahir*", "Tarikh Lahir*" (split into Day, Month, and Year), "Jantina/Bangsa/Agama*" (split into Gender, Ethnicity, and Religion), and "Negeri". At the bottom right, there are two buttons: "Padam" (Clear) and "Hantar" (Submit).

Figure 5.4: Application Registration Form

Figure 5.4 show that the interface application registration forms. This page functions as to help parents to make an application for their son.

- v. After make an application register student, admin will approve the application. This page is validation form.

Borang Pengesahan Pelajar

A. MAKLUMAT PERMOHONAN

UNTUK KEMASUKKAN SESI* 2015 ▾

NAMA SEKOLAH/TADIKA TERAKHIR Kemas kg sadik

B. MAKLUMAT PELAJAR

Nama Pelajar* jazmir bin mohd noh

No Surat Beranak yu89898 Eg. Y9000129

Tempat Lahir* Kedah ▾

Tarikh Lahir* 26 ▾ April ▾ 1993 ▾

Jantina/Bangsa/Agama* Lelaki ▾ Melayu ▾ Islam ▾

Tel. Bimbit* (Penjaga) 0134766517 Eg. 0123456789

Alamat Rumah * no 249a, kampung bukit tinggi

Bandar* baling

Poskod* 09200 Kedah ▾

C. MAKLUMAT BAPA

Nama*

No KP* Eg. 000000-00-0000

Pekerjaan*

Gaji* (RM)

Figure 5.5: Validation form

This page is validation form, after admin approve the registration their son, the parents will continue make a validation. The parents must go to school to make a validation for their son. They just login the system and submit their registration form to validation.

Aktiviti

Utama [Kemaskini Aktivit](#) [Lihat Aktiviti](#)

Borang aktiviti

Tajuk

Nama

Haribulan 01 ▾ - 01 ▾ - 2012 ▾

No telefon

Hurain

Gambar No file selected.

Notice **File support: JPEG, BMP,SWF**
Max file 3 Mega byte only

Figure 5.6: Form Activity

Figure 5.6 shows the form activity. This page for admin when activity will hold at school, admin will create an event and will send. SMS will receive at parents to replace with letter to inform about activity

The image shows a web form with a light blue background. At the top, the text "Hantar maklumat" is displayed in a blue, sans-serif font. Below this text is a horizontal line. Underneath the line is a large, empty white rectangular area for text input. In the bottom-left corner of the form, there is a button with the text "Hantar" in a grey, sans-serif font.

Figure 5.7: Form create SMS

Figure 5.7 shows the form for create SMS. This form only admin will create and send to parents to replace activities letter will held at school.

5.4 Constrain

5.4.1 Development Constraint

While develop School Student Administration system, there are some constraint that have to faces such as the limitation of time, limitation of information and so on. Time has been a biggest constraint since the process of development is running parallel during lecture hour. As a student, time management is important so that both of it can be run smoothly. Besides, the limitation of information also has been constraint while finishing the project. To gather the information form the Sri An-Nur is not simple as that. Not very single about registration process are willing to be analysis.

5.4.2 Documentation Constrain

To develop a system, a proper document should be prepared. While developing School Student Administration System, there are some constrain in document phase. For example, the ink of printer for printing documentation is out of order. Sometimes, the printer itself always did not function well.

5.4.3 Technical Knowledge

In developing the School Student Administration System using PHP, MySQL and notepad++, the lack of knowledge of knowledge using PHP, MySQL and notepad++ is also constraint. A lot of time needed to explore the language and pattern that suitable to apply for development very well.

5.5 Future Research

Further research and development can be done to enhance the system by developing a more user friendly front end. Also add more function in this system to make the system more efficiently and more flexible. More research needs to do to add more function in the system which is can make the system more flexible such as another university can use this system.

5.6 Lesson Learn

I. Project Planning

Proper planning is needed in order to successfully develop high quality product. Without a good planning, everything will become mess. A good project planning and execution ensure the project finish on time and all due date is met.

II. Time management

Time management really plays a huge role in this project. Besides having to research and develop this project, there are others subjects that require a lot of attentions. Assignments and tests has become one major barrier in this project. Another major barrier in this project is the amount of official holiday during develops of this project.

CHAPTER 6

CONCLUSION

Basically this School Student Administration System Sri An-Nur is developing base on methodology that called Software Development Life Cycle (SDLC) that's contain phase that are requirement and planning, analysis, make design, implementation, maintenance and testing. By follow the phase by phase the development of this system being more systematically and well arranged. The tool that used in develop this system are notepad++ for design interface and coding and MySQL as database. Notepad ++ is a powerful for detect error when the system cannot run. It also easy to use and helpfulness by providing guidance to the newbie developer. The objective of School Student Administration System Sri An-Nur is to simplify the registration system by suing web based. By using this system the parents doesn't have to school go the Sri An-Nur office if they want to know more about Sri An-Nur. Besides that, data stored are more secured compare in current system that only uses form to make registration.

REFERENCES

1. Fahmy, M. 2007. Automated student's courses Registration Using Computer – Telephony Integration. *The International Arab Journal of Information Technology*. 4(4): 353-358.
2. Peng, Y., Liu, N., Li, Y., Shao, Z. 2012. Design and Implementation of the Online Courses Registration System at Tsinghua University. *International Conference on Systems and Information*.
3. Kassem, A., Hamad, M., Chalhoub, Z., El Dahdaah, S. 2010. An RFID attendance and monitoring system for university applications. *Electronics, Circuits, and Systems*. pp.851 - 854.
4. Hoong, A.L.S., Tong-Ming Lim. 2012. The Use of Knowledge Management Systems to Support Knowledge Creation and Sharing Activities among Employees - - A Survey Based Study of IT Shared Services Company. *Information Technology New Generations*. pp.175 - 181.
5. Geng, S., Li, G., Liu, W. 2012. Design and Implement of Attendance Management System Based on Contactless Smart IC Card. *Computer Science and Electronics*. pp.290 - 294.
6. Hsieh, WH., Ho, CJ. Jong, GJ. 2008. Vehicle Information Communication Safety Combined with Mobile RFID System. *Intelligent Information Hiding and Multimedia Signal Processing*. pp.1021 - 1024.
7. Shibata, H. 2005. An attendance management system using mobile phones. *Communications, Computers and signal Processing*. pp.590 - 592.
8. Patriot, 2009. Patriot war. Retrieved from <http://www.patriotwar.com>
9. Kassim, M.; Mazlan, H.; Zaini, N.; Salleh, M.K. 2012. Web-based student attendance system using RFID technology," *Control and System Graduate Research Colloquium (ICSGRC)*. Pp.213-218.
10. Lim, T. S.; Sim, S. C.; Mansor, M.M. 2009. RFID based attendance system. *Industrial Electronics & Applications*. 2: 778-782.

Gantt Chart

