SERIA STAFF MOVEMENTS MANAGEMENT SYSTEM (SSMMS)

ZUL FAZRIN BIN ZAINUL ABIDIN

UNIVERSITI MALAYSIA PAHANG

SERIA STAFF MOVEMENTS MANAGEMENT SYSTEM (SSMMS)

ZUL FAZRIN BIN ZAINUL ABIDIN

Thesis submitted in fulfilment of the requirements for the awards of degree of Bachelor of Computer Science (Computer Systems & Networking) With Honours

> Faculty of Computer Systems & Software Engineering UNIVERSITI MALAYSIA PAHANG

> > DECEMBER 2013

SUPERVISOR'S DECLARATION

I hereby declare that have read this thesis and in my opinion this thesis is sufficient in term of scope and quality for the award of the degree of Bachelor of Computer Science (Computer Systems & Networking) With Honours

Signature: Name: EN. JAMALUDIN BIN SALLIM Date:

STUDENT'S DECLARATION

I declare that thesis entitle "SeRIA Staff Movements Management System (SSMMS)" is the result of my own research as cited in references. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

Signature: Name: ZUL FAZRIN BIN ZAINUL ABIDIN Date:

DEDICATION

Special dedication to beloved family, my father, En. Zainul Abidin Bin Mamat, my mother, Puan Anida Bt. Mamat, my siblings, thank you for all your endless love and support me from behind and give the spirit. Thank you to my supervisor, En. Jamaludin Bin Sallim for her guidance and support throughout the completion of this report. Special thanks to all my friends who are there for me to gives help until the completion of this project.

ACKNOWLEDGEMENT

Alhamdulillah, thanks to Allah because with its permission and blessing I can finish this report project with successful.

First of all, we would like to thank you to our supervisor project, En. Jamaludin Bin Sallim, which always give me support and more knowledge during develop this project. Without him, it is hard to make this project successful. He already gives a lot of help in achieving my project. I also like to thanks to my family, lecturers and all friends for their support and help. I could not do this project without the support and help.

Lastly, million thanks are delivered to those who have contributed directly from the beginning of the project until the completion of this report. May Allah S.W.T. bless all of you and hopefully we can complete what we have started.

ABSTRACT

Attendance in any organization is very important to ensure the continuous operation. Aiming at the disadvantages of traditional punch card attendance system, SeRIA Staff Movements Management System (SSMMS) is proposed to Sekolah Rendah Ibnu Abbas (SeRIA), Kuantan. SSMMS is a system used to record the present of staffs to work and staffs leaves application. Assisted by the System Development Life Cycle (SDLC) methodology, the system has been built using the web-based applications such as PHP, MySQL and Apache to record attendance and report the presence of staff. This system will allow staff to record daily attendance, to apply for leave and they can see their profile and also leave application status, while the coordinator could see staff attendance reports and generate attendance reports. Headmaster will manage the application off either accept or reject the staff leave application. Additionally, SSMMS can reduce time and management cost. The implementation of this system will minimize the usage of conventional system and maximize the usage of computers in the organization. In conclusion, it is hope that this system could improve the management in the organization

ABSTRAK

Kehadiran adalah amat penting bagi melancarkan perjalanan sesebuah organisasi. Menumpukan pada kelemahan sistem perakam waktu sedia ada, "SeRIA Staff Movements Management System" (SSMMS) telah di cadangkan kepada Sekolah Rendah Ibnu Abbas (SeRIA), Kuantan. SeSAMS digunakan untuk merekod masa kehadiran staf ke tempat kerja dan untuk memohon cuti bekerja. Dengan dibantu oleh metodologi "System Development Life Cycle" (SDLC), sistem itu telah dibina dengan menggunakan aplikasi berasaskan web seperti PHP, MySQL dan Apache untuk merekod kehadiran dan melaporkan kehadiran staf. Sistem ini akan membolehkan kakitangan untuk merekod kehadiran harian, memohon cuti dan mereka boleh melihat profil mereka dan juga status permohonan cuti, manakala koordinator boleh melihat laporan kehadiran staf dan menjana laporan kehadiran. Guru Besar akan menguruskan mengenai permohonan cuti samada menerima atau menolak permohonan cuti daripada staf. Selain itu, SSMMS boleh mengurangkan masa dan kos pengurusan. Pelaksanaan sistem ini akan mengurangkan penggunaan sistem konvensional dan memaksimumkan penggunaan komputer dalam organisasi. Kesimpulannya, ia berharap bahawa sistem ini boleh meningkatkan pengurusan dalam organisasi

TABLE OF CONTENT

	Page
SUPERVISOR'S DECLARATION	Ι
STUDENT'S DECLARATION	II
DEDICATION	III
ACKNOWLEDGEMENT	IV
ABSTRACT	\mathbf{V}
ABSTRAK	VI
TABLE OF CONTENTS	VII
LIST OF TABLES	IX
LIST OF FIGURES	XI

CHAPTER 1 INTRODUCTION

1.1 Background	1
1.2 Problem Statement(s)	2
1.3 Objectives	3
1.4 Scope	3
1.5 Project Significance	4
1.6 Conclusion	4

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction	5
2.2 Current System	5
2.3 Existing System	6
2.3.1 Attendance System by using Smart Card	6
2.3.2 Attendance System by using Fingerprint	7
2.3.3 Aquarius Soft BePunctual	9
2.4 Advantages And Disadvantages Of The Existing	11
System	
2.5 Development Tools	12
2.5.1 Adobe Dreamweaver	12
2.5.2 XAMPP	13
2.5.3 PHP	14
2.5.4 MySQL	14

CHAPTER 3 METHODOLOGY

3.1 Introduction	15
3.2 System Development Life Cycle (SDLC)	15
3.2.1 Planning	16
3.2.2 Analysis	16
3.2.2.1 Entity relation diagram (ERD)	18
3.2.2.2 Context Diagram (CD)	19
3.2.2.3 Data flow diagram (DFD)	21
3.2.2.4 Use-Case Diagram	23
3.2.3 Design	24
3.2.4 Implementation	26
3.2.5 Maintenance	26

CHAPTER 4 IMPLEMENTATION

4.1 Introduction	27
4.2 Development of System Interface	28
4.2.1 The Interface Design	28
4.3 Scripting Techniques	29
4.3.1 Connection between table and database in PHP	29
4.3.2 Declaration of Variables in PHP	30
4.3.3 SQL Statements	30

CHAPTER 5 RESULT AND DISCUSSION

	5.1 Introduction	33
	5.2 Result Analysis	33
	5.2.1 Objective Achievement	34
	5.2.2 Administrator Interface	37
	5.2.3 Headmaster Interface	40
	5.2.4 Secretary Interface	41
	5.2.5 Staff Interface	42
	5.3 Constraint	44
	5.4 Future Research	45
CHAPTER 6	CONCLUSION	46
	REFERENCES	47
	APPENDIX	48

LIST OF FIGURES

Figure No.	Title	Page
2.1	Main page for Aplus MyKad Attendance System	7
2.2	One-Touch Fingerprints Biometric Time Clock	8
2.3	Aquarius Soft BePunctual leave application page	10
2.4	Windows Adobe Dreamweaver	12
2.5	XAMPP	13
3.1	SDLC Phase	16
3.2	ERD (entity relation diagram)	18
3.3	CD (Context Diagram)	20
3.4	Data flow diagram (DFD)	2
3.5	Use-Case Diagrams	23
3.6	SSMMS main page	25
3.7	SSMMS attendance page	25
3.8	Gantt chart	26
4.1	The Main Interface for SSMMS	28
4.2	The Attendance page interface for SSMMS	29
4.2	Connection between tables in database	29
4.3	Declaration of data	30
4.4	Insert SQL statement	30
4.5	Select SQL statement	30
4.6	Update SQL statement	31
4.7	Delete SQL statement	31
4.8	Code for login to leave application	31
4.9	Code for stamp date and time in attendance application	32
4.10	Code for logout	32
5.1	Online attendance	34
5.2	Online leave application	34
5.3	Receiving leaves application	35
5.4	Approve or reject the leaves application	35
5.5	View attendance records	36
5.6	Administrator main page	37
5.7	Staff registration page for leave	37
5.8	Application directory page	38
5.9	Administrator attendance main page	38
5.10	List of staff page	39

5.11	Headmaster main page	40
5.12	update personal information modal	40
5.13	approve or reject leave application page	41
5.14	Secretary main page	41
5.15	verified or reject leave application page	42
5.16	Staff leave application main page	42
5.17	Leave form	43
5.18	Leave record and detail	43
5.19	Staff attendance page	44

LIST OF TABLES

Table No.	Title	Page
2.1	Differentiation between existing systems	11
4.1	Explanation of the system modules	27

CHAPTER 1

INTRODUCTION

1.1 Project Background

In the revolutionary era of information, globalization, and communication technologies has increase rapidly among countries around the world. In fact, information and communication technology are not the only part that affected by the revolutionary, thus the whole society in the world starting to move rapidly along with the development of technology resulting state of the world seemed limited.

Nowadays, the information technology and communication facilities have been applied in variety of management activities and on-line businesses such as ticketing, sales and purchases of goods, advice, and information search and many more. This service is to assist and facilitate the user to connect with the services easily, accurate and quick. Management and business activities can be implemented in a more systematic and flexible booking service and online application that has implemented at present.

Attendance can be defined as the action of being present at one place or event [1] for example present to somebody party or present to work in office. Attendance is one of the important factors in many institutions and organization that need to be followed by people [2]. In the previous implementation, there are various types of attendance systems that have been developed. For example, attendance systems by using punch card, using web-based, and also RFID. These implementations still can cause lots of problems such as providing incorrect information to the users.

SeRIA Staff Movements Management System (SSMMS) projects that will be develop involving online application for attendant and leave. This system will be implying to all staff in Sekolah Rendah Ibnu Abbas (SeRIA) Kuantan, Pahang Darul Makmur. In the modern era of development, the concept of space reservation can be implementing through variety of approaches that are more advanced and sophisticated compared to existing approaches which focus more on the use of paper as a formal or informal letters and pamphlets. Through the use of on-line, the concept of information at their fingertips and can be practiced to reduce the cost for the use of paper.

SSMMS is a smart online attendance and leave management system that allows SK Ibnu' Abbas's (SeRIA) staff to check in and out for work and apply for their leave conveniently. For leave application, SSMMS designed with auto-routing for verify and verified, approval and approved leaves of online capabilities, making each level winds leave application volume for both applied and those who verify and approve. Which is, the user will apply the leave by choosing the type of leave and reason why they apply for leave, and then the system will calculate the leave balance of the staff, after that, the application will sent to secretary to verify it before it sent to Headmaster to approve or reject the application. So this will help the management to reduce the use a lot of papers and wasted time.

These applications also allow officer to view the staff's attendance and leaves history within one year. With this functionality, staff will know their working history for attendance and leave and can view how many leave they left for example rest leave.

1.2 Problem Statement(s)

i. SeRIA still using traditional punch card and manual leave application.

By using traditional punch card and manual leave application, it will use a lot of papers for example for punch card, every month must use the new card and for leave application, staff must fill the leave form every time they need to apply leave. For safety it is not secure because it still using filing system and if something likes natural disaster happen there is no backup for it.

ii. Many processes of leave application require time and energy.

Staffs needs to get the leave form from office and then fill in all the information needed and then sent it to the clerk. Clerk will check if the staff's still has leave balance before accepted and sent to secretary for verification. Lastly the application will sent to Headmaster which is she will approve or rejected depends on some reason. This system will take a few days for staff to know their application is approved or rejected.

iii. Hard to view staff attendance and leave record.

Staffs will hard to view back their attendance or leave record because all the record is keep by the clerk and they need to ask the clerk about their record history if there a case in the future such as run out of leave balance.

1.3 Objectives

SSMMS main purpose is to upgrade or improve the current system of recording attendance and manual apply for leave. There are several main objectives of this project will meet:

- i. To upgrade the current attendance and leave application record that is manually processed to online.
- ii. To improve the mechanism of receiving, approving and rejecting leave application through system.
- iii. To solve administrator problem on viewing attendance report.

1.4 Scope

System:

SSMMS is focus on record time in and out and leave application.

User:

Administrator
 Will in charge the system management, register or delete user, view user information.

Staff To check in and check out the attendance system and can apply leave application.

iii. HeadmasterCan view staff information, approve or reject staff leave application.

iv. Coordinator Will in charge to check the daily attendance report.

1.5 Project Significance

SSMMS is the solution to the current punch card and manually apply leave system. This project will upgrade the attendance management system at SeRia due to the technologies application that enables the staff to use computer to punch card and applying leave.

The leave application process become smoother because staff no longer need to wait to punch card and apply for a leave. The attendance and leave record become more manageable because all the record is store into database. The database is easier to backup so no worries if something happen such as natural disaster or database corrupted.

In addition, the officer can see the presence information and leaves history in the manageable way. All of this can be achieve using SSMMS system because all the data will be store in the database and searching process will be faster than manual search.

1.6 Conclusion

It is about the early identification of projects to be developed in which it uses the concept of online. Moreover, the background was also identified the problems to find a solution for the system to be developed based on a concept similar to the existing system. SSMMS goals are to produce systematic leave applications through the service. In addition, there are various objectives that can be implementing in all phases of project development. The main focus of developing the SSMMS is to overcome the weaknesses of the current punch card and leave application.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter describes a detailed study of selected projects. In this chapter there are two main parts to be discussed review on the current and the same system or other system to describe the techniques, methods, tools and technologies that will be available in the project. In the process of system development, literature review is conducted to gain more understanding about the theory, methods, and technologies related to the system that has been developed [3]. Background research organization and comparative studies of existing systems also performed to get better understand about the system before the system is developed.

2.2 Current System

Sekolah Rendah Ibnu' Abbas is still using manual systems for attendance and leave application, they have yet to have any computerized system, the existing system is a manual system is not user friendly because the need to carry out more than one job at a time such as get the form, fill in the form, sent it to clerk, clerk will check the leave balance before verify by Secretary and approve or reject by Headmaster. SeRIA still uses the traditional punch card to record their attendance to work. This will cause the duty officer difficult to get reports of the staff attendance immediately or to manage staff attendance records and also to avoid staff to help punching attendance for others. Problems will occur when the card is lost either intentionally or unintentionally, and not impossible to happen betrayal by someone

In addition, if all the work is done manually, including the calculation to generate the report is not impossible it could lead to miscalculation and contribute to repeat the work. In addition, work is still paper-based time management which means that everything and every detail will be done manually on paper. If there are cases such as the loss of a single record of it can lead to difficulties in generating reports at the end of the month or year. In addition to requesting leave, employees

must take and complete an application form if he wants to apply for leave and submit to their officer. It will take some time for officers to approve leave if the officer was too busy or off duty.

2.3 Existing System

Nowadays, there are various types of attendance systems in the market. At present there are various types of systems in the market attendance. For example, time attendance system using RFID, mobile computing, mobile phones, and also traditional punch cards. Different approaches used in the different systems available. Some researchers have done on the existing attendance systems. Different approaches used in the different systems available. Some researchers have improved on the existing attendance systems. The purpose of this study is to understand what your strengths, weaknesses and problems in the existing system and to develop a better system than the current system to overcome the weaknesses found in the existing system. In this section, the existing system that has been developed previously related with attendance management system will be reviewed.

2.3.1 Attendance System by using Smart Card

All systems will enable accurate attendance tracking staff hours attending schedule, or hours of activity daily and weekly contracts, ensure employees are paid accurately measured and correct. One of the attendance systems that required to using smart card is Aplus MyKad [4]. This system will record the staff time entry record to replace the traditional manual punch card. With this computerized system, it will provide a very easy but accurate way to keeping track of the staff attendance.

In Malaysia, MyKad is an official identification card for all Malaysian. MyKad can use as the tool to record time by putting MyKad into the Aplus Smart Card Reader and then the computer will immediately capture the staff individual information and time.But by using MyKad to record staff attendance has a shortage. This is because it will only can use by Malaysian and difficult for foreigner because they dint have Malaysian MyKad.



Figure 2.1: Main page for Aplus MyKad Attendance System

2.3.2 Attendance System by using Fingerprint

Fingerprints can be regarded as the oldest human characteristics of the most reliable and popular widely used to identify individuals and validation in the field of biometric technology. Fingerprint is unique because it is believed that cannot be more than one person will have the same pattern of fingerprint in this world [5].

FingerFlex [6] is system that using fingerprint biometric device for time attendance. FingerFlex helps to automate collection of data and the timesheets process faster. This system will prepare and generate the report of attendance faster. Moreover, it can avoid the buddy-punching and will improve the overall workforce punctuality on a company. Below are the main functions of FingerFlex Time Attendance System:

i. One Touch Fingerprint Biometric Time Clock

FingerFlex Time Attendance will identify staff clocking in and clocking out just by the staff fingerprint and no need any password validation.

ii. Flexible Schedule Management

The system is also able to manage the work and time needed changes. FingerFlex can fulfill all time management needs and manage the different working hours for different groups.

iii. Flexible Leave Management

With this feature, employees who take leave will be recorded in FingerFlex and will appear in the related report.

iv. Generate Report

All reports generated by FingerFlex can be exported to Microsoft Excel that can be used for wages calculation and to generate reports.



Figure 2.2: One-Touch Fingerprints Biometric Time Clock

2.3.3 Aquarius Soft BePunctual

Aquarius Soft BePunctual is an employee's time and attendance solution designed specifically to replace mechanical punch clock, punch cards and attendance book sign in / out process. With BePunctual, your manager will no longer have to spend hours calculating staff worked hours and pay. Employees can punch in / out either at the computer center located at the entrance of the office, or in multiple locations, or at their own office computer.

- Employee login
 For Customer Login page, staff will enter the username and password to log in the main page of the system.
- ii. Check in & Check Out Workers need to use their ID and password to check in and check out from the system. Information about time had been punch will be sent to database.

In the server module consist:

i. Setting for Administration

This feature was created to enable the administrator to manage the data in a systematic manner. Under the administration of the atmosphere there that leave management allows admins to set off information and the environment is to make the admin staff know the details of the employee. Give the schedule feature allows admins to arrange work schedules for employees.

ii. Attendance Report

This the list of reports that can to printed out:

- Personal report
- Attendance report
- Leave report
- General report

1				Aquarius So	ft BePunctual Server (UNREGISTEREI	D)	- 0 ×
Elle Edit Yiev 12:1	<u>Beports Setup I</u> c 18 AM	ols Help Today	Punch Cards Ap	proved Leave Punch Station	s Setup		Friday, 19 April, 2013
Approved From: 1/ 1/2013	Leave	Department A					
Tot:		Leave Date	Time	Leave Type	Name	Apply Date	Remarks
19/ 4/2013		19/4/2013	Full Day	Annual Leave	StaffA	19/4/2013 12:16:16 AM	resting with family
This Week		10.48410	, an only	Pointee Coorte	and the		reading management
This Month							
This Year							
🔘 ștafi							
StaffA	v						
 Staff Type: All - 	v						
Departmen	¢.						
* All *							
		<)
Ready							

Figure 2.3: Aquarius Soft BePunctual leave application page.

2.4 ADVANTAGES AND DISADVANTAGES OF THE EXISTING SYSTEM

Name of the System	Advantages of the System	Disadvantages of the System
Smart Card Attendance System	 Provide secure system and automatic attendance management for staff. Less administration work. 	• Will need more cost for the smartcard and biometric device.
Fingerprint Attendance System	Save the time taken to record the attendance.Accurate timing.	 Will need more cost for the fingerprint tool. Need to correctly place the finger on the scanner to avoid no data detection.
Aquarius Soft BePunctual	 A web based system. Can be accessed anywhere. Attendance reports can be generated in real-time processing. 	 Need connection of internet to make the access to the system possible. User cannot update their profile. Not provide button for cancelling leave application.

Table 2.1: Differentiation between existing systems

2.5 Development Tools

Development tool is needed to develop this project. Adobe Dreamweaver is used to help designation and fixing web application interface. XAMPP used as a web server for this project. PHP was chosen as the programming language and MySQL as the database language.

2.5.1 Adobe Dreamweaver

Dreamweaver is the ideal tool for coders, web designers, and application developers of all levels. Web professionals of all experience levels will find a workspace arrangement to fit their style, or they can make one of their own. Dreamweaver user interface is both highly efficient and aesthetically pleasing.

We can use Dreamweaver to build a basic website using web technologies such as XHTML, CSS and JavaScript as well as a more complex website that combines server-side technologies such as ASP.Net, ColdFusion and PHP. It also allows us to create web database-driven websites and web admin to update and delete database records, login pages and server behaviour to restrict access to certain areas of our website. Dreamweaver is also very flexible development environment. Dreamweaver allows us to work in Code or Design view or have a split screen where we can do both. We make changes as design generate clean, standardscompliant code which we can modify the code as needed in view.

Most of the sites that we work on will have the sites linked to them as CSS style sheets and JavaScript files. Dreamweaver makes working with linked files such as easier by giving us access to them from the Related Files toolbar.

DW Ele Edit View Insert Modify Figmat Commands Site Window Help 🖬 • 🗘 • 👗 • 🛛 DESIGNER •	• D CS Live
Untiled-1 ×	8 ADDEE BROWSFRIAR
Code Split Design Live Code 🚭 Live View Inspect 🐑 🖉 Title: Unsteed Document 82.	INSTRU
1 CONTRACTOR AND PUBLIC "-//83C//DD XETML 1.0 Transitional//N" "http://www.wi.org/TB/whtmli/DTD/whtmli-transitional/	did"> A M Count
<pre>chtml xmlns="http://www.w3.org/1999/xhtml"></pre>	A Current
3 chead>	Sunmary for Selection
4 deta http-equive-Content-Type content-Text/html; charact-utr-s" /> chilabilitad Doumence/(tip)	No CSS properties apply to the current select Please select a styled element to see which C
C = c/head>	properties apply.
* 5 CEODY3	
♀ 10	
© 11	
	No. (SS place apply to the calented tap
no	the case to a spectra age.
<u>u</u>	
	Properties
	Add Property.
	11: Ari (++) (00 E) 2
	RUSINESS CATALYST
4	FLIS ASSITS
凤	The section of the se
a	Desktop • Manage Sites
	Cocal Files Size I y Desktop
	B-1 Computer
	Network
R.	B Desktop items
K/1sec Unico	icode (UTF-8)
PROPERTIES	- 11
OHTML Bornat None • Class None • B / E : I is a da	
Bh.CSS ID None • Unk • Op Co Target •	
Page Properties	<
	0

Figure 2.4: Windows Adobe Dreamweaver

2.5.2 XAMPP

Xampp is an open source web server solution stack is mostly known as a proficient tool that makes web development accessible even to beginners. Apache, MySQL and PHP components have been installed in Xampp. Additionally, Xampp also contains Perl programming language, database administration tool phpMyAdmin, FileZilla FTP server, mail server and JSP Tomcat server Mercury combined with cross-platform architecture makes it one of the most versatile and accessible.

Xampp face comes as a small Control Panel is very easy to understand from the beginning. The purpose of which does used Xampp no need a stylish appearance and as a result it does not have, but they need the functionality and it certainly has a lot of it.

Control panel lists Apache, MySQL, FileZilla and Mercury service alongside their status and buttons to start / stop them. Admin button provides advanced configuration options for each service. For example, one for Apache will open a page in our web browser consists of various types of information and settings for us to fiddle with, including the full report safety issues, documentation, PHP and Perl some samples to check if Xampp is working, access to phpMyAdmin and other tools that are useful.

8	XA	AMPP Cont	trol Panel A	pplication	- 🗆 🗙
8	XAMPP Control Panel (Apache Friends Edition)				She <u>l</u> l <u>S</u> etup
Modules					Port-Check
Svc	Apache	Running	Stop	Admin	Explore
Svc	MySql	Running	Stop	Admin	SC <u>M</u>
Svc	FileZilla		Start	Admin	<u>R</u> efresh
Svc	Mercury		Start	Admin	<u>H</u> elp
Svc	Tomcat		Start	Admin	Exit
XAMPP for Windows Version 1.7.3					
Current Directory: C:\xampp					
Busy					
Apache started					
Busy MvSOL started					
					~
<					>

Figure 2.5: XAMPP

PHP stands for Hypertext Pre-processor is a well-known programming languages used for web development and for developing dynamic websites. Most web developers today use PHP coding and this language has been a huge demand in the software industry due to its special features. It is an open source programming and can reduce the complexity of current programming.

2.5.4 MySQL

MySQL is an open-source relational database management system. Database MySQL is a reliable and flexible management system very fast. It provides very high performance and it is multi-threaded users and various relational database management systems. MySQL is one of the most popular relations database management systems on the web. Database MySQL database has become the most popular open source world, because it is free and available on almost all platforms. The MySQL can run on Windows UNIX, and Mac OS. MySQL is used for Internet applications because it provides good speed and very safe. MySQL was developed to manage large amounts of data at very high speed to overcome the problems of existing solutions. MySQL can be used for applications honesty but it is mostly used for web applications on the internet.

CHAPTER 3

METHODOLOGY

3.1 Introduction

Methodology is a set or system of methods, principles and rules for regulating a particular discipline, such as the arts or sciences. The method is an analysis of the principles, rules, and postulates employed by discipline. The method can also be a systematic study of methods, can be, or have been used in a particular discipline or procedure or set of procedures.

Method refers to more than a simple set of rules, rather it refers to rational and philosophical assumptions underlying a particular study. This is why scholarly literature often includes a section on research methodology. This section is not more than outline the research method.

3.2 System Development Life Cycle (SDLC)

For SSMMS project SDLC (System Development Life Cycle) is used to develop this system describes an approach to produce a computer system through a waterfall model. Waterfall model is a software development model order (a process for creating software) in which development is seen as flowing steadily downwards (like a waterfall) through the phases of requirements analysis, design implementation, testing (validation), integration and maintenance. To follow the waterfall model of the proceeds from one phase to the next in a purely sequential. For example, the first complete specification of the requirements set in stone. When these requirements are fully completed, one proceeds to design. The software is the design and plan of actions taken to implement (coders) to take this action and design an action plan to implement the given requirement.

Once the design is completed, an implementation of the designs made by coders. By the end of the implementation phase, the different software components developed by different teams are integrated.

After implementation and intergradations are complete, tested and debugged software products, any errors introduced in the early stages released here. Then the software product is installed, and then maintained to introduce new functionality and remove bugs.

In this project activity classifiable for 5 phases



System Development Life Cycle (SDLC)

Figure 3.1: SDLC Phase

3.2.1 Planning

The Planning Phase is the first phase of the SDLC. During this phase, the first responsible for creating the system must determine what the system needs to do for the organization (requirements gathering). The current SR Ibnu' Abbas attendance system has many problems occurs so the solution must be gathering to solve the problem. The planning phase is to identify the:-

- i. Problem Statement about the current system
- ii. Project scope involve of user, functionality, hardware and software.
- iii. The aim and objective of the project.

3.2.2 Analysis

The Analysis Phase is the second phase of the SDLC. In this phase some investigation and analysis on problem, reason and effect has been done. Determine the requirements that need to be fulfilled by the chosen solution. For the requirement specification, identifying the relationship between the entities that exists in the system, then build a context diagram, data flow diagram and entity relationship diagram.

All mentioned that needed to explain the structure of our system. Other than that, we make some interviews with our lecture to get to the more information. We also find and collect the necessary data from internet, book and from lecture. In our analysis phase have conducted three following activities:

- Interview interviews the SeRia staff to get the needed information.
- Documentation review collect the necessary data from internet, book and from staff.
- Logical Modelling create a models such as ERD (entity relation diagram), Contexts diagram, DFD (data flow diagram) and Use-Case Diagram.

3.2.2.1 Entity relation diagram (ERD)

An entity-relationship model (ERM) is an abstract and conceptual representation of data. Entity-relationship modeling is a database modeling method, used to produce a type of conceptual schema or semantic data model of a system, often a relational database, and its requirements in a top-down fashion. Diagrams created by this process are called entity-relationship diagrams, ER diagrams, or ERDs.



This is the ERD of the SSMMS project system.

Figure 3.2: ERD (entity relation diagram)

3.2.2.2 Context Diagram (CD)

System Context Diagram is diagrams used in systems design to represent the more important external actors that interact with the system at hand. This type of diagram according to Kossiakoff (2003) usually "pictures the system at the center, with no details of its interior structure, surrounded by all its interacting systems, environment and activities. The objective of a system context diagram is to focus attention on external factors and events that should be considered in developing a complete set of system requirements and constraints".

System context diagrams are related to Data Flow Diagram, and show the interactions between a system and other actors with which the system is designed to interface. System context diagrams can be helpful in understanding the context which the system will be part of. Context diagrams are used early in a project to get agreement on the scope under investigation. Context diagrams are typically included in a requirements document. These diagrams must be read by all project stakeholders and thus should be written in plain language, so the stakeholders can understand items within the document.



Figure 3.3 CD (Context Diagram)

3.2.2.3 Data flow diagram (DFD)

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system. DFDs can also be used for the visualization of data processing (structured design).

On a DFD, data items flow from an external data source or an internal data store to an internal data store or an external data sink, via an internal process. A DFD provides no information about the timing of processes, or about whether processes will operate in sequence or in parallel. It is therefore quite different from a flowchart, which shows the flow of control through an algorithm, allowing a reader to determine what operations will be performed, in what order, and under what circumstances, but not what kinds of data will be input to and output from the system, nor where the data will come from and go to, nor where the data will be stored (all of which are shown on a DFD). This is the Data flow diagram of SSMMS system project.



Figure 3.4 Data flow diagram (DFD)



Figure 3.5 Use-Case Diagrams
3.2.3 Design

During this phase have five involved activities:

- i. Interface design
- ii. Input design
- iii. Screen design
- iv. Database design
- v. Output design

In this phase is to create and design the interface, input procedure, output requirement and database design. The objective of input design is attractiveness, simplicity, easy to use and effectiveness. For the user interface, is ensure that guidelines on the interface. Such as, keep the screen simple, create an attractive screen, and use appropriate colours to highlight different areas of the title screen and displays, messages and instruction in a consistent manner.

In the input design, the guideline is making for data entry by the user on screen design. Such as, to minimize data entry errors and user frustration, never require the user to enter information that is already available within the system or information that can be easily computed by the system.

Example of SSMMS interface:-

SEKOLAH Jalan Pinta	H RENDAH IBNU 'ABBAS asan Kuantan, 25150 Kuantan, Pahang
SeRIA Staff Attend	dance Management System (SeSAMS)
Nama Pengguna : Kata Laluan :	
	LOG MASUK

Figure 3.6 SSMMS main page

SEKOl Jalar	LAH RENDAH IBNU 'ABBAS Pintasan Kuantan, 25150 Kuantan, Pahang
SeRIA Staff M	lovements Management System (SSMMS)
	Attendance
Nama Penggu	na :
Kata Laluan	
	Daftar masuk Daftar keluar

Figure 3.7 SSMMS attendance page

3.2.4 Implementation

Implementation is the fourth step in the system phase. One series of application system development is done followed by system installation and system testing. During the system application development, program and code is designed, written, tested and documented. The database for this system is PHP Language script, MySql, Xampp as the web server and Windows as operating system. After checking, training and manual user will be given to the new user on how to use this system.

3.2.5 Maintenance

System operating and maintenance is the last phase in SDLC. It starts when system operates and goes through the system life cycle. If have any problem, maintenance will be used to correct the mistakes, adaptive maintenance to add new function and modification in the system, perfection maintenance to increase effectiveness and preventive maintenance to decrease the error in the system.

CHAPTER 4

IMPLEMENTATION

4.1 Introduction

The purpose of this chapter is a discussion and recording of development process of the system. All objective will be achieve in this chapter and all main function of coding that use in this system will be explained. In SSMMS there are two modules that cover which is Attendance module and Leave module. In this phase, coding will be starting to write. Programming language that I use is PHP language. For database, I will use XAMPP and MySQL.

Module	Description
Attendance	This feature let SeRIA's staff to record attendance check in and check out time through computerizes system. Staff can view their check in and check out history. Administrator can view and print out daily attendance records.
Leave	This feature let SeRIA's staff to apply leave through online. Staff can view their leave application history and the current leave balance will be calculate by system automatically. Staff also can edit their profile and change password.

4.2 Development of System Interface

The most important phase in development of a web-based application is development of user interface. This is because interface design must attract the user and have the user friendly elements. The interface should be really eased to communicate with the function so that the flow of the system can be understood by the user.

4.2.1 The Interface Design

The main interface design in the system is shows in Figure 4.1. There have the login section to log in into the leave application. The navigation button is located on top of the column which is contain of home, link to attendance application, news, list of SeRIA's staff, staff on leave and public holiday. Figure 4.2 is login section to attendance application.



Figure 4.1: The Main Interface for SSMMS

NIL CENTRAL	SEKOLAH RENDAH IBNU 'ABBAS Lot'1/1294, KAMPUNG BAPU MPK, PERMATANG BADAK, 25150 KUANTAN, PAHANG DARUL MARMUR. SSMMS (ATTENDANCE)	
	Staff ID	
	Password	
	Login reset	

Figure 4.2: The Attendance page interface for SSMMS

4.3 Scripting Techniques

The base scripting language used for the development of the project is PHP. For Database queries, SQL are used.

4.3.1 Connection between table and database in PHP

In Figure 4.2, it shows the source code for connection between tables in database in PHP.

Ę	php</th <th></th>	
	# FileName="Connection_php_mysql.htm"	
	# Type="MYSQL"	
	<pre># HTTP="true"</pre>	
	<pre>\$hostname_seria = "localhost";</pre>	
	\$database_seria = "seria";	
	<pre>\$username_seria = "root";</pre>	
	<pre>\$password_seria = "";</pre>	
	<pre>\$seria = mysql_pconnect(\$hostname_seria, \$username_seria, \$password_seria) or trigger_error(mysql_error(),E_USER_ERROR);</pre>	
	?>	

Figure 4.2: Connection between tables in database

4.3.2 Declaration of Variables in PHP

In Figure 4.3, it shows the declaration of variable in PHP.

```
$f_name = $_POST["f_name"];
$l_name = $_POST["l_name"];
$position = $_POST["position"];
$email = $_POST["email"];
$contact = $_POST["contact"];
$user_id = $_SESSION['ic_no'];
```

Figure 4.3: Declaration of data

4.3.3 SQL Statements

Figure 4.4 shows the example of SQL statement for insert data into the database. The data will be inserted to the table named "staff".

```
$sql = "INSERT INTO staff (staff_id,staff_password,first_name,last_name,position,ic_no,email,contact,level,certified,approved) VALUES
('$staf_id','$pass','$f_name','$l_name','$position','$ic_no','$email','$contact','$level','$certified','$approved')";
mysql query($sql) or die(mysql error());
```

Figure 4.4: Insert SQL statement

Figure 4.5 shows the statement to select table "staff" from database.

```
mysql_select_db($database_seria, $seria);
$query_Recordset1 = sprintf("SELECT * FROM staff WHERE ic_no = %s", GetSQLValueString($colname_Recordset1, "text"));
$Recordset1 = mysql_query($query_Recordset1, $seria) or die(mysql_error());
$row_Recordset1 = mysql_fetch_assoc($Recordset1);
$totalRows_Recordset1 = mysql_num_rows($Recordset1);
```

Figure 4.5: Select SQL statement

Figure 4.6 shows the example of update statement on "staff" table.

\$sql = "UPDATE staff SET staff_password = '\$newpass' WHERE ic_no = '\$user_id'";
mysql_query(\$sql) or die(mysql_error());

Figure 4.6: Update SQL statement

Figure 4.7 shows the example of statement to delete data from "public_holiday" table.

\$sql = "DELETE FROM public_holiday WHERE id='\$id'";
mysql_query(\$sql) or die(mysql_error());



There are four users that involve in SSMMS (Leave) which is administrator, headmaster, secretary and staff. There using level in the code to differentiate the type of user which is shown in figure 4.8.

```
if ($_SESSION['level']=='Administrator')
   if ($_SESSION['position']=='Headmaster')
       print "<script>";
       print " self.location='~/../secure_headmaster/index.php';";
       print "</script>";
   else if ($_SESSION['position']=='Secretary')
       print "<script>";
       print " self.location='~/../secure_secretary/index.php';";
       print "</script>";
    else
       print "<script>";
       print " self.location='~/../secure_admin/index.php';";
       print "</script>";
   print "<script>";
   print " self.location='~/../secure_admin/index.php';";
   print "</script>";
else
   print "<script>";
   print " self.location='~/../secure_staff/index.php';";
    print "</script>";
```

Figure 4.8: Code for login to leave application

Figure 4.9 shows source code for stamp date and time in attendance application

```
<?php
   include 'Connections/dbconnect.php';
   date_default_timezone_set('Asia/Kuala_Lumpur');
   if (isset($_GET['submit'])){
       $date_semak=$_GET['date_semak'];
       $today=date('d M Y', strtotime($date_semak));
       $sql = " SELECT a.*,b.*
       FROM login AS a ,attendance AS b
       WHERE a.no_pekerja = b.no_pekerja AND
       a.masuk LIKE '$date_semak%'";
       $result = mysql_query($sql) or die('Query failed. ' . mysql_error());
       mysql_close($conn);
   else
       $date_semak=date('Y-m-d');
       $today=date('d M Y', strtotime($date_semak));
       $sql = " SELECT a.*,b.*
       FROM login AS a ,attendance AS b
       WHERE a.no_pekerja = b.no_pekerja AND
       a.masuk LIKE '$date_semak%'";
       $result = mysql query($sql) or die('Query failed. ' . mysql error());
       mysql_close($conn);
```

Figure 4.9: Code for stamp date and time in attendance application

Figure 4.10 shows source code for logout



Figure 4.10: Code for logout

CHAPTER 5

RESULT AND DISCUSSION

5.1 Introduction

In this chapter, the result from the system and discussion will be explained. It includes the final prototype of the system that has been developed. The most important thing is to make sure that the objective the scope of this project is achieved. This chapter will also discuss the constraints of the application. It is because to improve or upgrade the system for improvement in the future, these criteria should be clearly defined so that the preparation of each and planning can be arranged.

5.2 Result Analysis

The developed application, SeRIA Staff Movements Management System (SSMMS) has achieved all the objectives of this project, which are to develop an online system to help SeRIA's staff:

- i. To upgrade the current attendance and leave application record that is manually processed to online.
- ii. To improve the mechanism of receiving, approving and rejecting leave application through system.
- iii. To solve administrator problem on viewing attendance report.

5.2.1 Objective Achievement

- i. To upgrade the current attendance and leave application record that is manually processed to online.
 - This objective has been achieved as this system can allow SeRIA's staff to use online attendance and leave application. Shows in figure 5.1 and 5.2.

♠ SSMMS (Attend	lance)			එLogout
	Log Ir	Time Log Out Time		
Staff Attendan	ce Record			
Shows 10 👻 reco	rd(s)		Search :	
Date	Day	In	Out	Note
04-12-2013	Wednesday	08:44:38		II Note
06-12-2013	Friday	01:09:22	01:09:31	III Note
Shows 1 to 2 from 2 rec	ord(s)			← Previous 1 Next →

Figure 5.1: Online attendance

Tr GENERASI PL	SSMM	s (leave)	
SMMS Register Staff My Le	ave Application - Application -		Log
			Welcome to SeRIA Staff M
Name : Zul Fazrin Za Position : Staff	inul Abidin	NRIC :900118035879 Email :zulfazrin90@gmail.com	
Total Pending :15 day	Total Taken :20 day	Total Balance :5 day	
Leave Application			
Leave Type Please choose	e leave type		
From	Until :		
Reason :			

Figure 5.2: Online leave application

- ii. To improve the mechanism of receiving, approving and rejecting leave application through system.
 - This objective has been achieved as this system has the mechanism of receiving, approving and rejecting leave application through system. Shows on figure 5.3 and 5.4.

	SEI	KOLAH R LOT 1/11294, KAM 25150 KUAN SSM	ENDAH PUNG BARU MPK, PUNG BARU MPK, PAHANG DA	IBNU PERMATANG BAD? RUL MAKMUR.	ABBAS	
SSMMS N	lly Leave Application + Staff Ap	plication -				Logout
Approve	Application				Welcome to 9	SeRIA Staff Movements Managem
10 🗸	record per pages				Search:	
ld 🔺	Staff Name	Date Apply	Start	End	Period	Status
5	Zul Fazrin Zainul Abidin	2013-11-14	2013-12-28	2014-01-17	15 day	Certified
Showing 1 t	o 1 of 1 entries				*	– Previous 1 Next →

Figure 5.3: Receiving leaves application

GENERASI PLAN		SSM	MS (LEAVE)	
MMS My Leave Ap	oplication - Staff Application	on -		Log
		W	elcome to SeRIA Staff Movements Management System (SSMMS)	
etail Applicat	ion			
Staff Information				
Staff Name :	Zul Fazrin Zainul Abidin			
NRIC :	900118035879	900118035879		
Position :	Staff			
Email :	zulfazrin90@gmail.com	zulfazrin90@gmail.com		
Leave Detail				
Date Apply :	2013-11-14	2013-11-14		
Leave Type :	Annual			
Leave Reason :	rehat			
From :	2013-12-28	Until :	2014-01-17	

Figure 5.4: Approve or reject the leaves application

- iii. To solve administrator problem on viewing attendance report.
 - This objective has been achieved as this system allows the administrator to view attendance report as show in figure 5.5

♠ 53	SMMS (Atte	ndance) Staff Applicatio	n - Staff Attendance F	Record		<mark>ပံLogout</mark>
		Date Search				
Atte	endance	Record on 04 Dec 2	2013			
Shows	10 🗸 rec	ord(s)		Search :		
No	Staff ID	Name	Date	Log In	Log Out	
1	1222	muhd	04-12-2013	07:49:33	07:49:36	
2	1244	nur	04-12-2013	07:49:56	07:49:58	
3	1255	siti	04-12-2013	07:50:07	07:50:10	
4	1212	ali	04-12-2013	07:50:30	07:50:33	
5	1266	Nurul	04-12-2013	07:52:55	07:52:58	
6	1277	muhd nur	04-12-2013	07:53:06	07:53:08	
7	1288	Nurul Alia	04-12-2013	07:53:17	07:53:19	
8	9999	Zul Fazrin	04-12-2013	08:44:38	07:30:00	
Shows	1 to 8 from 8 re	cord(s)			← Previous 1	$Next \rightarrow$
Print						

Figure 5.5: View attendance records

5.2.2 Administrator Interface

In figure 5.6 it shows the administrator main page that view the administrator profile. This profile can be edited and can change the password by own self. There also have a bar that will link to other function.

SEKOLAH LOT 1/129 2515 SS	I RENDAH IBNU 'ABBAS 4. KAMPUNG BARU MPK, PERMATANG BADAK, D KUANTAN, PAHANG DATUL MAKMUR MMS (LEAVE)
SMMS Register Staff My Leave Application - Applica	tionLogou
	Welcome to SeRIA Staff Movements Manage
Personal Information	
Name :Zul Fazrin Zainul Abidin	
NRIC :900118035879	
Staff ID :9999	
Position :Staff	
Email :zulfazrin90@gmail.com	

Figure 5.6: Administrator main page

In figure 5.7 it shows the staffs register form. Administrator will register the staff account and fill it which staff information.

	SEKOLAH	H RENDAH IBNU 'ABBAS 94. KAMPUNG BARU MPK. PERMATANG BADAK, 50 KUANTAN, PAHANG DARUL MAKMUR.	
SMMS Register Staff	My Leave Application - Applica	ation -	Logo
Register Staff			Welcome to SeRIA Staff Mo
Staff ID :			
First Name			
Last Name			
Position	Please choose	×	
		Ex:870105034458	
Email			
Contact No.			
Level	Staff	v	
Certified By	Please choose		
	Please choose 👻		

Figure 5.7: Staff registration page for leave

In figure 5.8 it shows the News directory page. In this page administrator can add news about the school, meeting time or something else. There also have link to other directory.

TH GENERA	A TRA	SSMMS	(LEAVE)			
SMMS R	egister Staff My Leave Applic	cation - Application -				
News E	lirectory	News Directory List of Staff Directory Staff on leave Directory Public Holiday Directory	Welcome to SeRIA Staff Movements Mana	igement Syste	em (SSI	MMS)
	Date :					
Desc	ription : nit Reset					
Desc Subr	ription : nit Reset record per pages		Search:			
Desc Subr 10 V	ription : nit Reset record per pages	News	Search:			
Desc Subr 10 V No.	ription : nit Reset record per pages Date 2013-12-02	News Mesyuarat Agung PIBG pada	Search:	adir.	Delet	te

Figure 5.8: Application directory page

In figure 5.9 it shows the administrator main page for attendance. Administrator can register staff, can view and delete staff and also can view the staff attendance record.



Figure 5.9: Administrator attendance main page

In figure 5.10 it shows list of staff page. There will show with the detail of the staff such as staff id, name and I/C number. There also have function to delete staff which the staff that no longer work in SeRIA.

≜ SSN	IMS (Attenda	NCe) Staff Applie	cation • Staff Atte	endance Record		() Logout
List of	Staff					
Shows 1	10 v record(s)			Search :	
No	Staff ID	Name	NRIC	Contact No.	Position	Action
1	1212	ali	1212121	12	12	III Delete
2	1222	muhd	876543	9382323	Staff	Delete
3	1233	zul	2342111	9382323	Staff	Delete
4	1244	nur	1234413	213312313	Staff	Delete
5	1255	siti	11231444	9382323	Staff	Delete
6	1266	Nurul	11231444	112	Staff	Delete
7	1277	muhd nur	1212	112	Staff	🗐 Delete
8	1288	Nurul Alia	1212121	9382323	Staff	Delete
9	9999	Zul Fazrin	90232322	3444234324	Staff	🗐 Delete
Shows 1 t	:o 9 from 9 record((S)			← Previo	us 1 Next →

Figure 5.10: List of staff page

5.2.3 Headmaster Interface

In figure 5.11 it shows the headmaster main of leave application page that view the headmaster profile. This profile can be edited (figure 5.12) and can change the password by own self. There also have a bar that will link to other function which is can approve or reject leave application.

SEKOLAH RENDAH IP LOT 1/1294, KAMPUNG BARU MPK, PERM 25150 KUANTAN, PAHANG DARULA SSMMS (LC)	SNU 'ABBAS Atang badak, AVE)
SSMMS My Leave Application - Staff Application -	Logout
	Welcome to SeRIA Staff Movemer
Personal Information	
Name :Hjh Zaini Ahmad	
NRIC :680105295568	
Staff ID :1011	
Position :Headmaster	
Email :zaini@yahoo.com	

Figure 5.11: Headmaster main page

Update Personal	Information	×
First Name	Hjh Zaini	
Last Name	Ahmad	
2 Position	Headmaster	
1 Email	zaini@yahoo.com	
Contact	0198877633	
٤	Submit Close	

Figure 5.12: Update personal information modal

In figure 5.13 it shows the leave application approve or reject page. After headmaster reject or approve the application, staff will get the result.

CENTRISI IN		SSM	MS (LEAVE)	
IMS My Leave Ap	plication - Staff Applicat	ion -		Lo
		W	elcome to SeRIA Staff Movements Management System (SSMMS)	
etail Applicat	lon			
Staff Information				
Staff Name :	Zul Fazrin Zainul Abidin			
NRIC :	900118035879			
Position :	Staff			
Email :	zulfazrin90@gmail.com			
Leave Detail				
Date Apply :	2013-11-14			
Leave Type :	Annual			
Leave Reason :	rehat			
From :	2013-12-28	Until :	2014-01-17	

Figure 5.13: Approve or reject leave application page

5.2.4 Secretary Interface

In figure 5.14 it shows the secretary main of leave application page that view the secretary profile. This profile can be edited and can change the password by own self. There also have a bar that will link to other function which is can approve or reject leave application.



Figure 5.14: Secretary main page

In figure 5.15 it shows verify or reject application. Secretary can verify the application or reject it due to the staff frequency of apply leave. If no application, the system will tell the user that it do not have any application.



Figure 5.15: Verified or reject leave application page

5.2.5 Staff Interface



Figure 5.16: Staff leave application main page

	SEKOLAH RENI LOT 1/11294, KAMPUNG B 25150 KUANTAN, PA	DAH IBNU 'ABBAS ARU MPK, PERMATANG BADAK, HIANG DARUL MAKMUR
A CENERAL PLAN	SSMM	S (LEAVE)
SSMMS My Leave Application -		Logo
		Welcome to SeRIA Staff Movements Management System (S
Name :Rahmah Abd. Ma Position : Staff	anan	NRIC ∶678903939 Email ∶rahmah@yahoo.com
Total Pending 10 day	Total Taken :0 day	Total Balance :25 day
Leave Application		
Leave Type Please choose lea	until :	
Reason :	×	

Figure 5.17: Leave form

GENERNS	eave Detail		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
SSMMS My Leave Application -			Logo
	Date Apply : 2013-12-10		
	Leave Type : Annual		
Name Rahmah Abd.	Reason : melawat ibu d	i kampung	
THEFT	Céntrum : Dans din m		
i otai Pending 3 day	status : Pending	Close	Print
Application List	Status : Penoing	Close	Print
Application List	Status : Penoing	Close	Print Search:
Application List	End	Close Period	Print Search: Status

Figure 5.18: Leave record and detail

♠ SSMMS (Attend	lance)			()Logout					
	Log	In Time Log Out Time							
Staff Attendan	aff Attendance Record								
Shows 10 🔽 reco	rd(s)		Search :						
Date	Day	In	Out	Note					
04-12-2013	Wednesday	08:44:38		II Note					
06-12-2013	Friday	01:09:22	01:09:31	I Note					
Shows 1 to 2 from 2 rec	ord(s)			\leftarrow Previous 1 Next \rightarrow					

Figure 5.19: Staff attendance page

5.3 Constraint

When developing this system a few constraint has occurs and that has to be consider when developing the system. This is the constraint that occurs:

i. Development constraints

The first constraint have to faces is to get the data from the client because the data of SeRIA's staff is a confidential document. It is difficult to them to give their private information for security purpose. Seconds constrains is how to understand what the client actually want, how the flow of the system and how they work. Furthermore, in the middle of the development client have request to have a few changes in the system. To settle all this kind of constraints, all the system progress and all the documents need to back up at first and must be recorded because if some problem occurs while developing we can refer it back anytime.

ii. System constraints

System constraint is related to the methodology that has been used. We need to understand all phases in the methodology at first before implementing the system. Another constraint is hard to find the correct source code in order to make the system run properly and out of error.

5.4 Future Research

For the future research there are few recommendations in order to make SSMMS more practical to be implemented. For the current system developed, there cannot view report of staff attendance in a week, month and year and only can view a daily attendance report. For leave application administrator cannot view which staffs have applied for leave and whose application has been approved. So this lack of function must be added in the future to make this system more flexible.

CHAPTER 6

CONCLUSION

SeRIA Staff Movements Management System (SSMMS) is developed to manage Sekolah Rendah Ibnu Abbas (SeRIA) attendance and leave application. Attendance is very important to ensure the continuous operation. Aiming at the disadvantages of traditional punch card attendance system and manually leave application ways, SSMMS is developed to Sekolah Rendah Ibnu Abbas (SeRIA), Kuantan. By using web based application, this will give the staff of SeRIA to use it via online. Assisted by the System Development Life Cycle (SDLC) methodology, the system has been built using the web-based applications such as PHP, MySQL and Apache to record attendance and report the presence of staff. This system will allow staff to record daily attendance, to apply for leave and they can see their profile and also leave application status, while the administrator could see staff attendance reports and generate attendance reports. Secretary will manage for certifying the staff leave application while headmaster will manage the application off either approve or reject the staff leave application. Additionally, SSMMS can reduce time and management cost. The implementation of this system will minimize the usage of conventional system and maximize the usage of computers in the organization. In conclusion, hopefully this system could improve the management in the organization

REFERENCES

- Definition of Attendance, http://oxforddictionaries.com/definition/attendance, retrieved from Oxford Dictionaries Online, 10th October 2011.
- [2] Saraswat, C., & Kumar, A, "An Efficient Automatic Attendance System using Fingerprint Verification Technique," International Journal on Computer Science and Engineering (IJCSE), Volume 2, 2010, Page(s): 264-269
- [3] L.E Reed (1998). FRONTIERS IN EDUCATION CONFERENCE, 1998. FIE '98.28TH ANNUAL : Performing A Literature Review, Vol. 1, Page. 380-383.
- [4] Aplus MyKad Attendance System, http://www.aplus.com.my/mycard.htm, retrieved on 4th November 2011.
- [5] M. Kaur, M.Singh, A.Girdhar, and P. S. Sandhu, World Academy of Science, Engineering and Technology, pp. 497-502, 2008
- [6] Fingerprint Biometric Time Attendance Management System, http://www.p2digital.com/#tour, Retrieved 27 October, 2011.

APPENDIX A

Gantt chart

-	8	58	\$	8	8	2	8	5	*	4	đ	5	#	13	ri	÷	đ	•	••	-	ø	5	4	3	N	١	
Report Submission!	Draft Report Submission	Chapter 5 and 6 Submission	System being used and examined	MAINTENANCE	Implement to user	IMPLEMENTATION	Chapter 4 Submission	Determine errors	Developing the configuration code	DEVELOPMENT AND TESTING	Complete Report Submission	Chapter 3 Submission	Designing interfaces	Plotting Diagrams	DESIGN	Chapter 2 Submission	Chapter 1 Submission	identifying the Requirement	Analyzing the System	Finding Existing System	Information Gathering	ANALYSIS	Make a Draft	Tible Confirmation	Find Tible	PLANNING	
1 day	0 days	5 days	30 days	30 days	30 days	30 days	0 days	20 days	40 days	60 days	1 day	1 day	15 days	15 days	30 days	0 days	0 days	7 days	7 days	7 days	14 days	35 days	2 days	1 day	2 days	5 days	
Mon 12/23/13	Fit 12/13/13	Mon 11/25/13	Fri 10/4/13	Fri 10/4/13	Fri 8/23/13	Frt 8/23/13	Wed 10/23/13	Fri 7/26/13	Fil 5/31/13	Frt 5/31/13	FI 517/13	Mon 5/6/13	Fri 5/10/13	Fri 4/19/13	Frt 4/19/13	FI 3/29/13	FI 31513	Wed 4/10/13	Mon 4/1/13	Thu 3/21/13	Fri 3/1/13	Fri SVIVIS	Wed 2/27/13	Tue 2/26/13	Fil 2/22/13	Frt 2/22/13	
Mon 12/23/13	Fit 12/13/13	Fil 11/29/13	Thu 11/14/13	Thu 11/14/13	Thu 10/3/13	Thu 10/3/13	Wed 10/23/13	Thu 8/22/13	Thu 7/25/13	Thu 8/22/13	FI 517/13	Mon 5/6/13	Thu 5/30/13	Thu 5/9/13	Thu 5/30/13	Fit 3/29/13	FILISHS13	Thu 4/18/13	Tue 4/9/13	FI 3/29/13	Wed 3/20/13	Thu 4/18/13	Thu 2/28/13	Tue 2/26/13	Mon 2/25/13	Thu 2/28/13	
			ы	22	17	ţ		8	ń	4			đ	ø	Ch.			60	7	n	-	•	ω	64			
																										_	3
																	•				C	ſ	F	24	2	9	Mar
																♦ 3/25	4 3/15	Ģ	P ⁴	Ç	ļ	Ĵ			5	9	Na Na
											•	¢ 56		ļ	T	ezre 🌩	\$ 3115	Ç	P	P	Ç	ļ	F		₽.	9	o war Apr way
											♦ 5117	¢.5i6	ļ,	Ç	ļ	6200	♦ 3/15	Ç	9 4	P	Ç	ļ		7	P	9	a war vor way un
											S117	\$56	Ū,	Ç	ļ	\$ 3/29	♦ 3/15	Ç	•		Ç	ļ			P	9	a war vor way you you
								ļ.	ļ		♦ 5117	♦ 516	ŗ	ŗ	ļ	ezre 🔶	\$ 3/15	Ç	•		Ç	ļ.	~		P	9	a var var var var o
								ļ	ļ	ļ	♦ 5117	♦ 585	ŗ	Ç	ļ	4 3/29	3115	•	•		Ç	ļ	~		P	-	dae finv inn unn kau stv jau a
						Ĵ	•	ŗ	ļ		¢ 5117	♦ S65	ŗ	D	ļ	4 3/29	3/15	•	• •		Ç	ļ				9	the date driv into unto Abili addition of
		•			[ļ	↓ 10/23	ſ	ļ		¢ 5117	\$56	Ū)	ļ	♣ 323	315	•	•••		Ç						o has do no un un va do no vo
	▲ 1211	♦ 11/23	ſ	Ī	<u>ר</u>	Ţ	♦ 10223	Ç	J		¢ 511	\$56		D	ļ	¢	¢ 315	•	••		()				P	-	a war vor way un un vug sep oor vor ues

APPENDIX B

User Manual

SSMMS User Manual

INTRODUCTION	This is the attendance and leave application online.
OBJECTIVE	• To upgrade the current attendance and leave application
	record that is manually processed to online.
	• To improve the mechanism of receiving, approving and
	rejecting leave application through system.
	• To solve administrator problem on viewing attendance
	report.
COMPONENT	APPLY
(Leave)	-function for Staff of SeRIA can apply for Annual, Emergrency
	and Medical leave only.
	-must insert a correct start date, due date and reason for the
	leave.
	<u>CERTIFY</u>
	- Function for Secretary to certify or not the leave application.
	APPROVE
	-function for Headmaster to approve or not the leave
	application.
	ADD NEW DATA
	-Function for admin to insert a new data or the staff in system.
COMPONENT	LOG IN
(Attendance)	-Function for SeRIA's staff to login attendance time
	LOGOUT
	-Function for SeRIA's staff to logout attendance time
	GENERATE REPORT
	-Function for administrator to generate daily attendance report.
	ADD NEW DATA
	-Function for admin to insert a new data or the staff in system.

Leave Module

Staff

TO LOGIN

NOTE: In this case the username and password are not case-sensitive.

- 1. Type in your Staff ID
- 2. Type in your password. Make sure to enter in the correct password.
- 3. Click Login button

Login
Staff Id
Password
Login Reset

TO APPLY THE LEAVE

NOTE: For every page, it provides user a shortcut button to go to another page without re-enter the login. You must complete all the action.

1. On the main menu, choose APPLY. Fill in the Application Form:

Name :Rahmah Abd. Mana Position : Staff	n	NRIC :678903939 Email :rahmah@yahoo.com
Total Pending :0 day	Total Taken :4 day	Total Balance :21 day
Leave Application		
Leave Type Please choose leave From : Reason :	type V Until :	
Submit Reset		

2. On the APPLICANT DETAILS :

- i. ID : your staff id number
- ii. NAME : your name

3. On ANNUAL LEAVE information:

- i. Total: Total of leaved
- ii. Taken: Leave that has been taken
- iii. Balance: Balanced of leave

4. On DETAILS OF EVENT:

- i. Date applied: The date of applied is depend on the system date.
- ii. Leave Type: From the list box, you can choose:
 - Annual leave
 - Medical leave
 - Emergency Leave
- iii. c) Type in the date you apply for the leave in the leave from. Make sure to type in the correct format of the date:
 - (DD-MM-YYYY).Example: 04-02-2003
- iv. d) In until box, type in the end of the date of your leave .Make sure to type in the correct format of the date same as the leave from:

- (DD-MM-YYYY)
- v. f) Type in your simple and short reason why you apply for the leave in the reason box.
- 5. After that click submit button.

TO CHECK THE LEAVE

Note: check for lecturer application detail

- 1. Check for the application detail
- 2. The result of the application can check by clicking Application List at My Leave Application. So you can know whether your application have been certify, approve or rejected. There also will show your application history.
- 3. Can print the Leave Detail report by clicking Print button.

TI GENERASI IN	Lea	ve Detail		2. 9. 1. 1.
SMMS My Le	ave Application -			۵Lc
9				
	Welcome to SekIA :	Untill : 2013-12-18		
Na	me Rahmah Abd.	Period : 1		
Total Pend	ting :0 day	Date Apply : 2013-12-16		
		Leave Type : Medical		
		Reason : cneckup		
pplication	List	Status		
10 🔽 rec	ord per pages		Close	Print
Application 🏾 🔺	Start	End	Period	Status
	2013-12-18	2013-12-18	1 day	Approved
-	2013-12-16	2013-12-17	2 day	Approved
2013-12-24		2013-12-24 1 day Approved		
		and a second		

Secretary

TO LOGIN

NOTE: In this case the username and password are not case-sensitive.

- 1. Type in your Staff ID
- 2. Type in your password. Make sure to enter in the correct password.
- 3. Click Login button

Login			
Staff Id			
Password			
	Login	Reset	

TO CHECK A LEAVE APPLICATION

Note: A table will appear if have an application from staff.

1. If secretary receive an application a table will appear and show the application information such as staff name, apply date, start date, end date, period and status. For Period it will generate automatically by system

Staff's Leav	e Application					
10 v rec	ord per pages			:	Search:	
Application A	Staff Name	Date Apply	Start 🔶	End 🔶	Period 🕴	Status 🔶
-	Rahmah Abd. Manan	2013-12-16	2013-12-18	2013-12-18	1 day	Pending
Showing 1 to 1 o	f 1 entries				← Pre	vious 1 Next→

 By clicking the application button, all the detail about the lecturer application will show up.

Detail Application

Staff Information						
Staff Name :	Rahmah Abd. Manan					
NRIC :	678903939	678903939				
Position :	Staff					
Email :	rahmah@yahoo.com					
Leave Detail						
Date Apply :	2013-12-16					
Leave Type :	Annual					
Leave Reason :	rehat					
From :	2013-12-18	To :	2013-12-18			
Certified Reje	Reject					

- 3. To certify the leave application secretary just need to click the Certified button or else Reject button.
- 4. If an application is certified, the application will move to the headmaster for approval.

Headmaster

TO LOGIN

NOTE: In this case the username and password are not case-sensitive.

- 1. Type in your Staff ID
- 2. Type in your password. Make sure to enter in the correct password.
- 3. Click Login button

Login
Staff Id
Password 🛙
Login Reset

TO CHECK A LEAVE APPLICATION

Note: A table will appear if have an application from staff.

1. If secretary have certify an application, the application will move to headmaster. If headmaster receives an application a table will appear and show the application information such as staff name, apply date, start date, end date, period and status have been certified. For Period it will generate automatically by system

10 🔻 rec	ord per pages			5	Search:	
Application 🔺	Staff Name	Date Apply 🔶	Start 🔶	End 🔶	Period 🕴	Status
-	Rahmah Abd. Manan	2013-12-16	2013-12-18	2013-12-18	1 day	Pending

2. By clicking the application button, all the detail about the lecturer application will show up

Detail Application

Staff Information						
Staff Name :	Rahmah Abd. Manan	Rahmah Abd. Manan				
NRIC :	678903939					
Position :	Staff					
Email :	rahmah@yahoo.com					
Leave Detail						
Date Apply :	2013-12-16					
Leave Type :	Annual					
Leave Reason :	rehat					
From :	2013-12-18	Until :	2013-12-18			
	_					

- 3. To approve the leave application headmaster just need to click the Approve button or else Reject button.
- 4. If an application is approve, the result will send to staff.

Administrator

TO LOGIN

NOTE: In this case the username and password are not case-sensitive.

- 1. Type in your Staff ID
- 2. Type in your password. Make sure to enter in the correct password.
- 3. Click Login button

Login			
Staff Id			
Password			
	Login	Reset	

1. Administrator will in charge in register staff. Must fill in all information about the staff. After fill in all information, click the Register button and then the staff account will be created.

Register Staff

Staff ID :			
First Name :			
Last Name :			
Position :	Please choose	~	
NRIC			Ex:870105034458
Email			
Contact No.			
Level :	Staff	~	
Certified By :	Please choose	~	
Approved By :	Please choose 🗸		
Register Reset			

2. Like staff, administrator also can apply for leave and need to fill in the leave form.

eave Appl.	ication	
Leave Type :	Please choose leave type	V
From :		Until :
Reason :		
Submit	Reset	

3. Administrator also in in charge to update any information about school news, staff list, staff on leave, and public holiday. These can be done by clicking the Application menu bar.


4. News directory. Just fill the information and click submit. All this information will be publish at the main page.

News Direct	ory				
Date	:				
Description					
Submit	Reset				
10 v record	per pages	Search:			
No. 🔺	Date +	News	¢		
1	2013-12-02	Mesyuarat Agung PIBG pada 19/12/2013. Mohon semua guru SeR	ia hadir.	Delet	e
2	2013-12-02	Pendaftaran pelajar baharu pada 28/12/2013.		Delet	e
Showing 1 to 2 of 2	entries		← Previous	1	Next \rightarrow

5. List of staff directory. Just fill the information and click submit. All this information will be publish at the main page.

Lis	List Of Staff Directory					
	Name :					
	Position :					
	Submit Reset					
Shows	10 v recor	d(s)	Search :			
No.	Name		Position 🔶			
1	Pn. Hjh Zaini bt. A	hmad	Mudir / Gurubesar	Delete		
2	Ustaz Abd. Ghani	b. Abd. Rahman	Setiausaha	Delete		
3	Pn. Rahmah bt. A	bd. Manan	GPK Hal Ehwal Akademik	Delete		
4	Pn. Wan Maiha bt	Wan Mustafa	GPK Hal Ehwal Murid	Delete		
5	Pn. Hanisah bt. Is	mail	Ko-Kurikulum	Delete		
6	Pn. Siti Ilani bt . Ba	akeri	Setiausaha Hal Ehwal Sumber	Delete		

6. Staff on leave directory. Just fill the information and click submit. All this information will be publish at the main page.

Sta	aff On Leave Directory						
	Name :						
	Start Date :						
	Last Date :						
	Reason :						
				<u>A</u>			
	Submit Reset						
10	▼ record per pages			Search:			
No [*]	Name 🔶	Start 🔶	Untill 🔶	Reason			
1	Ustazah. Tg. Noraziru bt. Tg. Nazri	2013-12-08	2013-12-13	Cuti rehat			Delete
2	Pn. Hanisah bt. Ismail	2013-12-12	2013-12-17	Kursus di Putrajaya			Delete
Showi	ing 1 to 2 of 2 entries				← Previous	1	$Next \to$

7. Public holiday directory. Just fill the information and click submit. All this information will be publish at the main page.

Public Holid	ay Directory					
Public Holiday	:					
Description			h			
Submit	Reset					
10 v record	l per pages		Search:			
ld 🔺	Public Holiday	Description				
1	2013-12-25	Hari Krismas			Delet	te
2	2014-01-01	Tahun Baru 2014			Dele	te
Showing 1 to 2 of 2	entries			← Previous	1	$Next \to$

All Users

1. All users personal information can be update by own self. Just click the Update Profile Button.

Personal Information				
Name :Zul Fazrin Zainul Abidin				
NRIC :900118035879				
Staff ID :9999				
Position : Staff				
Email :zulfazrin90@gmail.com				
Contact:0179487323				
Update Profile Change Password				

2. After that fill in all the information and click submit.

Update Personal Information	×
First Name Zul Fazrin	
Last Name Zainul Abidin	
Position Staff	
Email zulfazrin90@gmail.com	
Contact: 0179487323	
Submit Close	

3. All users can change password by clicking Change Password button.

Change Password	×
Current Password	
New Password :	
Confirm New Password	
Submit Reset Close	

Attendance Module

Staff

1. To login to attendance, staffs needs to click the attendance link at the menu bar on the main page. After that attendance login page will pop up in new window.



2. TO LOGIN

NOTE: In this case the username and password are not case-sensitive.

- i. Type in your Staff ID
- ii. Type in your password. Make sure to enter in the correct password.
- iii. Click Login button

NUMBER OF STREET	SEKOLAH RENDAH IBNU 'ABBAS LOT LIT294, KAMPING BARU APK, FERMATANG BADAR, 25150 KUANTAN, PAHANG DARUL MARAMUR. SSMMS (ATTENDANCE)
	Login Staff Id: Password:
	Login reset

3. After clicking the login button, a welcome message pop up will come out.



4. Staff directed to the attendance page, in this system this is the only page for staff.

♠ SSMMS (Attendance)					()Logout	
	Log In Time	Log Out Time	Change Password			
Attendance Record						
Shows 10 v record(s)			Search :			
Date	Day	In	Out			
16-12-2013	Monday	10:41:26	10:41	:38		
Shows 1 to 1 from 1 record(s)			\leftarrow F	Previous 1	$Next \! \rightarrow $	

5. For attendance, to log in need to click the Log In Time button and after work, to log out need to click the Log Out Time button.



- 6. The time and date will appear in the table Attendance Record.
- 7. User also can change password by clicking the Change Password button.

Change Password	×
Current Password	
New Password	
Confirm New Password	
Submit Reset Close	

Administrator

1. To login to attendance, staffs needs to click the attendance link at the menu bar on the main page. After that attendance login page will pop up in new window.



2. TO LOGIN

NOTE: In this case the username and password are not case-sensitive.

- i. Type in your Staff ID
- ii. Type in your password. Make sure to enter in the correct password.
- iii. Click Login button

SEKOLAH RENDAH IBNU 'ABBAS LOT L'ILDA, KAMPING BARU MPK, PERMATANG BADAK 25150 KUMNIAN, PAHANG DARU MPK, PERMATANG BADAK 25150 KUMNIAN, PAHANG DARU MIKAUNAN SSMMS (ATTENDANCE)	
Login Staff Id: Password:	
Login reset	

3. After clicking the login button, a welcome message pop up will come out.



4. Administrator is directed to the home page, there have a menu bar Staff Application and Staff Attendance Report.

♠ SSMMS (Attendance)	Staff Application •	Staff Attendance Record	() Logout		
Welcome Administra	tor 1	Û			
Terima Kasih kerana menggunakan SeRIA Staff Movements Management System (SSMMS) . Sistem in adalah sebuah sistem yang dibangunkan bagi memudahkan kakitangan SeRIA untuk merekodkan waktu kedatangan pejabat. Sistem ini membenarkan Administrator untuk: -Mendaftar kakitangan baru -Memaparkan kakitangan SeRIA -Memadam kakitangan SeRIA yang tidak lagi berkhidmat -Memaparkan rekod kehadiran kakitangan SeRIA					

5. Administrator must register the staff as user of this application. Must fill in all the information about the user.

Register Staff

Name	
Staff ID	
NRIC	
Position	Please choose 💌
Contact No.	
Register Reset	

6. Administrator can view list of staff that have been registered and can delete the staff if the staff no longer work there.

List of Staff

Shows 10 v record(s)				Search :			
No	Staff ID	Name	NRIC	Contact No.	Position	Action	
1	2099	Mohd Ali Bin Hassan	87565566	01988888888	Staff	🔝 Delete	
2	1011	Pn. Hjh Zaini bt. Ahmad	12121212121	1221212	Staff	🔝 Delete	
3	1022	Ustaz Abd. Ghani b. Abd. Rahman	82382382323	0192882822	Staff	🔝 Delete	
Shows 1 to 3 from 3 record(s)						1 Next →	

7. When click the Delete button, pop up message will appear for confirm delete or not.



8. Administrator can view the daily Attendance Record and can print it by clicking print button.

Attendance



Attendance Record on 16 Dec 2013

Shows 10 record(s)				Search :			
No	Staff ID	Name	Date	Log In	Log Out		
1	2099	Mohd Ali Bin Hassan	16-12-2013	07:34:33	07:36:41		
2	1011	Pn. Hjh Zaini bt. Ahmad	16-12-2013	10:41:26	10:41:38		
Shows	Shows 1 to 2 from 2 record(s)						