



FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
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TITLE:

PREGNANCY RECORD & GUIDELINES SYSTEM

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DECLARATION

I hereby declare that this project report entitled
PREGNANCY RECORD & GUIDELINES SYSTEM
is written by me and is my own effort and that no part has been plagiarized without
citations.

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(WONG ZHIE PIENG)



I hereby declare that I have read this project report and found this project report is sufficient in term of the scope and quality for the award of Bachelor of Computer Science (Software Development) with Honours.

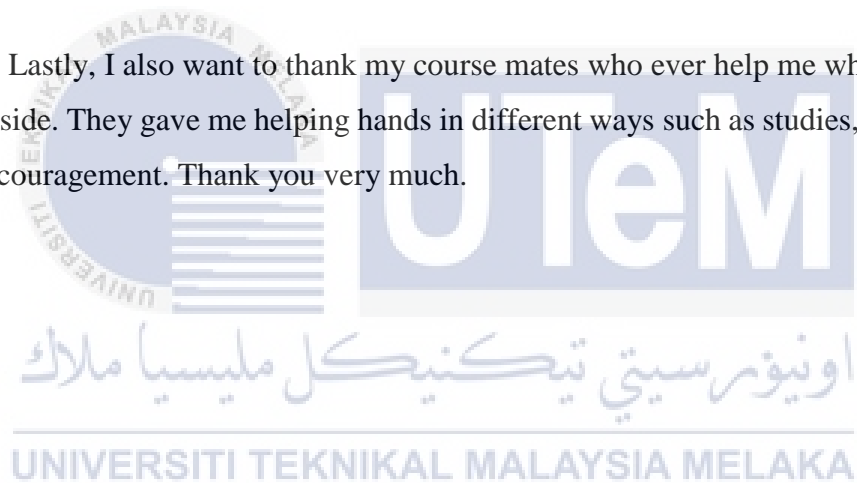
SUPERVISOR: _____

Date: _____

DEDICATION

I would like to dedicate this report to my family who always fully support me either through mentally or financially. Whenever I faced difficult situation, I will think that they are having high hopes on me. My family is the source of energy to help me get over all the obstacles.

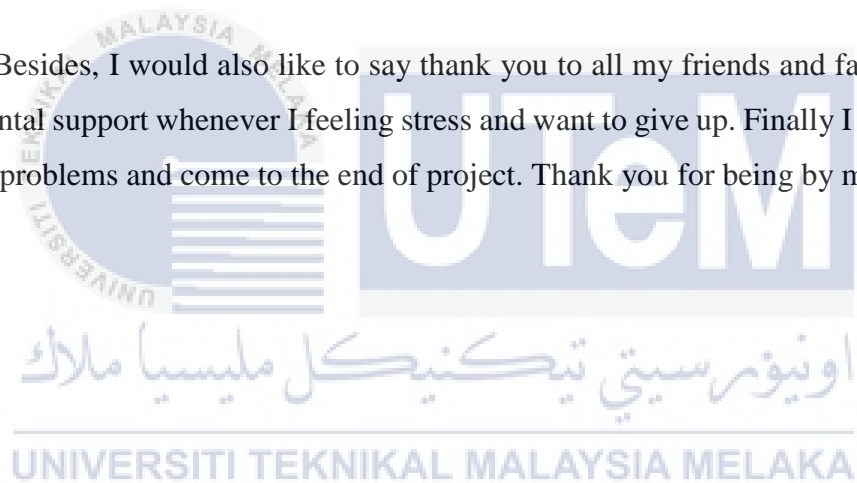
Lastly, I also want to thank my course mates who ever help me when I need them by my side. They gave me helping hands in different ways such as studies, transportation, and encouragement. Thank you very much.



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First of all, I would like to say thank you to my supervisor of this project, Dr. Azah Kamilah Binti Muda who guide me all along on the development of this project. She let me know the weakness of the project and provide suggestions on how to improve the system so I can build it successfully.

Besides, I would also like to say thank you to all my friends and family who gave me mental support whenever I feeling stress and want to give up. Finally I have overcome all the problems and come to the end of project. Thank you for being by my side.



ABSTRACT

Pregnancy Record & Guidelines System is a web-based system that designed to manage the pregnancy records and provides pregnancy knowledge. Nowadays, pregnant mother have to bring the pink book everywhere they are going at any time. The record can be lost or read by others if the book is missing accidentally. In order to protect the record, it is good to digitalize the book into system. Furthermore, it is much more convenience. Others than that, mostly people lack of pregnancy knowledge especially teenager. It is good to be prepared before we need it. Waterfall model is the suitable methodology that will be used to build PRG System due to this system has the clear and fixed requirements. A phase is starting only when the previous phase is end. Thus, there is no overlapping among all the phases. This model is easy to manage because each phase has specific deliverables. This project will develop a system which manage the records of pregnant women. The doctors and nurses are the main users for this part of system. No more paper work is needed as everything can be done by using this system. Nurses can make an appointment with the pregnant women and noted down in the system. Other than that, for those who has no experience about pregnancy especially pregnant women, they can surf through the other website which provided pregnancy guides. The pregnancy guides included healthy food guide, exercise guide and etc. All those information about pregnancy which hope to improve the knowledge of the mothers. Of course, gentlemen and non-pregnant women are encouraged to study these useful life knowledge through this website. Lastly, pregnant women are able to log into the system to view their information, health records and coming appointment.

ABSTRAK

Sistem Rekod & Garis Panduan Kehamilan adalah sistem web yang direka untuk menguruskan rekod kehamilan dan membekalkan pengetahuan kehamilan. Kini, ibu hamil perlu membawa buku merah jambu ke mana mereka pergi pada bila-bila masa. Rekod itu boleh hilang atau dibaca oleh orang lain jika buku itu hilang secara tidak sengaja. Sistem adalah lebih baik bagi melindungi rekod tersebut. Selain daripada itu, kebanyakannya orang kurang pengetahuan kehamilan terutamanya remaja. Waterfall model adalah metodologi yang sesuai yang akan digunakan untuk membina Sistem PRG kerana sistem ini mempunyai keperluan yang jelas dan tetap. Fasa bermula hanya apabila fasa sebelumnya berakhir. Oleh itu, tidak ada pertindihan di antara semua fasa. Model ini mudah dikendalikan kerana setiap fasa mempunyai hasil yang spesifik. Projek ini akan menghasilkan sistem yang menguruskan rekod wanita hamil. Doktor dan jururawat adalah pengguna utama untuk bahagian sistem ini. Tiada kerja kertas lagi diperlukan kerana segala-galanya boleh dilakukan dengan menggunakan sistem ini. Jururawat boleh membuat temu janji dengan wanita hamil dan diperhatikan dalam sistem. Selain itu, bagi mereka yang tidak mempunyai pengalaman mengenai kehamilan terutamanya wanita hamil, mereka boleh melayari laman web lain yang menyediakan panduan kehamilan. Panduan kehamilan termasuk panduan makanan yang sihat, panduan latihan dan lain-lain. Semua maklumat tentang kehamilan yang diharapkan dapat meningkatkan pengetahuan ibu. Sudah tentu, lelaki dan wanita yang tidak hamil digalakkan untuk mempelajari pengetahuan hayat berguna ini melalui laman web ini. Akhir sekali, wanita hamil dapat log masuk ke sistem untuk melihat maklumat, rekod kesihatan dan temu janji yang akan datang.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This project proposes a web-based system named Pregnancy Record & Guidelines (PRG) System focusing in pregnant women and medical staff. Nowadays, pregnancy record for every single pregnant woman will be written in a pink book which is medical health record of pregnancy mother book. Pregnant mother have to bring the pink book to everywhere and every time and the record can be lost and read by everyone if the pink book is missing accidentally. In order to protect the data from lost and improve the confidential and security, it is good to digitalize the pink book into a system.

With this system, there have an authentication module to ensure the confidential and a database that contain all the records. Sometimes, pregnant women might forgot their coming appointment, they will be a SMS reminder in this system. Besides that, pregnant women can also get some guidelines about pregnancy knowledge and how to taking good care on herself through the websites. To fulfill the requirement of this system, research about pregnancy is needed. Other than that, an interview with pregnant women to obtain more information about the inconvenience part of this pink book.

After gather all the information, system planning and design will conduct. The system will implements and testing afterward. This system is built for trying to help both pregnant woman and hospital to make the flow of medical check-up run smoothly. PRG system will separated in three parts, one part will be used by medical staff who are doctors and registrar nurses. The others part is built for public and last part is for pregnant women.

Registrar nurses can register pregnant woman, arrange their appointment with doctors and send reminder to pregnant women. The doctors can insert the health information of mother and baby through PRG after the medical check-up. For pregnant woman, they can log into the system to view their information, health records and appointment. Some guidelines can be study through the website to improve their knowledge on how to take care of themselves. This project consists of eight modules which includes authentication module, registration module, mother personal details module, appointment module, mother health records module, baby health records module, SMS reminder module and health care module.

1.2 Problem Statement

i. Pregnant mother have to bring the pink book everywhere and anytime

- The pink book is like a note book for a pregnant woman. It recorded the health status of a pregnant women and it is so important for them to bring them everywhere. But, it can be inconvenience to carry a big book into the hand beg, because they have to bring many things in their hand bag such the card, their purse, their make ups, their smartphones or even car and home keys. Somehow, they might also forget to bring the book out

ii. The record can be lost and read by everyone.

- This problem happen when the book is lost, the pink book does not have a lock on it, and any person can read through if someone found the book. The personal detail of the pregnant woman such as handphone number and address can be know which is not secure.

iii. Mother might forgot their appointment.

- They do not have any reminder to remind them about their appointment and they have to remember it themselves. The appointment is important for them to get the health status about their babies.

iv. Users lack of knowledges on healthcare for the first time

- For those who do not have experiences about pregnancy especially pregnant women, they may go through this website and learn some knowledge on how to take care of herself.

1.3 Objective

1. To digitalize the existed pink book into a system.
2. To improve the confidentiality and security of pregnant mother record.
3. To remind mother to attend the appointment.
4. To provide some pregnancy knowledge for public.

1.4 Scope

This project consists of eight modules which included

i. **Authentication module**

Users: Doctor, Nurse, Mother

Function: To differentiate the identity of user to get the right for different modules.

ii. **Registration module**

Users: Nurse

Function: To register new medical staff and new pregnant woman.

iii. **Mother personal details module**

Users: Nurse, Mother

Function: To view the personal details of each pregnant woman. Mother can only view the personal detail without modify.

iv. **Appointment module**

Users: Doctor, Nurse, Mother

Function: To make new appointment and view the coming appointment date and time. Mother can only view the appointment without modify.

v. Mother health records module

Users: Nurse, Mother

Function: To record the mother health information by nurse after the medical checkup. Mother can only view the health record without modify.

vi. Baby health records module

Users: Doctor, Mother

Function: To record the baby health information by doctor after the medical checkup. Mother can only view the health record without modify.

vii. SMS reminder module

Users: Nurse

Function: To send a SMS reminder to pregnant woman.

viii. Health care module

Users: Public

Function: To study some knowledge about pregnancy and learn how to take care of baby.

1.5 Project Significance

This project will develop a system which manage the records of pregnant women. The doctors and nurses are the main users for this part of system. No more paper work is needed as everything can be done by using this system. Nurses can make an appointment with the pregnant women and noted down in the system. Doctors can view the coming appointment without asking

the nurse. Nurses are able to send a SMS reminder to pregnant women to remind them the coming appointment. Nurses can record the medical check-up report of the pregnant women via the system, no hand-write recording is necessary.

Other than that, for those who has no experience about pregnancy especially pregnant women, they can surf through the other website which provided pregnancy guides. The pregnancy guides included “How Your Baby Develop”, “Your Health In Pregnancy”, “Antenatal Care”, “Feeding Your Baby”, “What You Need For Your Baby” and “The Early Week”. All those information about pregnancy which hope to improve the knowledge of the mothers. Of course, gentlemen and non-pregnant women are encouraged to study these useful life knowledge through this website. Lastly, pregnant women are able to log into the system to view their information, health records and coming appointment.

1.6 Expected Output

Every medical staffs must log into the system to verify their identity for ensure the security of records. For nurses, they are able to register for new medical staff and a new pregnant mother. They also make appointment with pregnant mother and send SMS reminder to mother for medical check-up by using the system. Besides, they are able to record the mothers and babies health information into the system. For doctors, they can view the health record of the mother and baby and the coming appointment.

There is also a website design for public especially for the pregnant women. Pregnancy guides can be found to improve their knowledge about pregnancy. They can learn about how to take care of herself and baby. Lastly, pregnant women are able to log into the system to view their information, health records and coming appointment.

This project is designed to digitalize the existing pink book to save paper used and also provide a website for mother to learn more about pregnancy knowledge.

1.7 Conclusion

In conclusion, the PRG can provide an effective way to record the healthy status of mother and baby compared to record on the pink book in term of security, confidentiality, accessibility and functionality. Besides, the environment of learning the pregnancy guide should be easy to understand and interesting which can lead them to keep on surfing the website to know more about pregnancy.



CHAPTER 2

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

In the previous chapter, an overall explanation on the problem statements and objectives of the project has been given. This project will develop a system that is able to register new pregnant woman, making new appointment, store health record of mother and baby, SMS reminder and some simple pregnancy guide.

In this chapter, some research is went through literature review is done. Other than that, the analysis on existing system from the aspect of strength and weakness will be done in this chapter. Finally methodology will be stated.

2.2 Facts and Findings

For this project, some researches are ongoing to study more about pregnancy. In additional, this sections will divided into 3 parts which is the definition and evolution of website, html as shown in section 2.2.1, section 2.2.2 is about the existing websites and 2.2.3 is study on pregnancy.

2.2.1 HTML and SGML

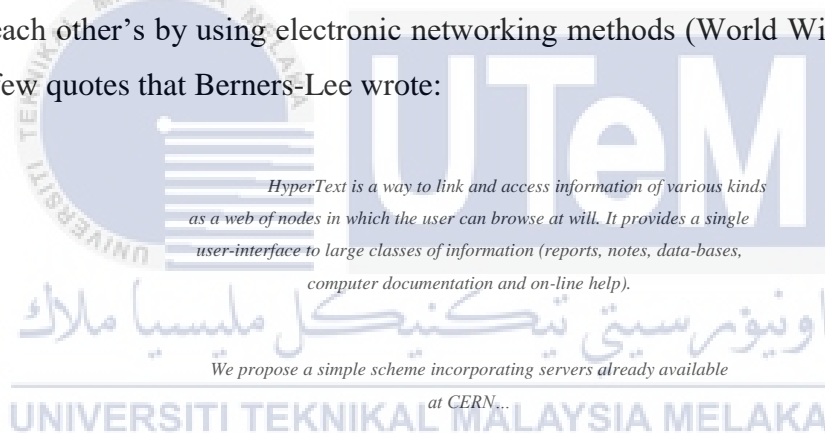
HTML stands for Hyper-Text Markup Language which is one type of coding language. HTML uses markups method to create hyper-text. HTML is also a subset of the more general simplified markup language called SGML (Standard Generalized

Markup Language). There is some evolution of HTML, these changes have their reasons.



Figure 2.2.1.1 Tim Berner-Lee, the Director of World Wide Web

Time Berner-Lee worked in CERN (Centre European pore la Recherche Nucleaire) in 1989. He recommended a system that allow scientists to share their work with each other's by using electronic networking methods (World Wide Web). Here are a few quotes that Berners-Lee wrote:



Hypertext is a way to link and access information of various kinds as a web of nodes in which the user can browse at will. It provides a single user-interface to large classes of information (reports, notes, data-bases, computer documentation and on-line help).

We propose a simple scheme incorporating servers already available at CERN...

A program which provides access to the hypertext world we call a browser...

It would be inappropriate for us (rather than those responsible) to suggest specific areas, but experiment online help, accelerator online help, assistance for computer center operators, and the dissemination of information by central services such as the user office and CN [Computing & Networks] and ECP [Electronics & Computing for Physics] divisions are obvious candidates.

WorldWideWeb (or W3) intends to cater for these services across the HEP [High Energy Physics] community.

2.2.2 Existing Record System



Figure 2.2.2.1 Pregnancy Record Book

The current pink book is in the book form that the mother needs to carry with. The pink book is like a note book for a pregnant woman. It recorded the health status of a pregnant women and it is so important for them to bring them everywhere. But, it can be inconvenience to carry a big book into the hand beg, because they have to bring many things in their hand bag such the card, their purse, their make ups, their smartphones or even car and home keys. Somehow, they might also forget to bring the book out.

The pink book does not have a lock on it, and any person can read through if someone found the book. The personal detail of the pregnant woman such as handphone number and address can be know which is not secure.

They do not have any reminder to remind them about their appointment and they have to remember it themselves. The appointment is important for them to get the health status about their babies.

2.2.3 Existing Website

The websites www.mypregnancyguide.com and www.thebump.com is a website that contains pregnancy guide. There have a lot of information can be found in both website.



Figure 2.2.3.1 The homepage of www.mypregnancyguide.com



Figure 2.2.3.2 The homepage of www.thebump.com

2.2.3.1 The Modules in Existing Website

There have 7 modules in MyPregnancyGuide which are My Preconception, My Pregnancy, My Baby Names, My MotherHood, Tool & Stuff, Shopping and Other Resources. Inside these modules contained several sub modules as shown in the figures 2.2.3.1.1 until 2.2.32.1.7.



Figure 2.2.3.1.1 My Preconception Module



Figure 2.2.3.1.2 My Pregnancy Module

Figure 2.2.3.1.3 My Baby Names Module

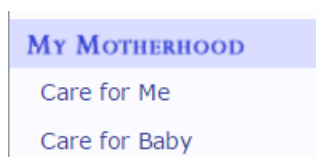


Figure 2.2.3.1.4 My Motherhood Module



Figure 2.2.3.1.5 Tools & Stuff Module



Figure 2.2.3.1.6 Shopping Module



Figure 2.2.3.1.7 Other Resources Module

For TheBump, there have 3 modules which are Getting Pregnant, Pregnancy and Newborn & Baby. The sub-modules of these 3 modules is as in the figure 2.2.3.1.8 until 2.2.3.1.10.

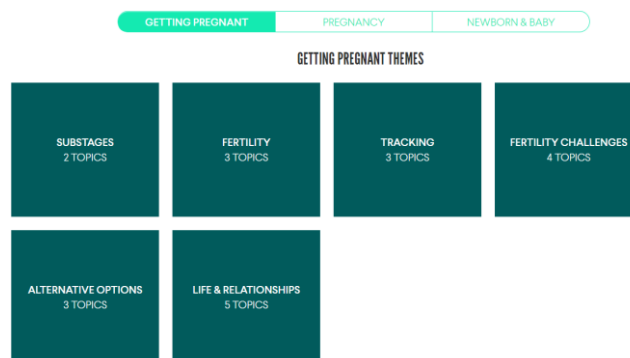


Figure 2.2.3.1.8 Getting Pregnant Module