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PATIENT APPOINTMENT SYSTEM

FLORANCE CHONG SOOK KUAN

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA
2010
DECLARATION

I hereby declare that this project report entitled

PATIENT APPOINTMENT SYSTEM

Is written by me and is own effort and that no part has been plagiarized without citations.

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SUPERVISOR: ___________________________ Date: 08/6/2010

(Dr. Mohd. Khanapi Abd. Ghani)
DEDICATION

To my beloved parents, your supports and love are my greatest inspiration.

To all my friends, I thanks for your kindness, encouragement, and guidance throughout the period of my study here.

To my lecturer, I appreciate all the advices and critics given in order to make me a better student.
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Universiti Teknikal Malaysia Melaka (UTeM) degree student are required to be involved in the final year project as one of the prerequisite for graduation. It is the main reason this project is conducted as well as to train student to apply what they have learn before simulating the real working world environment. The researches and assessment are carried out during study time in order to challenge the student to be capable of managing time and resources to be more competent in applying and sharpening their knowledge and skills. However, the product produced in the end of the project can still be improved for upcoming workforce. Therefore, I am grateful to the university for providing adequate facilities and services in order to complete my project.

Much of credits have to go to my supervisor, Dr. Mohd. Khanapi Abd. Ghani for all the guidance and patience in guiding me in carrying the research and doing my project. Besides that, I also want to thank either of my parents that continue to support me both morally in advice and support or physically in financial and facilities. Last but equally important, appreciation have to go to my fellow course mate as my friends in providing moral support and advice to lead me to be able to complete the project.
ABSTRACT

This Patient Appointment System (PAS) is used by the doctor, nurse and patients. This system can be used by the patient to view their appointment and sent reminder to the patient to attend appointment few days before appointment date. This system is a back end application which functioning as an appointment reminder. This system will auto search from the database to get patient contact and send to patient each day once via SMS and email. Besides that, these systems also ease for the patient to make appointment with the doctor without go to the hospital for checking the available appointment date and it also can let the patient to view their desired doctor time table. In the other hand, the doctor also can view their available time to make appointment for the patient immediately without referring to documentation. In addition, the patient who wants to visit outpatient department can make an appointment via SMS. The system will then reply the patient request via SMS for confirming the request appointment date. After the outpatient makes the appointment, the nurse also can check the quota using the system and to manage the maximum amount for each day.
ABSTRAK

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CHAPTER I

INTRODUCTION

1.1 Project Background

This Patient appointment system is used by the doctor, nurse and patients. This system can be used by the patient to view their appointment and sent reminder to the patient to remind patients attend appointment three days before appointment date. Besides that, these systems also ease for the patient to make appointment with the doctor without go to the hospital check the available appointment. On the other hand, the doctor also can view their available time to make appointment for the patient immediately without referring to document such as doctor schedule that record in the thick books. In additional, the patients that want to go for outpatient department can SMS and make appointment. After the system process, it will reply SMS to the outpatient to confirm their appointment status such accepted of rejected.

1.2 Problem Statement

i) Time consuming in handling long queue and make appointment
   It was waste of time for patient purposely go to hospital just for making appointment and also waiting for long queue when there needs a doctor treatment.

ii) Forget to attend appointment
Usually, the patients will get a long waiting period of appointment. Therefore sometime it is hard for patient to remember when their appointment date is and even forgets to go for their appointment due to their busyness.

iii) Delay the process of check appointment
    Currently, most of the hospital used manual system to make appointment. The patient cannot decide the date for the appointment. It is hard for the doctor or patient to check their appointments.

iv) Lack of efficiency to make appointment
    Need to go hospital personally to make appointment with the nurse. Then only can get consultation from the doctor. Sometime cause the patient to travel several times just to make appointment.

v) Hard to check doctor availability
    Doctor time table only can know when we go to ask the nurse for it or when the time for we go make appointment. It troubles the patient to know doctor time table.

vi) Hard to predict the quota for outpatient department
    Patient who want to come for outpatient department sometime will waste their time on waiting and end up with fail to get doctor consultation because of the quota full.

1.3 Objective

i) Remind patient for appointment
    This system will remind the patient to attend their appointment with the doctor via email and SMS. Especially for those appointments that make long time ago.

ii) Help to manage patient appointment date
This system help to manage the appointment time for the patient. Let the patient to view the appointment they make and also let the staff to view their time table and manage their time with patient.

iii) View the available appointment date for the doctor

Patient can check the doctor availability time and arrange their time with the doctor with the system.

iv) Provide online appointment which can save patient time

The patient can online from the current place that can access to the internet to make appointment. The system helps the patient to save their travel time to the hospital.

v) Solve long queue problem in the hospital

The patient can make appointment before they want to consult the doctor and no need to wait so long queue. They can just come around that appointment time. Reduce their waiting time.

vi) Provide SMS service for outpatient

The patients can SMS to the system with the specific format and make appointment with that specific date. Besides that, the system also will reply the patient to notify the patient whether their appointment accepted or rejected.

1.4 Project Scope

1.4.1 Module

i) Login and logout

This module is used to manage the user access into the system. The system is intended to be used by doctor, nurse, and patient. Doctor, nurse, and patient can also access into the system by entering identification number.
ii) Manage patient appointment
   This module provides that patient register account, edit the user account and let the user to make appointment and view the appointment they make.

iii) Cancel patient appointment
   This module can use by the patient for canceling the appointment they had made previously using the system.

iv) View available appointment for the doctor
   This module is to view the appointment for the doctor with the patient. And also their off day is when.

v) Reminder for patient to attend appointment
   This module is to remind the patient the appointment date and time they had made. This module functions with sending email and SMS to the patient to remind the user.

vi) Patient online appointment
   The module provides the user to make appointment and choose preference doctor online.

vii) Doctor time table
   This module is let the doctor to add their time table in the calendar and avoid the patient to view their time table.

viii) Manage quota for outpatient
   This module is the let the authorize staff to edit the quota amount for the outpatient SMS reply
1.4.2 Target User

i) Nurse
   a. This system will let the user to login to the system with correct password and username.
   b. This system let the user to view the timetable and add the doctor timetable.
   c. This system let the outpatient department staff to edit the quota available from the doctor.

ii) Doctor
   a. This system will let the user to login to the system with correct password and username.
   b. This system let the user to view their appointments with the patient and also add their own timetable.

iii) Patient
   a. This system will let the user to login to the system with correct password and username.
   b. This system let the user to make appointment with their desired doctor.
   c. This system let the user to view their appointment and cancel their appointment.
   d. This system let the user to SMS to make outpatient appointment.

1.5 Project Significance

This system tries to contribute to the following aspects:

i) Time management
   Patient Appointment System enables doctor to record their event and appointment with patient. This can always remind and update doctor with their appointment.
ii) Check doctor availability
   With this system, patient can make an earlier appointment with doctor easily. Patient can check doctor availability through this system and make suitable appointment.

iii) Reminder
   Patient Appointment System can act as a reminder for patient. It will remind patient with their appointment date and time by sending email and SMS.

iv) Easy to make appointment
   Patient can check doctor time table and make appointment by search through this system. It is easy and convenient as patient online at home rather than walk in appointment.

v) Save time
   By using this system, patient can arrive at hospital before their appointment. This can save their time on waiting.

vi) Avoid long queue
   This system can avoid long queue problem at hospital. Each patient has their own appointment time, so doctor can consult patient within the time before next patient.

1.6 Expected Output

The patient appointment system has not yet existed for the use of both government and private hospital. The development of the web-based patient appointment system will definitely yields positive effects from the fields. The expected result from the last stage of the project is figure out as below:

i) Security measures and access control on confidential files
   This system only enable authorized user to login and do the management task. Different user will have different views of data based on the users’ position.
ii) Remind via Email
The system will send the password to the user when used the forget password function. Besides that, the patient also will get the appointment reminder 3 days before the appointment.

iii) Remind via SMS
The system will send the patient appointment reminder 3 days before appointment.

iv) Make appointment via SMS(Outpatient visit only)
The system can receive SMS from the patient and reply a message to the patient whether their appointment accepted or rejected. The system also will save the SMS content to the database for the nurse to retrieve the patient data.

v) Patient appointment view
The system can use to view the patient’s made appointment and can cancel the appointment.

vi) General provider information
The system can provide suitable supplement information based on user input. Besides, they can retrieve and view their appointment timetable after they login the system.

vii) Doctor availability view
The system will let the user to choose their desired doctor timetable and they can have the doctor availability view.

1.7 Conclusion

In general, Chapter I give an overview of the study which includes background, problem statements, objective, scope, significance of study and expected output of Patient Appointment System. In the following chapter, the
project's methodology and findings will be discussed based on the facts in this chapter to build up a conceptual framework relevant to the study. Besides, project schedule and milestone will be developed to make sure the project is completed in the purposed time.
CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

In this chapter, the literature section review and past research regarding patient appointment system. The aim of the review is to find the appropriate solution and approach in developing the appointment system for Malaysian public hospitals. This will be done by conducting literature through electronic and published media and personal communication from other experts. From the literature review, the significant evolution of a project over time will be described.

A project methodology is a systematic way of performing research and system development work for this PSM. Methodology can properly refer to the theoretical analysis of the methods appropriate to a field of study which helps developer to structure, plan, and control the process for developing a software project systematically.

2.2 Facts and Findings

This section discuss about the domain and features that PAS refer from the existing system.