CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter is discussing about the methodology of the development of Mobile Patient Appointment And Helping System For Emergency. The phases of the methodology, hardware and software requirements that I used for development this system will be discussed in this chapter.

3.2 System Development Methodology

System development methodology is a division of the software development work into the different phases containing the activities with the better planning and management. It is often considered a subnet of the systems development life cycle. A suitable system development methodology is needed as a software methodology is the framework that used to plan, structure and control the processes of developing the systems. With a suitable methodology, it will lead the development of software become more efficiently and effectively.

The system development model that I used in developing the system is a Rapid Application Development (RAD) methodology. RAD is a type of the incremental model. It is a faster software development process and provides a higher quality system compare to the traditional methodology such as traditional waterfall model. In the RAD model, the components are developed in parallel manner. The RAD methodology consists of four phases which are requirement planning phase, user design phase, construction phase and cutover phase. The RAD is shown in Figure 3.1
Requirements Planning Tasks
• Users, managers, and IT staff agree upon business needs, project scope, and systems requirements
• Obtain approval to continue

User Design Tasks
• Interact with users
• Build models and prototypes
• Conduct intensive JAD-type sessions

Construction Tasks
• Program and application development
• Coding
• Unit, integration, and system testing

Cutover Tasks
• Data conversion
• Full-scale testing
• System changeover
• User training

Figure 3.1: Four phases of the RAD Model
3.3 Requirement Planning Phase

Requirement planning phase is the first phase of the RAD methodology. It is a combination of the components in the system planning phase and the system analysis phase of the system development life cycle (SDLC). The purpose of the requirement planning phases is to identify the problem statement, objective and scope of the system. The planning must be well defined in order to have a smooth way in developing the system.

There are three tasks of the requirement planning phase, which are research current situation, define requirements and finalize requirement. The research current situation task initiates the requirement planning phase by doing a research on the current environment. After doing the research, I found out there are some problem that faced by the patient or the family of the patient. They waste a lot of time when waiting at the hospital due to no appointment services are provided. There is a lack of update information on hospital. I decide to develop a Mobile Patient Application And Helping System For Emergency to solve the problems.

The define requirement, task is developing an outline of the system area model and the definition of the system scope. After the title of the project has been approved, a detailed system analysis has been conducted to estimate the system requirement and its functionality. I start to identify the objectives and the scopes of the system. The functionality of the system is expressed in the term of the process and the data that the system will support.

In the finalize requirements, the objectives and the scopes of the system are formally documented. An estimate of the duration to develop the system is planned. A Gantt Chart is prepared according to the schedule of the project that has been provided to make sure the entire project is completed on the time.