

UNIVERSITI TEKNOLOGI MARA

**DEVELOPMENT OF MEDICAL
EQUIPMENT RENTAL SYSTEM FOR
MALAYSIA CITIZENS**

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ABSTRACT

The Medical Equipment Rental System (MedRent) is a native mobile application that acts as a platform for Malaysia citizens to rent medical equipment in a community. In Malaysia, accessing healthcare is not free as some people especially low- to middle-income households are struggling in buying relatively high-priced medical equipment and they often live far away from healthcare centers. Besides, the country is also facing insufficient medical equipment. Thus, MedRent is developed to cope with these problems. The development of MedRent uses waterfall model, with the implementation of AWS Amplify framework and Google Maps API to enhance the usability of the mobile application for users to be able to do rental activities within a nearby location. It is developed on Flutter and Android Studio and run on Android smartphones. The testing done upon the mobile applicatoion shows a positive result on MedRent's functionality and usability. Upon completion of this project, the mobile application will be beneficial as a platform for medical equipment crowdsourcing among community.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter provides the background and rationale for the study. It also gives details of the significance of the medical equipment rental system for Malaysia citizens, the issues and problems that led to this project.

1.2 Background of Study

Healthcare system refers to a structure that is responsible for the health of people's health. "Overview of the United States Healthcare System" (2020) suggested that a healthcare system should include safety, efficacy, patient-centeredness, timeliness, efficiency, and equity as its focus areas. These six areas explain on how patients should be safe while receiving the care, how the system uses evidence-based treatments, how sensitive the system is to patients' needs, how the system provides care in a timely manner, how the system makes the best use of its resources, and how the system provides essential health benefits to everyone ("Overview of the United States Healthcare System", 2020).

Malaysia's healthcare system is divided into two; public and private. Malaysian citizens pay public healthcare through general taxation of income. It is known as the cheaper option, but some disadvantages exist. For instance, public hospitals are overcrowded from greater number of patients (AIA, 2017). On the other hand, private hospitals offer faster services but with higher cost. This is because private hospitals have more doctors. Having more doctors allows private hospitals to have a greater ratio of doctors to patients (AIA, 2017).

Since public healthcare is cheaper than private, low- and middle-income households prefer to go to public hospitals. This is because public healthcare offers facilities and mobile healthcare services that can be accessed almost anywhere.