

UNIVERSITI TEKNOLOGI MARA

**BloodNetwork: Blood Donors
Community Mobile Application**

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ABSTRACT

Blood had always been on demand all over the world. Blood donation would sometimes appear as troublesome to some people due to busy working schedule and the difficulty to search for nearest location and nearest blood donation events. The lack of advertising element in an event may resulted to low numbers of blood donors. The objectives of this project are to identify the user requirements for BloodNetwork application, to design and develop BloodNetwork application by following the Mobile Application Development Life Cycle (MADLC) methodology. This project however will be developing up until testing phase only. This project is intended to create blood donor's community platform whereby the donors can locate blood donation events even in busy working list and creating awareness on the importance of blood donation while ensuring the repeating blood donation among blood donors. Geolocation technology will help users to stay informed of the location of blood donation events. Users may chat with other blood donors in requesting for blood and asking for advices for the potential blood donors. BloodNetwork can set a reminder for blood donors on their future donation in their device's calendar application. The public user and the healthcare industry are the significance for this project. Users does not need to search for blood donation events in social media anymore hence it is time consuming and the blood supply may slightly increase due to the awareness on the importance of blood donation. For the future direction of BloodNetwork, this project is planning to be collaborating with National Blood Centre Malaysia to know the blood donation records for the blood donors and the insufficient blood supply in other regions. However, the limitation of this application is the chatting feature can only be used if the user's device is installed with WhatsApp application.

Keyword: Blood donation, Mobile Application Development Life Cycle (MADLC), Android, Flutter, Event Notification, Live Chat

TABLE OF CONTENTS

CONTENT	PAGE
SUPERVISOR APPROVAL	ii
STUDENT'S DECLARATION	iii
ACKNOWLEDMENT	iv
ABSTRACT	v
TABLE OF CONTENT	vi-x
LIST OF FIGURES	xi-xiii
LIST OF TABLES	xiv
CHAPTER ONE: INTRODUCTION	
1.1 Project Background	1-3
1.2 Problem Statement	3-4
1.3 Project Aim	4
1.4 Project Objectives	5
1.5 Project Scope/Limitations	5-6
1.6 Project Significance	7
1.7 Chapter Summary	7

CHAPTER 1

INTRODUCTION

An outline of this project is given in this section. This chapter includes background information, problem statements, project aims, objectives, scope and project significance.

1.1 Project Background

Blood is currently needed throughout the world and this demand can be met by a large amount of blood donations (Majdabadi, Hesamedin & Mehdi, Kahouei & Taslimi, Soghra & Langari & Mahnanz, 2018). Roughly, only 2.2 percent of the Malaysia's population donates blood every year, contrasted with the standard prospect of 5 percent. (Nur Shahrulliza Muhammad, Fairus Hamdan, Helmi Norman and Amie Azida Yunus, 2019). It is an indication that this nation will eventually encounter deficiency in blood supply (Nur Shahrulliza Muhammad et al, 2019). An article by World Health Organisation (WHO, 2016) indicated that a developing country is popular with chronic blood supply shortage due to a result of low donation rates (as cited in Noor' Ain Mohamad Yunus, Syukrina Alini, Mat Ali1, Sri Fatiany Abdul Kader Jailani, 2019).

Furthermore, according to Hollingsworth and Wildman (2004) and Burgdorf et al. (2017), time constraints may restrict the tendency of blood donation for the reason of busy working calendar and changing structure of society (as cited in Lim, M. L., S. H. Thock, A. K. G. Tan and S. L. Gwee, 2018). Despite having frequent announcement for blood donation events in social media such as Twitter and Facebook, there are still less of awareness among people about these events. This