UNIVERSITI TEKNOLOGI MARA

MANCA: HEALTH CALCULATOR, FOOD AND EXERCISE MOBILE APPLICATION

MUHAMMAD NABIL ISYRAFF BIN MOHD ISHAM

BACHELOR OF INFORMATION TECHNOLOGY (Hons.)

FEBRUARY 2022

ACKNOWLEDGMENT

ABSTRACT

In this era of modernization, despite significant scientific evidence supporting the advantages of regular exercise in the prevention and treatment of cardiovascular disease (CVD), physical inactivity is extremely common across the world. Having a healthy lifestyle is important to maintain overall health status. For this project, a mobile application is developed to calculate the Body Mass Index (BMI), Total Daily Energy Expenditure (TDEE) and Basal Metabolic Rate (BMR). The objective of this project is to identify the system requirement, to design and to develop Manca Mobile Application The aim of this project is to develop Manca with features of automated calculation that can can calculate BMI, BMR and TDEE and based on TDEE and BMR result can calculate the calories intakes the user needs. The methodology used is the Mobile Software Development Lifecycle (MSDLC) until the testing phase. The Manca Mobile Application is developed on Android platform. Offering such as features are the (type of calculator), search features on food list and list of exercise video. Based on the result after the testing phase, overall System Usability Score has high perceived usability, with System Usability Score of 76.14. The future direction is to implement an algorithm that can recommend food and exercise based on the user calories and preferences.

Keywords: Total Daily Energy Expenditure, Body Mass Index, Basal Metabolic Rate, Mobile Software Development Life Cycle, Non-communicable diseases

TABLE OF CONTENTS

CONTENT	PAGE

Chapter 1

INTRODUCTION

1.1   Project Background

Non-communicable diseases (NCD), such as heart disease and diabetes, are the main causes of death among modern people, killing more than 60% of the world's population (Franco, 2017). The rise of these non-communicable diseases is a serious concern with unhealthy eating habits and lack of exercise being identified as the culprit. Men generally need 2500 calories per day, while women need 2000 calories per day. Unfortunately, they do not watch their daily calorie intakes and consume without any care about the high calorie's food. Although consumers are generally aware of poor eating habits, they frequently fail to adopt the necessary behaviors. Many factors affect their food choices, but a lack of desire to put forth cognitive effort in food preparation, as well as a lack of time, are significant obstacles to maintaining a balanced diet (Pinxteren, Geleijnse &Kamsteeg, 2011).

One of the most important aspects of living a healthy life is weight management and there is a mutual relationship between excess bodyweight and and health related issues (Senarathna, 2020). Understanding Body Mass Index (BMI), Total Daily Energy Expenditure (TDEE) and Basal Metabolic Rate (BMR). would help in managing calories daily intake by counting the calories if only not makes one a discipline eater, but me more aware on how much they need to consume per day.