

HEALTHY LIFESTYLE APPLICATION

CHUAH PEI JIN

BACHELOR OF COMPUTER SCIENCE

UNIVERSITI MALAYSIA PAHANG



SUPERVISOR'S DECLARATION

I hereby declare that I have checked this project and in my opinion, this project is adequate in terms of scope and quality for the award of the degree of Bachelor in Computer Science (Computer Systems & Networking) With Honours.

(Supervisor's Signature)

Full Name : LIEW SIAU CHUIN
Position : *senior lecturer*
Date : *07/01/2019*



STUDENT'S DECLARATION

I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

Chin

(Student's Signature)

Full Name : CHUAH PEI JIN
ID Number : CA15032
Date : 07/01/2019

HEALTHY LIFESTYLE APPLICATION

CHUAH PEI JIN

Thesis submitted in fulfillment of the requirements
for the award of the degree of
Bachelor of Computer Science (Computer Systems & Networking)

Faculty of Computer Systems & Software Engineering
UNIVERSITI MALAYSIA PAHANG

DECEMBER 2018

ACKNOWLEDGEMENTS

First at all, I would like to give my biggest appreciation to my project supervisor, Dr. Liew Siau Chuin who has been supportive and spend a lot of time throughout the process of completing this project. Without his guidance and help, this project would not successfully complete. I also would like to express my gratitude to the lecturers of my faculty who are willing to help me to complete this project. Not to forget, I would like to thank my beloved family for the encouragement and always supporting me while I am completing this project. Lastly, I would like to give special thanks to my friends and course mates who directly or indirectly helping me, give me a lot of ideas and opinions during the completion of task.

ABSTRAK

Obesiti merupakan salah satu masalah kesihatan yang terbesar dalam kalangan masyarakat di seluruh dunia. Ini mungkin disebabkan oleh pelbagai faktor seperti genetik, kekurangan aktiviti fizikal, persekitaran dan pemakanan yang tidak seimbang. Pada zaman era ini, kebanyakan masyarakat menjalani kehidupan yang sibuk dan tidak mempunyai masa yang cukup untuk menyediakan makanan yang sihat. Oleh itu mereka sanggup mengisi perut mereka dengan mengambil makanan segera. Hal ini akan mengakibatkan mereka menghadapi pelbagai penyakit seperti tekanan darah tinggi, kolesterol tinggi, penyakit jantung, kencing manis dan jenis kanser tertentu. Untuk mengatasi masalah ini, projek ini mencadangkan sebuah aplikasi yang tujuan untuk membantu dan mendorong masyarakat agar mereka giat melakukan senaman dan mengambil pemakanan yang sihat. Objektif perjalanan projek ini adalah untuk mengira nilai BMI serta memberi cadangan kepada pengguna tentang pemakanan yang sihat dan seimbang. Pembangunan Aplikasi Rapid (RAD) ialah kaedah yang digunakan untuk membangunkan aplikasi ini. Metodologi RAD terdiri daripada empat peringkat utama iaitu peringkat perancangan keperluan, peringkat reka bentuk, peringkat pembinaan dan peringkat henti ganti. Selepas permohonan telah dibangunkan, pelanggan akan diberikan ujian penerimaan pengguna (UAT). Ujian UAT akan memastikan semua fungsi dalam permohonan boleh berjalan dengan lancar dan memenuhi semua objektif. Kesimpulannya, diharapkan projek ini akan memberi manfaat kepada pihak yang berminat untuk memperbaiki kehidupan mereka.

ABSTRACT

Obesity is one of the biggest health concerns in communities across the country. This may be due to a variety of reasons such as genetics, lack of physical activity, the environment and poor diet. Nowadays, many people have their busy life and not enough time to prepare healthy meals, so they usually have their meals from fast food restaurants. This will lead them to get disease easily like high blood pressure, high cholesterol, heart disease, diabetes and certain types of cancers. To overcome this problem, this project proposes an application which can help and motivate users in exercising and eating healthy foods. The objective to build this application is to evaluate BMI value and suggest healthy meals to the users. Rapid Application Development (RAD) is the methodology used to develop this application. The RAD methodology consists of four main stages including requirements planning, user design, construction and cutover. After the application has been developed, the client is given a user acceptance test (UAT). The UAT testing will ensure that all functions in the application can run smoothly and fulfil all the objectives. In conclusion, it is hoped that this project will benefit the interested user in their life.

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LIST OF ABBREVIATIONS

BMI	Body Mass Index
GB	Gigabyte
GHZ	Gigahertz
RAD	Rapid Application Development
USB	Universal Serial Bus
WHO	World Health Organization

CHAPTER 1

INTRODUCTION

1.1 Project Background

Obesity has reached epidemic proportions globally, with at least 2.8 million people dying each year as a result of being overweight or obese (WHO, 2017). It is caused by imbalance between calorie intake and calories utilized. The other factors are environment, stress, emotional factors and poor sleep, smoking habit and physical activities. For example, some people will overeating of foods that are high in fat, sugar and calories when they are bored, angry, upset or stressed. Obesity will lead to life-threatening conditions such as cardiovascular diseases, high blood pressure, diabetes, cancers and others. So the overweight and obesity should be taken in control as it will impair health future and lead to premature death. To prevent these, the regular exercises and healthy lifestyle are very important. For example, limit the consumption of fatty and sugary foods, eat more fruits and vegetables, and exercise at least 30 minutes a day are encouraged to prevent overweight and obesity.

In this project, an android application will be developed with the theme of healthy lifestyle. For this application, users can fill in their profile such as gender, weight and height. After that, the system will help the users to calculate their BMI value and show the status which is underweight, normal, marginally overweight, overweight or obese. Besides, this application also will provide suggested meal plans for the users. The different type of exercises also provided for the users to ensure that the users can have a healthy lifestyle.

1.2 Problem Statement

The global obesity epidemic continues, and a new report shows that about two billion people worldwide are overweight or obese (Sifferlin, 2017). This may be due to the busy nature of their study life or working life or they are having an unhealthy life style and imbalanced diet. They also always eat much of fatty and sugary foods, eat less fruits and vegetables and do less the exercises. This will lead them to get diseases easily such as high blood pressure, heart disease stroke, certain type of cancer and others.

1.3 Objectives

The objectives of this project are:

- i. To investigate current application in health fitness and nutrition.
- ii. To design a healthy lifestyle application.
- iii. To evaluate proposed application.

1.4 Scope

The project's scopes are as listed as follows:

- i. This application is designed to calculate the user's BMI value.
- ii. This application is designed to suggest the healthy meal plan for users.
- iii. This application is designed to motivate the users to do exercises.

1.5 Significance

- i. Display appropriate healthy food for users.
- ii. Can help prevent disease.

1.6 Thesis Organization

This thesis consists of total five chapters. Chapter 1 discuss on the introduction to the project, including project background, objectives, scope, significance and lastly the thesis organization. Chapter 2 discusses the literature review of the system and comparison of three systems. Chapter 3 will discuss about methodology. It will include

the introduction, methodology carried out, hardware and software requirements, Gantt chart and implementation. Chapter 4 discusses the implementation of the project, testing and result discussion and user manual in the application. Chapter 5 which is the conclusion consists of introduction, project constraint and future work.

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