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DEVELOPMENT OF A HEALTHCARE MOBILE APPLICATION WORKOUTHOLIC: FIT4HEATH

NUR AFFA ARDINI BINTI ABDUL HALIM



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FAKULTI KOMPUTERAN DAN META-TEKNOLOGI

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LAPORAN PROJEK TAHUN AKHIR DIKEMUKAKAN BAGI
MEMENUHI SYARAT UNTUK MEMPEROLEHI IJAZAH SARJANA
MUDA KEJURUTERAAN PERISIAN (PERISIAN PENDIDIKAN)
DENGAN KEPUJIAN

FAKULTI KOMPUTERAN DAN META-TEKNOLOGI

2023





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APPLICATION WORKOUTHOLIC: FIT4HEALTH

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Tarikh

Tandatangan Penyelia

(Puan Marzita Binti Hj Mansor)





ACKNOWLEDGEMENT

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

First and foremost, I would like to praise and thank the Almighty God for giving me the strength in order to complete this project. Without His graces and blessings, this study would not have been possible.

I would like to thank my supervisor, Madam Marzita Binti Hj Mansor for her relentless time, support, and guidance while conducting this final-year project and making this work possible. Her gratitude and support have given me the opportunity to create this thesis document and the whole project successfully.

On the other hand, I am also thankful to Madam Asma Hanee binti Ariffin for her help and assistance and for providing necessary information regarding the whole Final Year Project 1 (MSR3982). Her guidance has helped me to fulfill all the requirements needed for the proposal preparation and the first three chapters of this document.

Also, I am sincerely grateful to my Final Year Project 2 (MSR3994) coordinator, Encik Ahmad Nurzid bin Rosli, for his ongoing mentorship and a never-ending supply of fascinating tasks. His humble approach to research and tips is an inspiration. This approach has been evident throughout my career.

Last but not least, I am so happy to have such a very supportive friends, Olver Gading Anak Jinggan and Qurratu'aini Syahirah Binti Nasharuddin for always be there to help, to guide and to give valuable advices whenever I felt like giving up in completing this academic journey. Having a very positive best friend really helps you to grow in a healthy way.

I am forever glad for the unconditional love and support throughout the entire process of completing this Final Year Project as the sum of all 7 semesters I've spent studying at Sultan Idris Education University.





ABSTRACT

This mobile application is a monitoring program for intensity indoor workout to prevent any health disease during this pandemic era. Workoutholic mobile application contains a lot of exercising activities such as aerobic dance, jumping rope, push-ups and many other easy workout activities. This application also will help the user to have balanced exercise for their daily life activities.

There is an urgent need for therapies that support mental health as well as the subthreshold or early phases of the disease, given the high rates of these 5 conditions. Young people's ability to live a healthy existence is greatly improved by Workoutholic mobile applications. By encouraging individuals to engage in a variety of daily exercise, these apps will benefit a large number of people. It enables the neighborhood to maintain a healthy environment free of any form of chronic cardiac problems. With recommendations for potential daily activity, learning is made simpler.

Youth mental health disorders are predicted to top the list of causes of disability in developed countries by 2020. Thus, it is imperative to encourage mental wellness and guard against mental illnesses. Young people who exhibit increased symptoms of mental health disorders, such as depression and anxiety, which are just as prevalent as recognised disorders, have much lower function. 2-4 Young people with high levels of psychological distress and a higher risk of or increased incidence of mental disorder symptoms do, in fact, have severely decreased social and occupational functioning.

Keyword: monitoring program, intensity indoor workout, aerobic dance, jumping rope, push ups, Workoutholic





PEMBANGUNAN KERJA APLIKASI MUDAH ALIH PENJAGAAN KESIHATAN: WORKOUTHOLIC: FIT FOR HEALTH

ABSTRAK

Aplikasi mudah alih ini adalah program pemantauan untuk senaman dalaman intensiti untuk mencegah sebarang penyakit kesihatan semasa era pandemik ini. Aplikasi mudah alih workoutholic mengandungi banyak aktiviti senaman seperti tarian aerobik, lompat tali, tekan tubi dan banyak lagi aktiviti senaman mudah yang lain. Aplikasi ini juga akan membantu pengguna melakukan senaman yang seimbang untuk aktiviti kehidupan seharian mereka.

Terdapat keperluan mendesak untuk terapi yang menyokong kesihatan mental serta subambang atau fasa awal penyakit, memandangkan kadar tinggi 5 keadaan ini. Keupayaan golongan muda untuk menjalani kehidupan yang sihat dipertingkatkan dengan banyak oleh aplikasi mudah alih Workoutholic. Dengan menggalakkan individu terlibat dalam pelbagai senaman harian, aplikasi ini akan memberi manfaat kepada sebilangan besar orang. Ia membolehkan kejiwaan mengekalkan persekitaran yang sihat bebas daripada sebarang bentuk masalah jantung kronik. Dengan cadangan untuk aktiviti harian yang berpotensi, pembelajaran menjadi lebih mudah.

Gangguan kesihatan mental belia diramalkan akan menduduki tempat teratas dalam senarai punca hilang upaya di negara maju menjelang 2020. Oleh itu, adalah penting untuk menggalakkan kesihatan mental dan menjaga daripada penyakit mental. Golongan muda yang menunjukkan peningkatan gejala gangguan kesihatan mental, seperti kemurungan dan kebimbangan, yang sama lazimnya dengan gangguan yang diiktiraf, mempunyai fungsi yang jauh lebih rendah. 2-4 Golongan muda yang mempunyai tahap tekanan psikologi yang tinggi dan risiko yang lebih tinggi atau peningkatan kejadian simptom gangguan mental, sebenarnya, telah menurunkan fungsi sosial dan pekerjaan dengan teruk.

Kata kunci: program pemantauan, senaman dalaman intensiti, tarian aerobik, lompat tali, tekan tubi, Workoutholic



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CHAPTER 1



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INTRODUCTION

1.1 Introduction

By 2020, it is anticipated that youth mental health disorders would rank first among the causes of disability in developed nations. Therefore, it is crucial to promote mental health and prevent mental health diseases. Increased mental health disorder symptoms in young individuals, such as depression and anxiety symptoms, which are just as common as recognized disorders, are associated with significantly reduced function. 2-4 Indeed, social and occupational functioning are significantly impaired in young individuals who have a greater risk of or increased incidence of mental disorder symptoms, and they also have high levels of psychological distress.



There are 5 given high incidences, there is an urgent need for interventions that both support mental health and focus on subthreshold or early stages of the disease. Workoutholic Mobile Applications have a major purpose in improving youngsters to live their life in a healthy way. These apps will help many people by guiding them to have balanced exercise every day. It helps the community live in a healthy environment without any kind of chronic cardiac diseases. It's easier to learn with the guidance for potential daily exercise.

Lastly, it creates a positive environment throughout the whole area. To develop a healthcare program called Workoutholic: Fit4Health Apps that monitors you for a productive indoor workout for a healthy lifestyle. This desire to eat this unhealthy food will be much enhanced by the people (M. Mediouna, Riadh M, Karolina E, 2020). It requires you to complete the workout scale that you like and the program will assist you in a better self-improvement. The main content of this Workoutholic: Fit4Health system is workout monitoring healthcare programs. The target user of this application is Malaysian citizens specifically the youth generation. The geographical area for this application is around the Tanjong Malim area.

1.2 Research Background





The Workoutholic: Fit4Health Mobile Application consists of a database that will store all the registered user's information such as full name, phone number, email address, height, weight, BMI, and other types of personal data. Based on the database, the administration will double-check the given information such as the BMI calculation. Exercise provides powerful health benefits for quality of life, physical function, and independent living throughout the life cycle. Exercise impedes the aging process and promotes longevity (Keith R. Miller, Stephen A. McClave, Melina B. Jampolis, Ryan T. Hurt, Krueger, Sarah, Bryan, 2016). When the user has successfully accessed the application, the screen will display the main interface of the Workoutholic mobile application. After completing the required information and creating their personal username and password, the user can log in into the application using their personal username and password. On the other hand, administrators also need to log in to the admin function before they can access the functionality of the application.

This app has many monitoring program functionalities such as water intake, food intake, walking steps, and sleeping hours daily in order to help the user keep an eye on their healthcare. It also has workout guidance by a professional coach to assist a genuine physical activity for proper exercise. Other than that, this mobile application also helps solve their problems which makes them too lazy to go out to get some exercise outdoors, it makes it easier for everyone to do exercise anywhere using their mobile apps. This project will be done by a student with their supervisor. I am in charge of developing these mobile apps. This application will be conducted by my supervisor and all the functions included are based on a final discussion with my supervisor. The project will be done within two semesters (semester 2 2021/2022 and semester 1 2022/2023) as our final year project. The aim of this application is to help many more people in living a healthy lifestyle while the world is facing so many new illnesses and viruses that can ruin one's life.

1.3 Research Problem





Youth mental health disorders are predicted to top the list of causes of disability in developed countries by 2020. Therefore, it is imperative to encourage mental wellness and guard against mental illnesses. Increased mental health condition symptoms, such as depression and anxiety symptoms, which are almost as prevalent as recognized disorders, are linked to significantly lower function in young people.

Nowadays, 2–4 Young people with high levels of psychological distress and a higher risk of or increased incidence of mental disorder symptoms do, in fact, have severely decreased social and occupational functioning. 5 Interventions that improve mental health and concentrate on subthreshold or early stages of the disease are urgently needed given the high occurrence.

The global pandemic disease declared by the World Health Organization (WHO), coronavirus disease 2019 (COVID-19), has caused a significant burden on health and economic aspects around the world (Timotius, Andree, 2020). Young people's ability to live a healthy existence is greatly improved by Workoutholic mobile applications.



Numerous folks will benefit from these apps by being guided to engage in balanced activity each day. It enables the neighborhood to maintain a healthy environment free from any form of chronic cardiac disorders. With recommendations for potential daily activity, learning is made simpler. Finally, it fosters a cheerful atmosphere throughout the entire region.

This application is a Monitoring program for an intense indoor workout to prevent any health disease during this pandemic era. This is because physical activity and exercise have positive effects on general well-being, mood, and anxiety. The ignorance among people that choose only a proper diet without any physical exercise. At present, most of the community that lives in this current pandemic world lacks information about actual workout steps for each part of the body and are too lazy to go out to get some exercise outdoors.

1.4 Research Objectives





The research is conducted:

1. To spread awareness of the impact of not living a healthy lifestyle.
2. To help decrease the number of cardiovascular mortality.
3. To assist a genuine physical activity for proper exercise.
4. To make it easier for everyone to exercise anywhere use this mobile app.

1.5 Research Questions

The research is conducted to answer the following questions:

1. How to design helpful healthcare apps?
2. How can Workoutholic give advantages to users?
3. How to maintain the use of this healthcare program application?

1.6 Research Hypothesis



The hypothesis of this research is as follows



H01: The interface design of this application needs to be straightforward, unique, and accessible for a good user experience.

H02: When the applications are user-friendly and easy to use, it will automatically attract many more users of all ages to use and apply the application to guide their daily life activities

1.7 Research Learning Theory

A group of concepts known as learning theories describes how people acquire, store, and retrieve knowledge. The guiding concepts of the theories can be utilized to identify techniques, resources, and approaches that enhance learning. Out of the three primary learning theories, the researcher will choose cognitive learning theory.

An instructional strategy called collaborative learning draws heavily on the principles of cognitive learning theory. Collaborative learning weaves in these Cognitive Learning Theory ideas while also democratizing and encouraging learning generally:

- **Social Cognitive Theory:**





Collaborative learning companies involve all employees in learning and development, allowing team members to encourage learning among themselves across departments and levels of seniority. Positive reinforcements are another feature of a collaborative learning culture that inspires workers to learn more.

- **Cognitive Behavioural Theory:**

Collaborative learning-based training programs seek to give pertinent and interesting content that inspires team members to learn. They deliver programs and experiences that staff members wish to partake in based on input from trainees.

- **Implicit and Explicit Learning:**

Collaborative learning moves a large portion of L&D's emphasis to implicit learning's experience-based instruction while utilizing explicit learning's purposeful curriculum. Sharing knowledge is a big part of collaborative learning, which taps into the importance of implicit learning for personal development. Employees choose the topics and substance of the courses in collaborative learning, enabling the purposeful knowledge acquisition associated with explicit learning.



This learning method is used because it enables website visitors to self-learn whatever they need to know. They will attempt to comprehend the mental process involved while utilizing the website, where one piece of information may lead to another, in order to learn more efficiently when using the Workoutholic mobile application.

1.8 Limitations

The main focus of this part is the communication interface and software interface of the Workoutholic: Fit4Health mobile application. Consequently, most of the limitations come when developing the interfaces. Workoutholic: Fit4Health is a mobile application that can only be downloaded from a smartphone. This app can only be accessed when there is a strong internet connection to help the application work smoothly and it cannot be substituted into a website.

1.9 Scope





One of the main functions of this healthcare application is to develop a healthcare program called Workoutholic that monitors you for a productive indoor workout for a healthy lifestyle. It requires you to complete the workout scale that you like and the program will assist you in better self-improvement. The main content of the system is workout monitoring healthcare programs and workout coaching. The scope of this Workoutholic: Fit4Health mobile application is:

1. Field of specialization

This application focused on users who needed some guidance to do instant workouts and to monitor their daily activities to stay healthy and prevent chronic diseases.

2. Targeted Audience

for this application are all Malaysian citizens especially youth and adults to encourage them in living a healthy lifestyle.

1.10 Conclusion

In conclusion, this chapter discusses each of the Workoutholic: Fit4Health mobile application's introductions. Discussing the software and communication interfaces for this healthcare program mobile application is the main objective of this article. To draw in lots of users, this application needs to be developed successfully.

CHAPTER 2

