

Mobile Application: GoFit (Fitness)

Fitness Mobile Application

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Abstract— This paper discusses the development and implementation of GoFit, a mobile application in both the personal and social environments. People are increasingly installing fitness and wellness mobile applications on their smartphones. The major aim of this study is to create a fitness mobile app named "GoFit" that will assist users to track their wellness or fitness activities on their Android phones. It is just a matter of educating people what activities to do and how to accomplish them. The ADDIE method used is to make this study a success. The steps in ADDIE model are analysis, design, development, implementation, and evaluation. This methodology is used as it is most suitable for creating a smartphone application. GoFit passed through alpha and beta testing to determine if it achieved the target and fulfilled the main objective. GoFit gives users a nudge in the right direction by providing information on their fitness activities. Also, GoFit maintain a track record for users' health condition, which include steps, distance, calories and heart rate. As a result, users can keep track of their progress and exercise accordingly. Overall, this application educates users on the advantages of leading a healthy lifestyle.

Keywords— Fitness, mobile application, healthy lifestyle, user experience, technology

I. INTRODUCTION

Technology is rapidly evolving in modern environment, particularly in the field of health and fitness. Almost all smartphones come with health apps developed by major telecommunications firms such as Apple. Furthermore, there are third-party applications that offer health and fitness apps for Android and iOS platforms, each with its own set of benefits. Mobile application is a new and fast-developing Segment of the global Information and Communication Technology [1]. Other than that, it can work smoothly on smartphones from entry-level to flagship smartphones categories. Malaysians have become more aware of the importance of health after the world was hit by the viral disease Covid-19 earlier this year. This application was created to spark the interest of users who want to take care of and track their health, and to assist them in following a healthy lifestyle wherever they are, including at home.

One of the issues with individual fitness and health is a lack of knowledge or information about positive lifestyle activities. This is one of the reasons why they are uninterested in leading a healthy life, and as a consequence, they simply abandon it. The

lack of professional training that guides the exercise routine is another difficulty related to living a healthy lifestyle. If they have a strong identity to measure their performance, some individuals can live a healthy lifestyle without any of the assistance of a coach. Finally, they cease or give up practising a healthy lifestyle due to an inflexible schedule that makes it difficult to reconcile work and personal life. Several people are too busy to give attention to their health and fitness.

The research objective is to determine the contemporary technique of providing the user with information on a healthy lifestyle, personal fitness data, and daily exercise instructions. Also, researcher create a mobile app that gives information and educate on personal fitness data. Overall, the researcher aims to figure out how effective the mobile app provides the nudge in the right direction to user's daily life in this pandemic, Covid-19. In addition, the target demographic for "GoFit," a fitness mobile application that encourages people to live a healthy lifestyle, is teenagers and adults. Personal data records and basic step-by-step exercise instructions will be the focus of this study. This app is user-friendly, with English terminology used to make it simple for everyone to interpret.

II. LITERATURE REVIEW

A fitness mobile app is used as a way to transmit the message about living a healthy lifestyle in this study. Users can utilise apps to set goals, improve self-monitoring, and spread awareness.

A. What is Mobile Application?

A mobile application, sometimes known as an app, is a type of software that runs on a mobile device, such as a smartphone or tablet computer. Apps, which are often small units with limited functions, manage to provide users with valuable experiences and services. The goal of developing a mobile application is to provide conditions when maximum number of users use applications for maximum time [2]. Native apps and web apps are the two most common types of mobile applications. Native apps are designed for iOS or Android and are loaded directly on phones. Additionally, native apps are downloaded via an app shop such as the Google Play Store or the Apple App Store. There are several types of mobile apps which is Gaming apps, Productivity apps and Lifestyle and entertainment apps. GoFit is within the category of productivity

apps that is focus on increasing organizational performance by achieving objectives like sending notifications, tracking fitness goals progress, and assistance on a fitness activity.

B. User Interface and User Experience

User interface (UI) design describes the iterative set of decisions leading to a successful implementation of an interactive tool while user experience (UX) design describes the iterative set of decisions leading to a successful outcome with the interactive, as well as a productive and satisfying process while arriving at this outcome [3]. The graphical format of an application is referred to as the user interface (UI). It includes the buttons that the user clicks, the content that the user reads, the pictures, sliders, text passage fields, and all other objects with which the user interacts. Screen layout, transitions, interface animations, and interaction are all part of this. All of these, including the visual element, interactivity, and animation, should be planned. The ease with which a user interacts with user interface elements produced by UI designers determines the app's overall experience.

C. Health and Fitness

Mobile applications are increasingly being used to track one's health or fitness, and they are also being used for prevention, diagnosis, and treatment. These apps can be personalized and tailored to the user's condition and can be used in the comfort of their home, office, or even on the move [4]. As compared to fitness centres, fitness apps have more priority because of its many features, the most important being its mobility. Moreover, another important feature of these apps is their ability to record and track users' daily changes in health and fitness which can help in bringing a major progress in their fitness for a long period [5].

In other words, those who work out on a regular basis like to do so because it makes them feel great. They are more energetic throughout the day, sleep well at night, have sharper memories, and have a more positive outlook on themselves and their lives. It is also an effective treatment for a variety of common mental health issues.

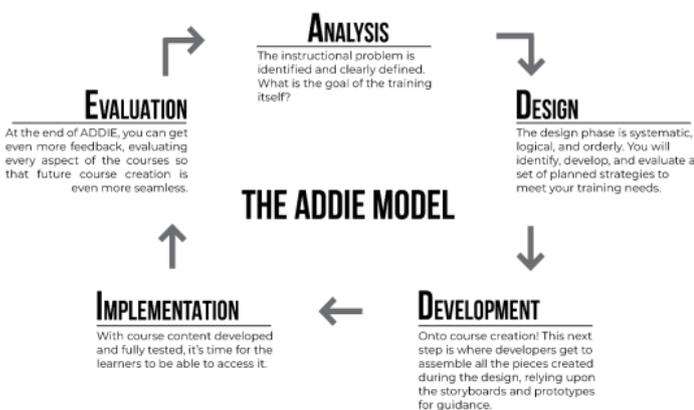


Fig. 1: ADDIE Model

This chapter covers the methodology applied in acquiring data and conducting analyses that are relevant to the study. In designing GoFit, the researcher employs the ADDIE design methodology, as shown is Fig. 1.

A. Analysis Phase

This step is the description process of what is going to be taught and forms the basis of all other steps. In this step, the researcher determines the needs and difference between knowledge, skills, and behaviours, which the learners presently have, and behaviours which they must have or they are expected to have. In other words, need analysis is conducted. The system is analysed and the problem and the roots of the problem are described [6].

B. Design Phase

Researcher conducted a case study for each completed project in order to identify a research gap. The researcher is able to identify the design that will be used in a project. In this method, the researcher has created a mobile application that focuses on fitness. Page by page, a wireframe of the design or navigation was created. The researcher chooses a muted colour for the mobile application theme, which is the polar opposite of vibrant colours and is generated by simply adding black, white, or complimentary hues to a base colour, dulling, or desaturating it. Colours having a low saturation or chroma are referred to as "muted colours," because they are more appealing for efficiently communicating a message.

C. Development Phase

This is the process of producing the instruction materials, all the tools which will be used during instruction and any kind of support materials. The product is created during this phase and an evaluation, which is mostly for correction, is made and modifications are carried out if necessary. The detailed plan prepared during the phases of analysis and the design is implemented and all the components of the learning environment are developed and the environment is prepared for the test [6]. In this stage, the researcher developed the project using the Flutter plug-in for Android Studio software. Balsamiq Wireframes software is used to construct wireframes or storyboards before the researcher develops a mobile application. Android Studio is the most important piece of software to use when creating an app.

D. Implementation Phase

In this step, development result is applied in learning process to know its influence on the quality of the completed application which covers the effectiveness, attractiveness, and efficiency [7]. Implementation is applied on small group to get input from the students and lecturers as input for the revision of product draft. During the implementation stage, this fitness mobile application will be tested on Android platform devices. When the app is constructed on an Android emulator, the researcher will conduct alpha testing. A supervisor would be engaged during the final beta tests. This research is critical and must be completed in order to ensure that customers benefit from the framework that has been built.

E. Evaluation Phase

Prototype of the mobile application will be downloaded in the android phone to check the functionality of the application on different devices [8]. The testing will be done on android platform smartphone. After it was tested by the researcher then it was ready to be tested on the actual target user by giving them

through the installed application on the smart phone for them to experience the interface and the application by themselves. The item is completely done and ready to be tested at this stage. The person in charge of preparation will assess how successfully the assignment accomplished its goals. As a result of the testing, the application's output will be outstanding, and it will accomplish the objectives.

IV. PRODUCT DEVELOPMENT

The first stage of the GoFit mobile application development process is covered in this chapter. Analysis, design, development, implementation, and evaluation are all part of the process.

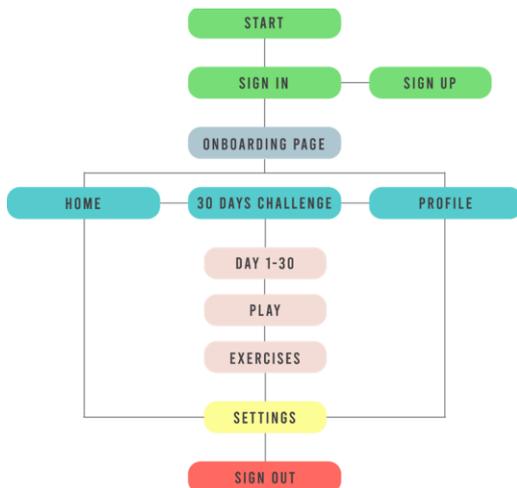


Fig. 2: GoFit mobile application site map

This sitemap was used to plan the development of the mobile apps as shown in Fig. 2.

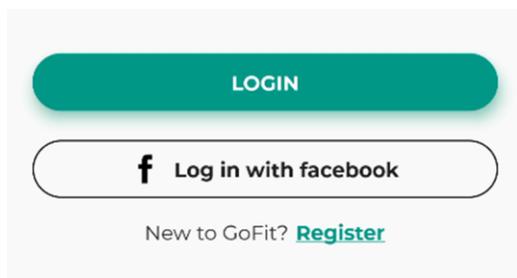


Fig. 3: Button

To make the system more appealing to users and easier to use, the researcher employs a variety of buttons. When a user presses the button, the button shows a gesture effect, as shown in Fig. 3, the 'LOGIN' button. It will make it more interactive to users.

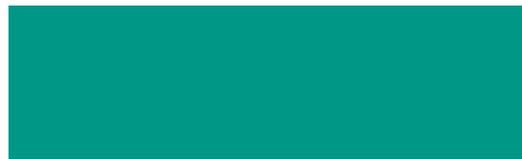


Fig. 4: Colour

Teal, #009787 or rgba (0,151,135,255), is the primary colour used for the development of this mobile app. Teal was chosen by researcher as the primary colour because it is synonymous with fitness, calming, heal, and enlightens. It is not too vivid, as shown in Fig. 4, which has the potential to irritate the user's eyes. The main objective of using this colour for this application is to keep users relaxing using this mobile application and colour consistency which teal and white, according to the researcher.



Fig. 5: Font

In this mobile application, the researcher uses Montserrat Regular as the main font. This typography is used by the researcher to make it appear more professional, structured and clearer. Users should be able to use this software regularly to track their health and perform simple exercises, according to the researchers. The researcher also uses Futura Condensed Extra Bold for the numbers, as shown in Fig. 5, to make it more highlighted and pop up for the user to attract their eyes to the numbers.



Fig. 6: Home Page of GoFit Mobile Application

On this page, users can monitor their health and use the 'Start' button to go straight to the 30 Days Challenge page, which offers simple exercises anytime and anywhere. The researcher positioned a clarifying icon in the top right corner, such as the Settings icon, which is mostly used for other application settings and is also used by users to sign out. Finally, the researcher

placed three icons tab on the bottom of the page which to navigate users to the Home Page, 30 Days Challenge Page and Profile Page as shown in Fig. 6.

V. RESULTS AND DISCUSSIONS

The GoFit Mobile Application experienced alpha and beta testing and to see if it reached the target and accomplished the primary objective. To receive input, suggestions, and recommendations from potential users, a collection of questionnaires has been designed for beta testing this Interactive Documentary. A total of 31 respondents submitted and completed the questionnaire. The questionnaire's results are presented below.

A. Demographic Questionnaire

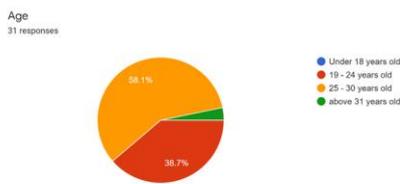


Fig. 7: Age

The majority of the respondents, 58.1%, were between the ages of 25 to 30, as shown in Fig. 7. The majority of respondents are also in their mid-teens, making them more susceptible to new innovations.

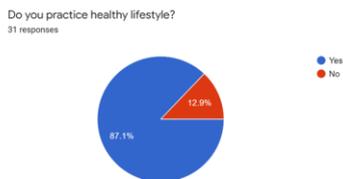


Fig. 8: Practicing Healthy Lifestyle

87.1 percent of those who responded to this survey claimed they were conscious of the importance of living a healthy lifestyle. 12.9 percent of respondents stated no because they are not involved in sports or are too busy working, as shown in Fig. 8. As a result, many people in our modern world are aware of the importance of living a healthy lifestyle.

B. User Interface and User Experience

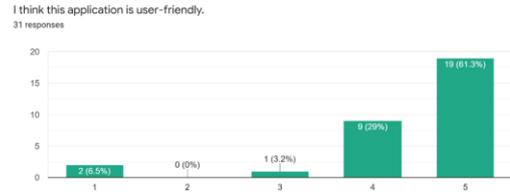


Fig. 9: User Interface and User Experience

According to the bar chart in Fig. 9, 61.3% 'Strongly Agree' that the GoFit Mobile Application is user-friendly, while 29% 'Agree'. Finally, 3.2% said that they are "Neutral," while 6.5% reported they "Strongly Disagree". As a consequence, the majority of respondents claimed that this application is simple and easy to use.

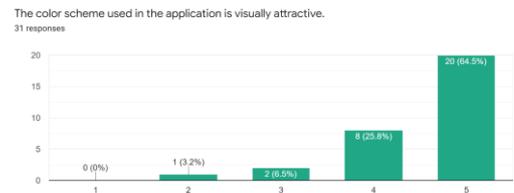


Fig. 10: User Interface and User Experience

In the bar chart in Fig. 10, 64.5 percent of respondent 'Strongly Agree' vote that the colour scheme used in the application is visually attractive, while 25.8 percent 'Agree'. Besides that, 6.5 percent have stated that they are "Neutral". Finally, 3.2 percent vote "Disagree". As a result, the majority of respondents found the colour scheme that used in this application to be incredibly attractive.

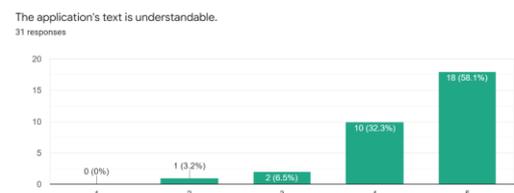


Fig. 11: User Interface and User Experience

In the bar chart in Fig. 11, 58.1% of respondent 'Strongly Agree' stated that the text used in the application is understandable, while 32.3% 'Agree'. Besides that, 6.5% have stated that they are "Neutral". Finally, 3.2% "Disagree". As a consequence, the vast majority of respondents agreed that the application's text usage is very tidy and easy to read.

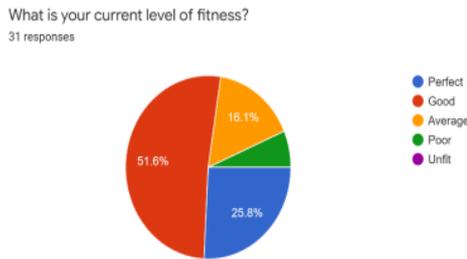


Fig. 12: Level of Fitness

From the result, the “Good” level of fitness got the highest respondent with percentage of 51.6% while 25.8% “Perfect” level of fitness. Other than that, the “Average” level of fitness is 16.1% and a minor respondent vote “Poor” level of fitness, as shown in Fig. 12. The majority of respondents reported that their current level of fitness is good, implying that the user of this application is the average user.

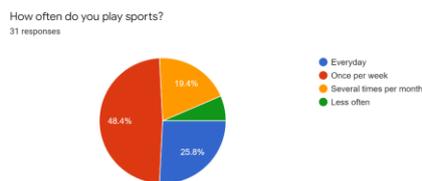


Fig. 13: Level of Fitness

According to the pie chart in Fig. 13, “Once per week” got the highest number of respondents with percentage of 48.4% while 25.8% stated they play sports every day. Other than that, 19.4% play “Several times per month” and lastly, a minor respondent vote “Less often”. As a result, the majority of respondents claimed that they play sports ‘Once per week’, showing that consumers divide their time wisely for sports.

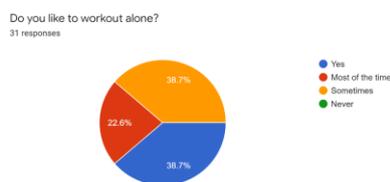


Fig. 14: Level of Fitness

Based on the pie chart in Fig. 14, respondents have a tie vote of 38.7 percent for “Yes” and “Sometimes” rather than “Most of the time” which 22.6 percent. The decision of respondents who use this application is based on a number of users who like to work out alone and ‘Sometimes’.

There are several features that could be improve, such as the animations on the 30 Days Challenge page if the user is unable to follow the workout directions. Furthermore, researchers must enhance the interface so that it is constantly efficient and attractive. Finally, account security must be improved to ensure that user data is not exploited.

VI. CONCLUSION AND FUTURE RECOMMENDATION

This study is designed for users who want to stay active and healthy at all times and in any place. The project conducted field research and used the results to assure the application's functionality such as improve the UI/UX, add more information, and better animation or video for guidance on fitness exercises. Also, expanding GoFit to another platform such as Apple Store. This application has a structured process in place to improve the application's engagement with its users. However, for future recommendation, it can be improved in order to target a more advanced and improved mobile app. Some tasks, such as enhancing the interface design and standardising any required themes, left unnoticed. Furthermore, this application's design functionalities must be improved. In addition, this software required notifications to notify users when they hit a certain step or activity target. Conducting research and development (R&D) for this project could lead to the growth of an app for the iOS platform. In this regard, this app was created to assist people in becoming healthier and stay fit.

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