



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

SCHOOL OF COMPUTING
Faculty of Engineering

SEMESTER 2

SESSION 2019/2020

HUMAN COMPUTER INTERACTION

SECV 2113

ASSIGNMENT 3

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SUBMISSION DATE: 29 APRIL 2020

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Introduction

Designing a new wearable application involves a lot more forethought than just deciding on what colours and fonts to use for the interface. A wearable such as smartwatch is portable device that is designed to be worn on a wrist as an alternative to other bulkier devices in an adventurer's tool kit. Smartwatch technology has same feature as smartphone which uses touchscreen and offers applications. An effective application enables a targeted group of users to carry out a specific set of related tasks. First steps in designing an application is designers should put themselves in users' shoes in order to be fully understood them. The better we understand the people who will be using the application, the better we can design it. Next is to determine what tasks the application should perform and which features are needed to perform those tasks. Therefore, our group has decided to design an application named GoFit.

GoFit is a fitness tracking application that is specifically used as a standalone application for a smartwatch designed by A-Team. This application offers several functions such as workout mode, activity tracking, workout routine ideas, BMI calculator and nutrition plans. Workout mode keep track of the active calories output, heart beat rate and monitor the amount of time during working out. Besides, activity tracking shows all the activities that can be track by the smartwatch. It is also helpful during jogging or running. This application also gather workout ideas with exercises for different purposes like workouts to lose weight or workouts to gain abs while nutrition plan as a guide to healthy eating. Lastly, BMI calculator helps users to calculate their body mass index to monitor the normal range of healthy weight. Throughout the application design process, we strive to keep the UI as intuitive and user-friendly as possible. This is because users want an application that is familiar and predictable. The content should be clear, simple and focused in order to achieve the 'lightweight' interaction principle and follow the guidelines for wearable applications.



Main Menu

First, users need to select the icon A from the main menu in order to enter the GoFit app. The main menu only displaying some recent apps to enhance the glanceability of users by only showing the essential or frequent apps used by the users.



Menu of GoFit App

After entering the GoFit app, users could select various functions provided by GoFit. The user interface of GoFit only shows 3 functions at one time, making the interface look clean and simple. Users could rotate the digital crown on the side of the smartwatch to scroll down and see more available functions.

Function 1 - Workout Mode

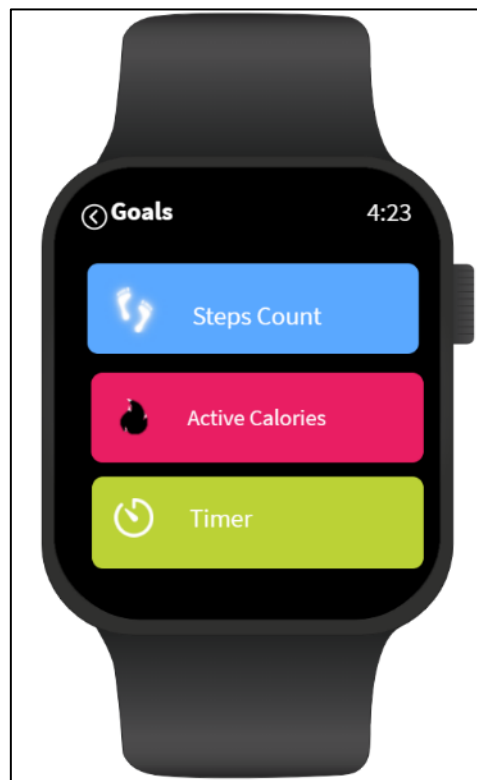
Designed by Alvin Hee Jun Sheung



Flow 1



Flow 2



Flow 3



Flow 4



Flow 5



Flow 6



Flow 7

Flow 1

For the first function in the GoFit app, it provides core features to keep the users' body fit and healthy by allowing them to keep track of the active calories output, heart beat rate and monitor the amount of time during working out. In the user interface of workout, users need to first select the activities that they wish to carry out ranging from running, cycling, walking, swimming, sports activity and more. Same, we only display 4 activities at one page without having any excessive information to prevent a disrupt on the users' experience. Users could also have rotate the digital side crown to view more activities selection.

Flow 2

Since an activity could be carry out in lots of various form, hence in order to have a more accurate tracking on the parameter, users need to select either one of the forms provided that best compatible with their current activity. Other than that, we know that certain users might prefer having a target challenge for themselves to strive for in terms of total steps count, total active calories from the activity. Users could tap on the icon located on the top left corner to set their goals before starting their workout.

Flow 3

If the users intend to set the goal for the respective activity, then they would come into the goal interface. From the option provided, users could set any target that they wish to break through. To meet the requirement of lightweight, we display the selection using a Hierarchical model, when the users wish to find out more about the respective goal and tap on it, a new screen interface will appear rather than revealing every detail on the same screen.

Flow 4

After setting all the goals to be achieved, a new count down screen will appear to the users. The countdown numbers are located at the centre of the screen and a light colour is used to achieve a proper contrast and grab the users' attention. These are the elements that help to achieve the the guidelines of designing a wearable app.

Flow 5

When users need to have a glance on the parameters, this is the always on display screen that appears to the users. Only a few selected parameters are presented to the users rather than showing every parameter that would probably distract the users.

Flow 6

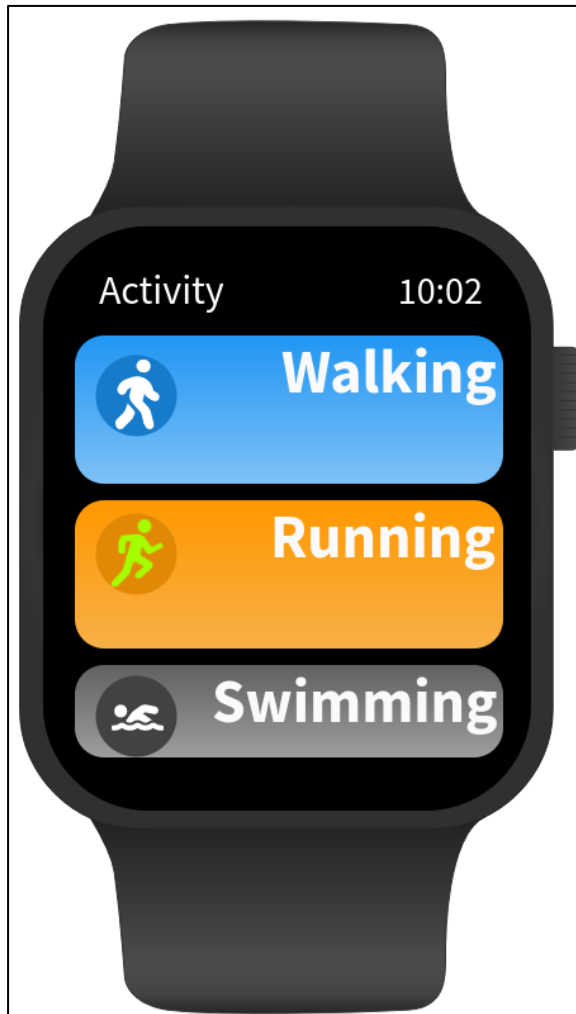
During the workout, if the users wish to have a break or to end the work out, they could tap on any respective selections to perform the task. We are using a Hierarchical model in the setting mode once again because we this interface has been used before and could make users familiar when using it. Yet it possesses a direct manipulation interface that enables users could learn the basic functionality quickly and gain confidence in mastering how to use it.

Flow 7

The last screen design that reminds the users on how much they have achieved from the pre-set goals and encourage them to keep moving up. From this reminder interface what users need to know is only the goals achieved in terms of percentage. Other information than the users' need are not display on the screen. Besides than that, the design screen meets the guidelines of minimalist where users could perform one specific task and see one thing at only one time thus providing a better user experience in terms of time consuming because no one is willing to spend so much time on a wearable device. Moreover than that a proper navigation model for instance page-based navigation is used in the last flow because in terms of memorability, this navigation model is used before and it would trigger the memory of users once again on how to use it.

Function 2 - Activity Tracking

Designed by Khor Yong Xin



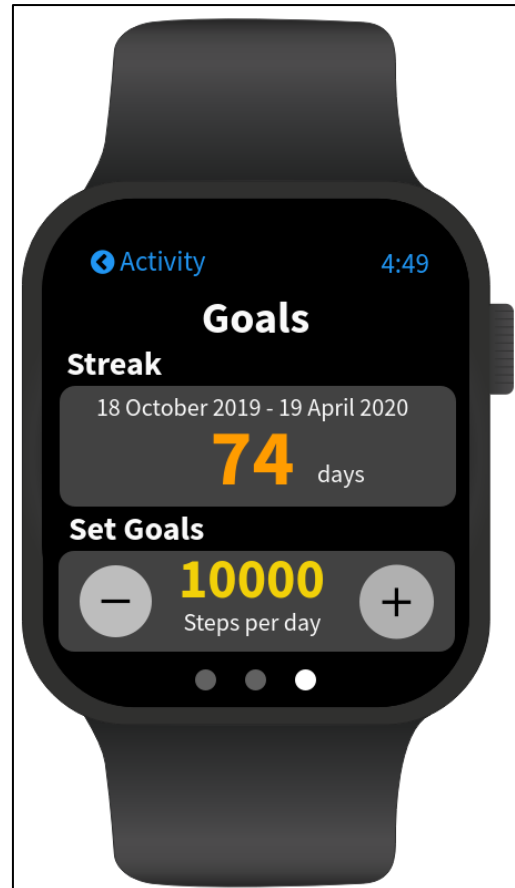
Screen 1



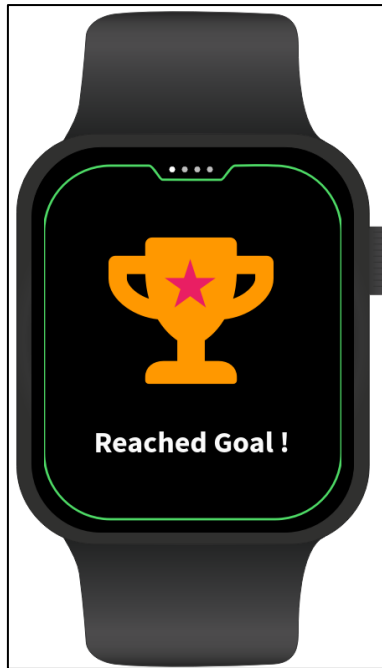
Screen 2



Screen 3



Screen 4



Screen 5

When user select the “Activity Tracking” or refer to the icon at the menu page, it will bring user to the Screen 1 that shows all the activities that can be track by the smartwatch. In Screen 1, it shows the activities such as walking, running and swimming. User can scroll down to select other activities listed in Screen 1. After the user selecting the type of activity to see the tracking, for instance, the user wants to track his walking results, then he will use his fingertip to point at the “Walking” button, it then bring the user to Screen 2 which contain the title in bold of “Walking”. Screen 2 is the first page of the tracking system that user selected as the dot below the screen represent the pages. There are three pages which are Screen 2, Screen 3 and Screen 4 respectively. This dot icon indicate user to slide to the left to go to the other screen. At the top, there is also an arrow icon that represent return back to the activity menu. User can select it to go back to Screen 1 and select other activities. As Screen 2 is the first page after user had selected the activity, so it contains the total steps and total distance because most of the user will first refer to their results for today. The units are also shown in the screen so that user will not confuse. When user slide to the left, Screen 3 will appear. Screen 3 contains the results of the activity carry out by the user in the week. There are two types of results for a week which are steps and distance. User need to scroll down to see the results for a week for distance travelled. Those results are represented by a line chart and the days are below each dot. Next, the user slide to the left will lead them to Screen 4 which is “Goals”. In this page, user can set for their goal to achieve per day. In Screen 4, there are plus icon and minus icon to represent increment and decrement number of steps that can be clicked by the user to set for

their goal. The “10000” shown in Screen 4 indicate the amount of steps per day set by the user for his goal. “Streak” is used to show how many days that the user has achieved his goals and the date range is shown to represent start date and end date for the streak counted. Screen 5 shows a trophy icon and “Reached goal !”. This screen is a notification screen that indicate the user by vibrating and showing this screen to notify the user that he has successfully reach the goal that he set in Screen 4.

The design is said to be achieved “lightweight” interaction principle because all the pages and main menu only contain important and useful information. The user interface and interaction is simple as it does not take much time for user to complete the tasks. This will increase the cognitive of the user as all the buttons are shown and user does not need effort to think to complete his task. The learnability is also high because the design is easy and user will remember all the steps or action in the first attempt when using the interface. All the information are represented in a simple way which are just icon and keywords. Affordance also occur in the design to give a clue for the user to know how to use the interface. For instance, the box for “Swimming” category appears half compared to the box for “Walking” and “Running” in Screen 1. This give the clue for user to scroll down for more choices. Same as Screen 3, the word “Distance” will give clue for user to scroll down to view the line chart for the distance travelled by a week. Furthermore, the design is said to be “lightweight” because the user interact with the interface with just scroll, swipe and click to perform all the task.

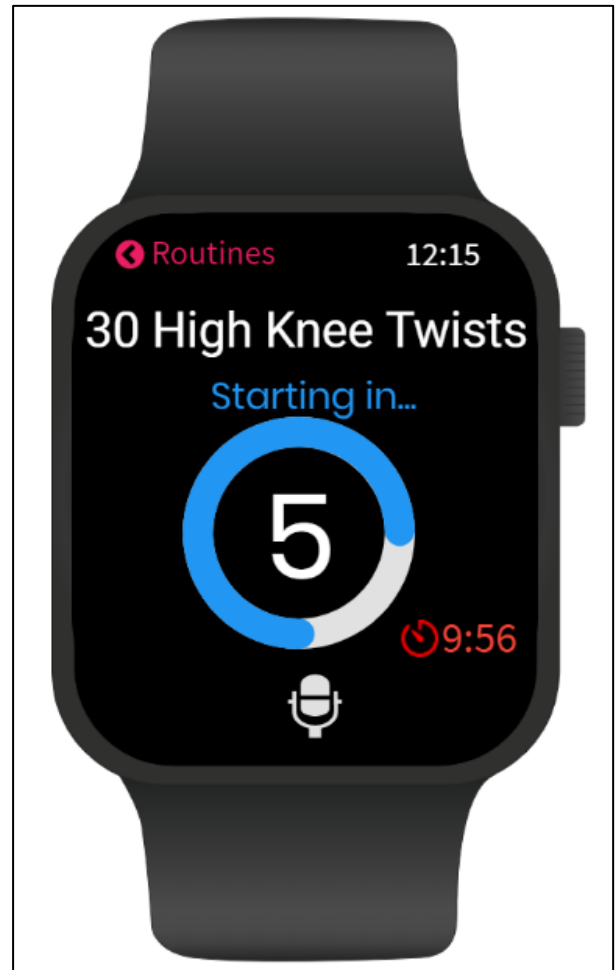
The design also follow the guidelines for wearable app such as predictable navigation. The number of pages is less and less time consuming for user to interact. Hence, the effectiveness and efficiency will increase indirectly. The design also use proper navigation models for instance page-based navigation (represented by dot at the bottom of Screen 2, 3, and 4) and hierarchical (user can tap and the item selected as shown in Screen 1) which suit the parent-child interfaces. Additionally, this design also satisfied the guideline which is timely and relevant notifications. When the user’s goal set by the user achieved, the notification (Screen 5) will deliver at the right time. This notification only takes 3 seconds to vibrate and will disappear automatically. This function will also increase the motivation for the user to do more exercise for their fitness. Apart from that, the glanceability is also achieved which can be proved by the line chart in Screen 3 rather than showing by using numbers. User can take a glance at the pattern of the line chart to know the flow of steps in a week.

Function 3– Workout Routine Ideas

By Nurul Alis Alia Binti Mohamad Zamri



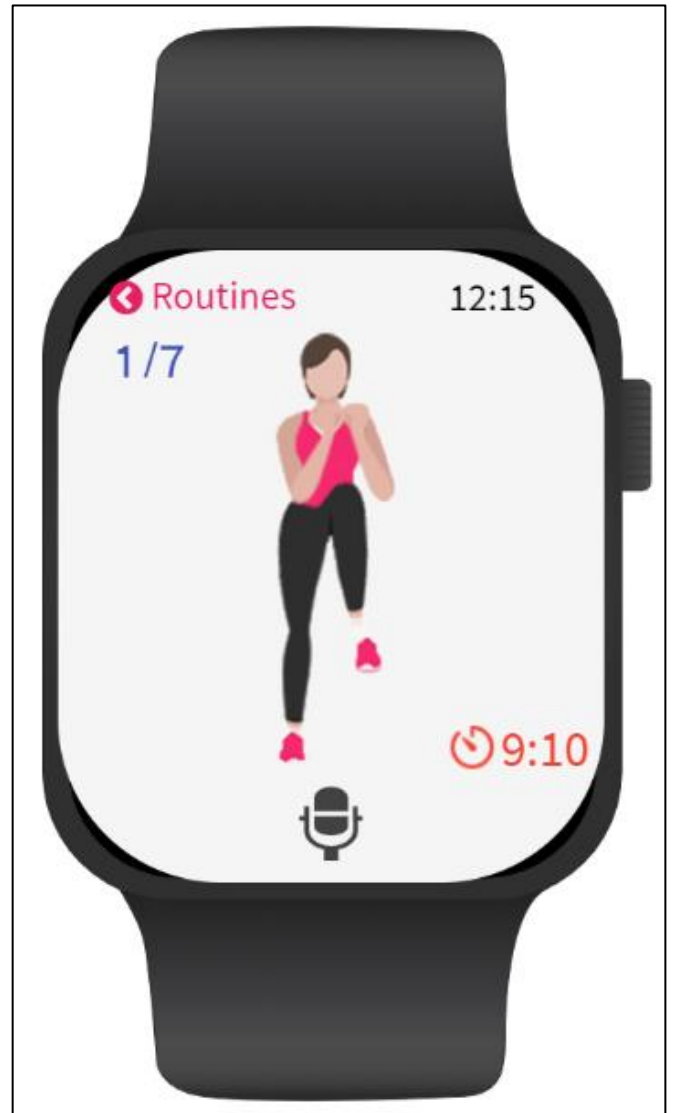
Screen 1



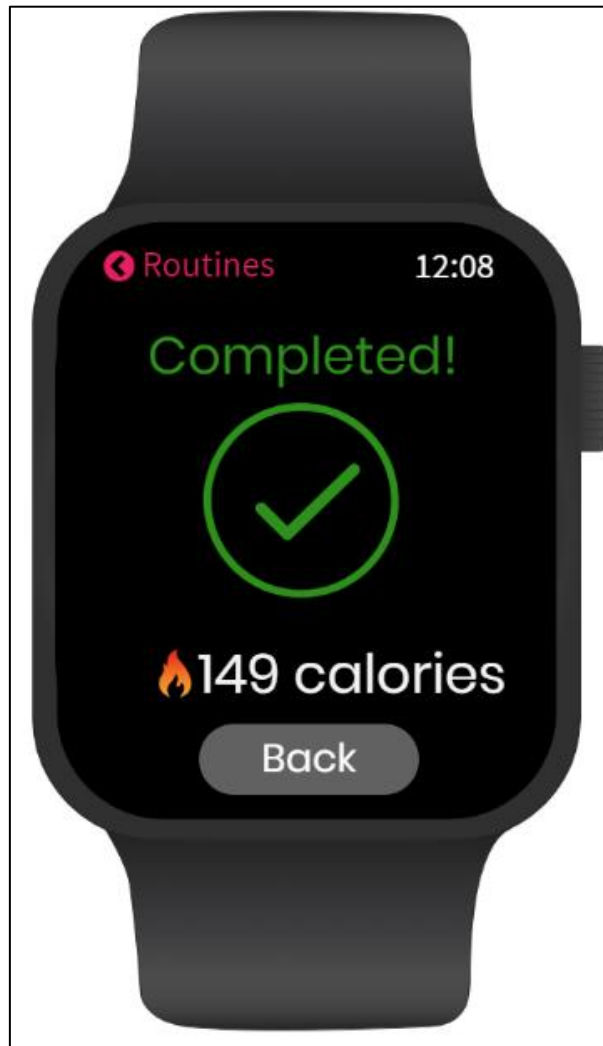
Screen 2



Screen 3



Screen 4



Screen 5

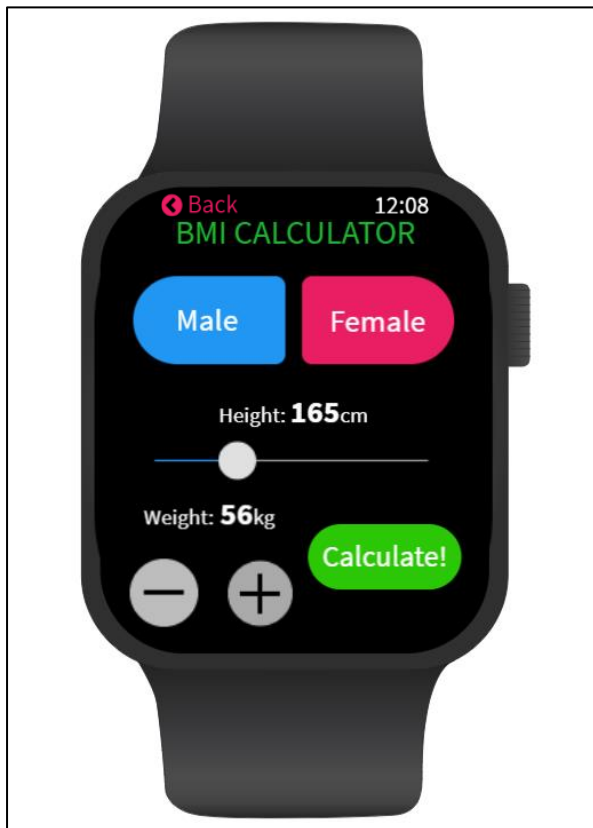
From the menu page, when the user tap “Routines”, screen 1 will appear. On screen 1, various different exercises will be listed along with their level of difficulty and the duration of the routine as pointed on the figure above. User can scroll through the list and choose the routine that they want to do. When the user press “Back” on the top left of the watch or scroll to the left, they will be redirected back to GoFit’s menu page. After the user chose their desired routine, screen 2 will appear and automated voice will read out the name of the exercise, e.g “30 High Knee Twists”. Since one routine have various exercises, screen 2 will display the name of the first exercise that the user will has to do. User will be given 5 seconds to get ready. The purpose of the timer on the bottom right of the screen is to let the user be aware of the time left until the whole routine is over. If the user wants to skip the current exercise or pause, the user has to press the microphone icon and say “Skip” or “Pause”. Tapping the “Back” text on screen 2 will redirect user back to screen 1. After 5 seconds are over, the watch will vibrate. Then, if the user put their wrist down, screen 3 will appear. It shows only the timer as a voice

command will tell the user how to do the exercise, for example, “Raise your left knee to your chest as high as possible”. The “1/7” on the upper centre is to tell the user that they are doing the first exercise out of 7 exercises. The voice command will also count for the user so the user has to follow the pace of the voice command. If the instruction given by the voice command is not clear, the user will only need to raise and tilt their watch and screen 4 will appear. Screen 4 shows an animation doing the exercise move. The microphone icon in screen 4 and 5 have the same functionality as the one in screen 2. After the first exercise is over, the watch will vibrate and screen 2 will appear again with the name of the second exercise and the sequence will be repeated until the user finished all the exercises. Then, screen 5 will appear. Screen 5 will tell the user that they have completed the routine and the amount of calories burn. Pressing the back button will redirect the user back to screen 1.

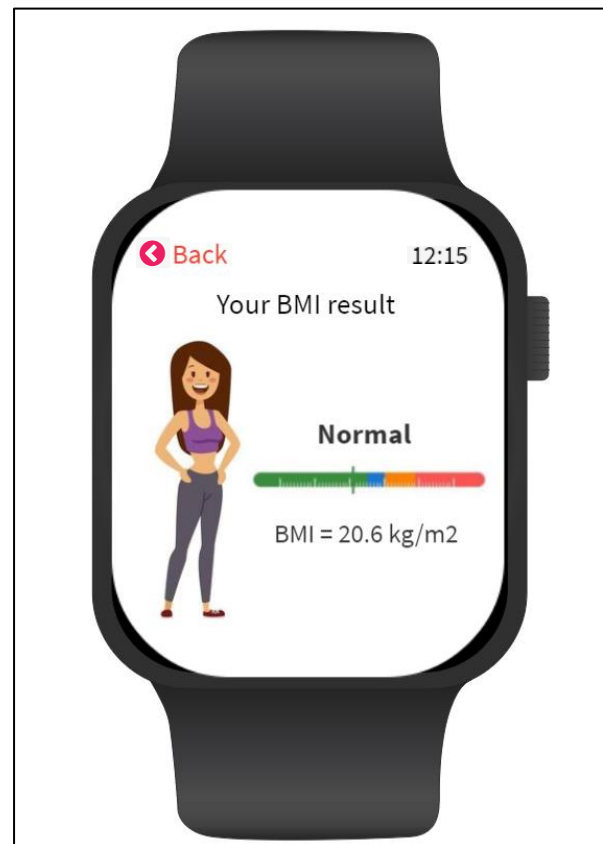
This design achieves the ‘lightweight’ interaction principle and follows the guidelines for wearable apps as they only show important details that users need to see. Usually, fitness apps on the phone will show more information on each routine like the calories burned, the number of exercises and so on but on screen 1 only the routine, level of difficulty and duration are shown. On screen 2, 3 and 4, the pause and next icon are eliminated and replaced by the microphone icon. On screen 3 and 4, there are no written instruction written instead it is replaced by voice command and animation. The screens are designed for glanceability which means the information are not packed and some feature are represented by understandable icons like the fire icon for calories burned, the timer icon and the microphone icon, the user can consume the content in less than 5 seconds. To make user be able to read the content on the screen faster, visual grouping of different routines like in screen 1 are applied and important information are emphasized by font size. Different information are represented by different colours, for example, the routine are in white while the duration is in red. This is to help user distinguish different elements on the screen. The spaces between the elements are all just right, there are not too small that the user will have a hard time reading them and not too large that they are not enough space on the screen. Non-visual interface is important in designing apps for wearables, so I try integrate as much as possible, for example, the vibrations after the 5 seconds and after the exercise is over, the voice command and the voice input. Since running animation on wearables will affect its responsiveness, the animation for this function are made optional, which means the animation will only show on screen when the user tilt the watch.

Function 4 – BMI Calculator

Designed by Mirza Sabrina binti Mohd Salmi



Screen 1



Screen 2

From the GoFit menu page, when the user tap “BMI Calculator”, screen 1 will appeared. As in picture of screen 1, there are some inputs that user need to key in which are gender option, height and weight scale. These are the basic variables that required to calculate body mass index, BMI. The height and weight are required in centimeter, cm and kilogram, kg respectively. User can slide the height scale to the right to increase the height and vice versa. Meanwhile, the action to input weight is using plus and minus button which user can tap the plus button to increase the weight and vice versa. After user done key in the input, user will have to tap the “Calculate!” button and screen 2 will appeared. On screen 2, it will show the user’s BMI result. For example, if the user choose female as gender and has a normal BMI, a female model with a normal type of body will appeared to illustrate the user’s body. The screen will also display the “Normal” range, the BMI scale and the calculated BMI. Moreover, user can tap “Back” to go back to screen 1. User also can try input the desired height and weight to calculate their BMI goal.

This design achieves the 'lightweight' interaction principle and follows the guidelines for wearable apps as they only required simple action to obtain output. As expected, simple input will give a simple output. Usually, other BMI calculator application will require user to key in another input which is age. However, as for my design above, it only required three inputs which are gender, height and weight. This is because body mass index is a simple calculation which only using a person's height and weight. The formula is $BMI = \frac{kg}{m^2}$ where kg is a person's weight in kilograms and m^2 is their height in metres squared. As for the gender option, it only needed to display the model to illustrate the user's body. Beside to tone up the screen, the model is to help user to imagine their body that synchronize with the calculated BMI. If the user has a healthy BMI, a model with a nice body will appeared. Thus, it can encourage user to stay fit to achieve their body goal. Futhermore, the gender option is designed by colour which blue represent male while pink represent female. This condition will make easier for user to choose the gender option without having to read them. I believe that the slide scale for height and the plus and minus button for weight are both understandable on how to use it. Therefore, all the actions to input the variables can intuitively understood by user.

Function 5 – Nutrition plan / guide for healthy eating

Designed by Aina Aliah Binti Ruslan



Screen 1



Screen 2



Screen 3

From the GoFit menu page, when the user tap on “Nutrition Plans” button, it will directly go to Screen 1. As in figure of screen 1, it show that there is an input users need to key in which is their gender. On Screen 1 also show some choices buttons which are “Breakfast” button, “Lunch” button, “Dinner” button and “Nutrients calculator” button. Users need to choose one of the “breakfast”, ”Lunch” and “Dinner” buttons in order know the guide and plan for their meals. If users tap on “Nutrients Calculator” button, this will bring function to calculate all the nutrients in users’ food. First of all, if users choose “Breakfast” Button, Screen 2 will appeared. On Screen 2, it will show the breakfast guide for the food that users need to eat for breakfast. It shows what type of food and nutrients needed for breakfast to the user. Same goes to if users choose “Lunch” and “Dinner” button. A screen like Screen 2 will appeared and shows guide and plan for lunch and dinner. Meanwhile, if users choose “Nutrients Calculator” button, it will directly show Screen 3. At Screen 3, it shows that the users need to input the name of the food they eats so that it will help users to calculate and track the nutrients in the food they eat. From that, they will know whether their food is a healthy diet or not. This function will help the users to choose food wisely. Also, we can see from the space that users need to key in their food, there is a microphone icon. This indicate that the users just need to voice their name of the food without typing. The users just need to tap on that microphone icon and just tell what food they eat and the name of the food will be shown at the space next to microphone icon. For all screen, we can see there is an icon “<”. This icon indicates as “backs” so when the user taps on it, it will go to the previous screen.

This design and function achieves the ‘lightweight’ interaction principle as it takes little time for the users to key in their data such as gender and name of the food. For gender, the users just need to tap the choices button and for the name of the food, the users just need to voice it. This interaction only required little time. Also, this design only show the important information to the users and only showing what’s essential for the users to complete a task. The interaction also are easy to understand and we can see the colour of the words can be seen clearly. This will required less time for the users to learn on how to use it.