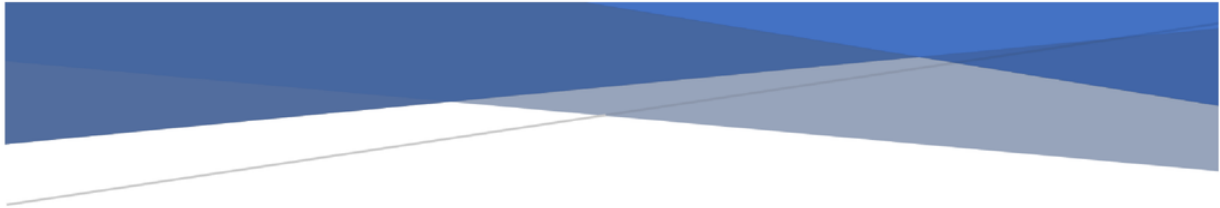


Tapi Assignment Final

by Tapi Matuwi

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REPORT ON HEALTH/FITNESS APPLICATIONS & PROTOTYPING

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1.0 Introduction

This report will focus on the task at hand which is the prototyping of a Health/Fitness application. There are many things that will be taken into consideration when it comes to creating the prototype of the application, this includes things like Task Analysis and Human Factor. The prototyping that will be shown in this report is a paper prototype and a software prototype. The type of Health/ Fitness application this report will be looking at is an application that helps people get to the fitness stage that they desire.

1.1 Health/Fitness Applications

These applications offer health related services to people through their mobile devices. Users are able to access these applications on the go or at home. There are many applications that are available for users on the app stores some are free and the apps users need to purchase. (1) The type of application this report is focusing on also contains fitness along with health. For the people that are trying to lose weight or gain weight mobile applications are good at assisting people in doing so. Keeping fit need for a user to adjust to daily habits and change of lifestyle, this is achievable with mobile application because they point the user in the right direction and make a difference. There are applications that are able to do different things like log workouts, collect stats about runs, walks and bike rides. There are also other applications that act as fitness coaches and they connect a user to a nutritionist or personal trainer and they check on them once a week. (2)

2.0 Task Analysis

This is the process of studying users by watching them do something to help understand how they carry out their tasks and attain their goal. Task analysis assists in pinpointing tasks that an application or a website should support and help the developer refine or redefine the navigation of the site by deciding upon the right content. (3) There are different types of task analysis there is cognitive task analysis and hierarchical task analysis. Cognitive task analysis is used to understand tasks that are in need of a lot of cognitive activity from a user. This could be making a decision, memory, solving a problem, judgement and attention. (4) Hierarchical task analysis breaks down the user's actions when they are heading towards a goal into a series of tasks. These tasks are then broken some more and they become sub tasks until a decision has been made that that is far enough. (5)

What type of people will use this application?

The people using this application are the ones that are looking to get fit. This could be gaining weight, gaining muscle, losing weight or just improving their fitness as a whole.

What task do they perform now?

The user will be asked to perform different physical tasks to help them get to their desired stage and also adjust to a diet.

What is the purpose of this task?

The purpose of this task is to allow users to reach the fitness goal they require by providing them with a work out plan and a diet plan.

What does the user gain from performing these tasks?

The users get fitter and they are able to track their progress in order to see how far they have come since they first started. They can also share their progress with other people to inspire them to do the same thing.

What else can the user do with this application?

The user is able to connect with other people using the application and check out their progress and talk to them as well.

How often will the user use the application?

The user would need to use the application on a daily basis in order to get the best results.

What happens if something goes wrong like the application crashing for instance?

If something was to go wrong then the user could report the incident and it would be fixed as soon as possible.

3.0 Paper Prototype

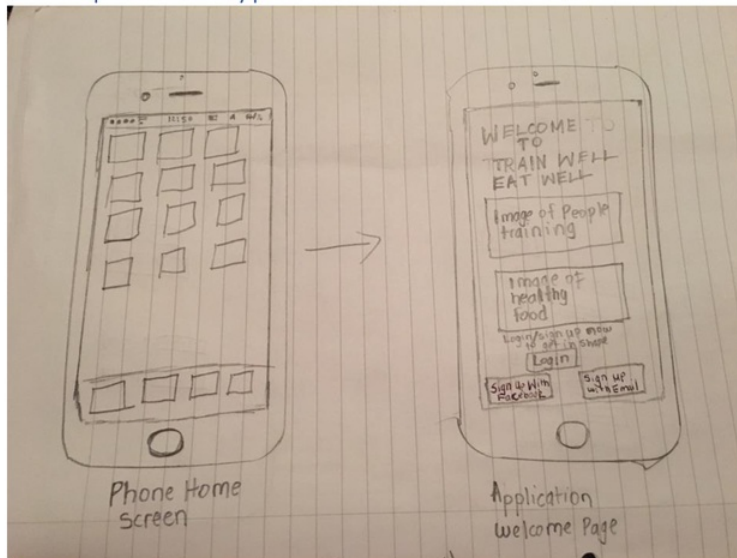


Figure 1. Screen on the left shows the phone home screen before entering the application and the screen on the right is the home screen of the application. On the home application is where user choose how they want to sign up whether it's using Facebook, email or if they already have an account they can just login.

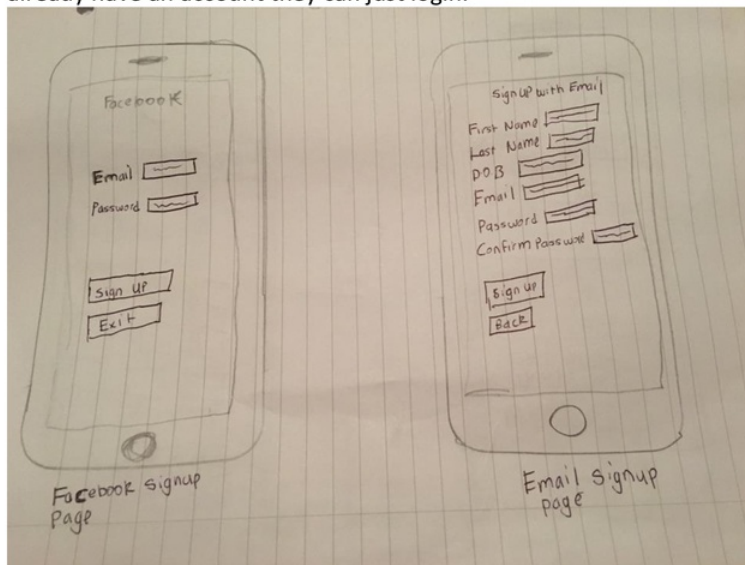


Figure 2. The screen on the left shows the signup page using Facebook, the user just has to enter their Facebook credentials and they can sign up. The screen on the right allows the user to sign up using email all they have to do is fill out the details.

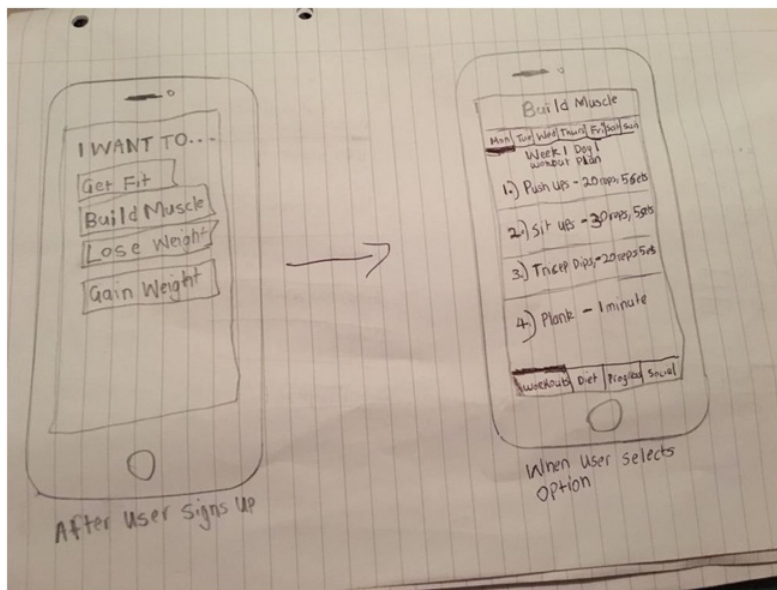


Figure 3. The screen on the left shows the first page a user sees after they sign up. The user would then choose what they are looking to achieve. Once they user selects an option it then leads them to what is shown on the right screen. This screen would have the same look even if the user picked a different option. As shown on the screen it contains the different workouts that the user needs to carry out on that day.

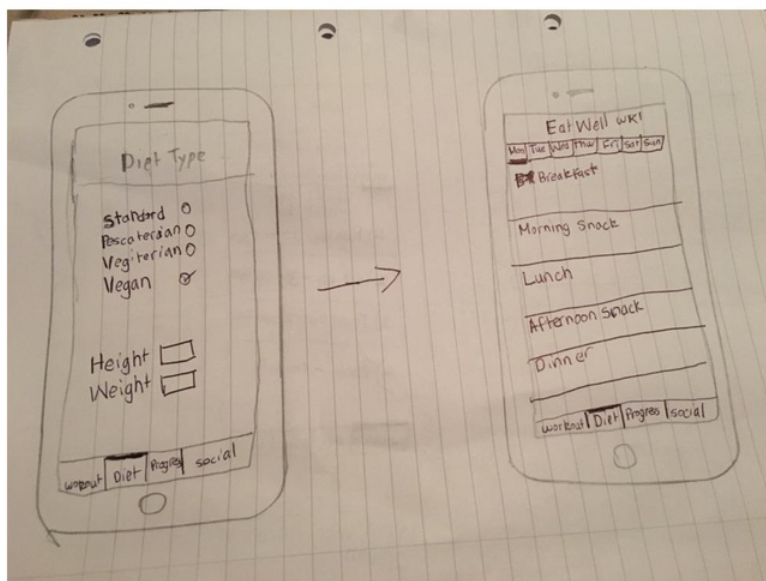


Figure 4. The screen on the left is the first thing the user would see when they go onto the diet page. On this page, the user would need to choose their diet type as well as entering their height and weight. The screen on the right shows what the user would see after selecting their diet type. This screen also will also contain the foods the user would need eat at different times.



Figure 5. This image shows where the user can save their progress and take pictures to track their changes as weeks progress.

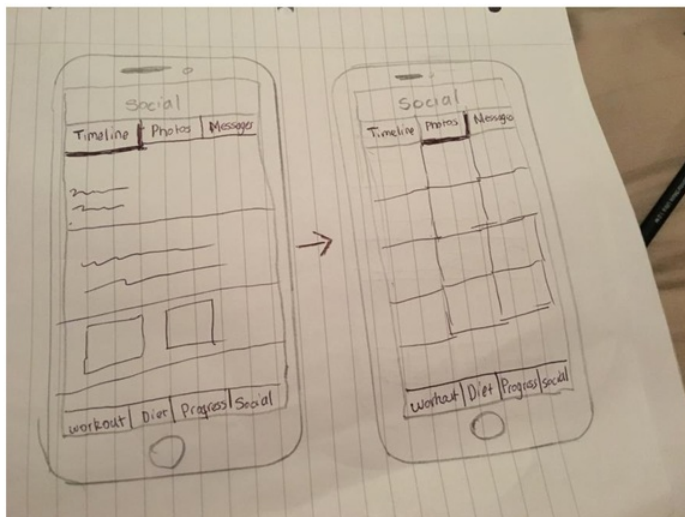


Figure 6. This shows the social page, this page contains three tabs which are Timeline, Photos and Messages. The screen on the left shows the timeline tabs where the user can see the pictures others post showing their progress. The screen on the right shows where the user posts their own photos to show their progress.

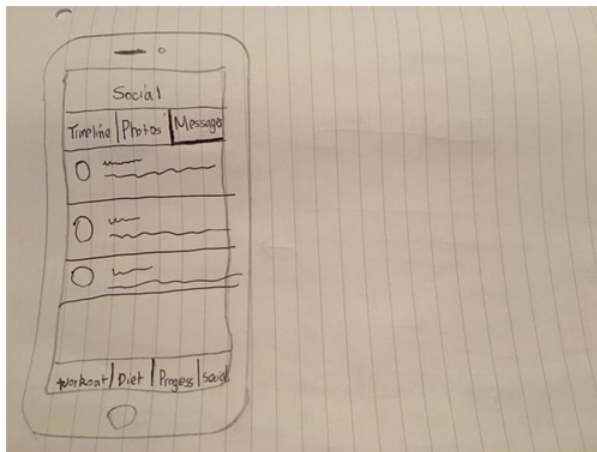


Figure 7. This image shows the last tab of the social page which is the messages. On this page, the user can connect with other people and discuss their fitness and progress.

3.1 Todd Renton Evaluation of Paper Prototype

The app could possibly have a feature in which the user can to set a goal of the set additives. For figure two where the user can build muscle there could be a drop down of a choice of activities in which the user can pick the ones they want with an adjustable time. For figure 4 the diet app the app could send message of time when the person should eat/drink. Figure 5 could have graphs to show the changes the progress screen over the weeks that the person trains. Another feature which the app could uses is while the user finishes a lighter excise it could recommend a hard type for less times than normal.

4.0 Human Factors

This area of the report is going to focus on Human Factors. Human factors are something that needs to be considered when designing an application. There are different types of factors that come into play like human memory, human vision and human reasoning. The ways that humans use Affordance and Metaphors are also other factors that will be looked at in this section.

4.1 Human Memory

Human memory has often been compared to a filing cabinet that has memory folders where information is kept or sometimes a super computer that run at a high speed and capacity. Although quite similar modern biological and psychological knowledge say that the human memory is a lot more complex than that. Our memory isn't just found in one part of the brain but it is a brain wide process where other parts of the brain work with each other. An example of this is the act of bike riding, the memories of riding a bike come from one part of the brain and the memories of bike safety rules come from another part. (6) In the design of the paper prototype an example of this would be the memories on how many reps the use must carry out might be stored in one area of the brain and the memories on how to carry out a workout might be stored in another part.

4.2 Human Vision

When a person looks at an object the light from that object enters the eye through pupils. The iris changes the size of the pupil but this all depends in the brightness of the light. The lens focusses the light onto the retina. This is an area of mass light sensitive neurons that are known as photoreceptors. Photoreceptors then change the light signals into electric ones. They also have chemicals that change when they are exposed to light. This cause an electric signal that is sent to the brain using the optic nerve. There are different type of photoreceptors and they enable us to see a huge amount of light this could be from the colours of the rainbow to the sunshine. (7) Not everyone is able to see all colours though =, there are also people that are colour blind. Colour blindness is a condition that is common in males more than females. In America, it is estimated that 8% of males and less than 1% of females have colour vision problems. Colour blindness is cause when light-sensitive cells in the retina don't respond appropriately to variations in wavelengths that allow people to see an array of colours. (8) In order to help the colour-blind people, the application will use a colour scheme of two different colours will be used to make sure than the app is consistent in the colours it uses. The most common form of colour blindness is red-green deficiency and this a difficulty in telling the differences between red and green. (7) Avoiding using these colours would be helpful for the application.

4.3 Human Reasoning

When it comes to human reasoning there are three different types. The three different types are deductive reasoning, abductive reasoning and inductive reasoning. Abductive reasoning is a method of reasoning that best explains the situation according to the evidence. An example of this would be when it rains it gets wet. (9) Deductive reasoning in the logical process where a conclusion is made based on a number of things that are assumed to be the truth. A Greek philosopher Aristotle who is known as the father of this reasoning used this as an example; all men are mortal, Socrates is a man, Therefore Socrates is a mortal. (10) Inductive reasoning "refers to reasoning that takes specific information and makes a broader generalization that is considered probable, allowing for the fact that the conclusion may not be accurate" (11)

4.4 Metaphors

A metaphor is a representation associating an object or meaning with another. An example of this is how a floppy disk has been used as an icon to save on different applications. (12) In the prototype design, there are different way that metaphors can be applied like on the work out section a running man can be added to represent a workout.

4.5 Affordance

Affordance gives a clue as to how an object should be used, this is provided by the way that the object looks. An example of this would if you had never come across a mug before, the handle is shaped for grabbing the mug and the well inside where something goes in. The mug can afford to be picked up and it is able to be picked up. It can afford to be drank out and it can be drunk out of. That is what it is designed to do and that is what it does. (13)

6.0 Review

This review is based on the images below for another person's fitness application. This application is for a step counter that allows user to count how many steps they have done throughout the day. The first thing I'd like to point out is the history menu, to make this better a high score could be shown on this menu to encourage the user to be that score and set a new one. The user should also be able to set a target of what they want to achieve and how much time they want to achieve it in. On the map menu, the map could also detect a different route that is more challenging for the user but it would still lead to the same destination. There should also be a place where the user can log their progress over time like their weight and body fat and compare it to the past. The fact that the user is able to check their history is a key element and would be very useful for the user.

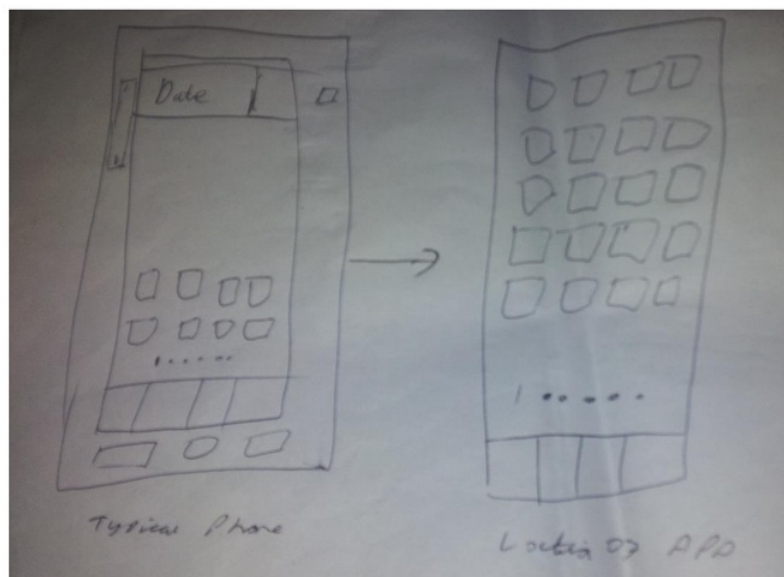


Figure 1: App location

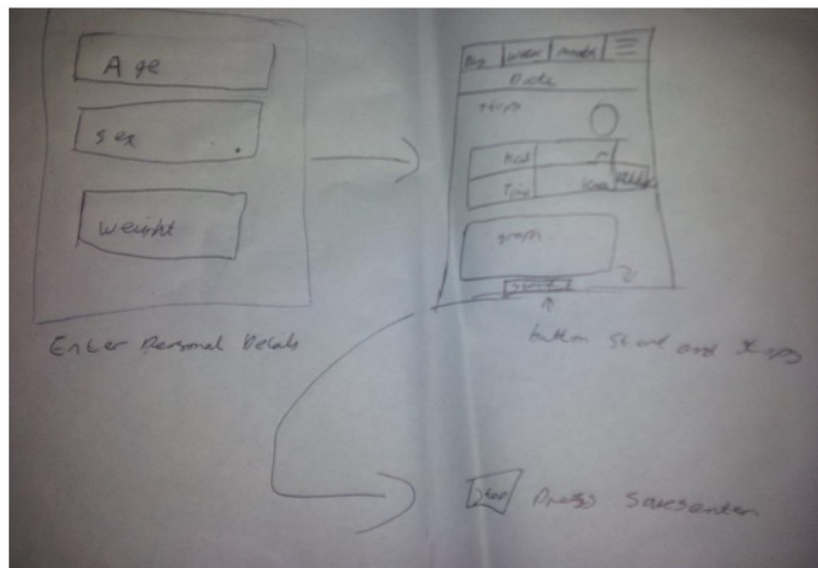


Figure 2: start up settings and main user view

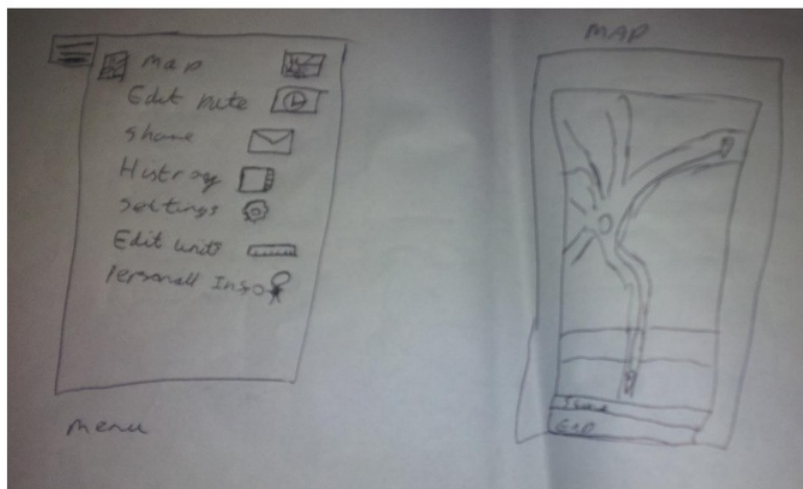


Figure 3: Menu and map page

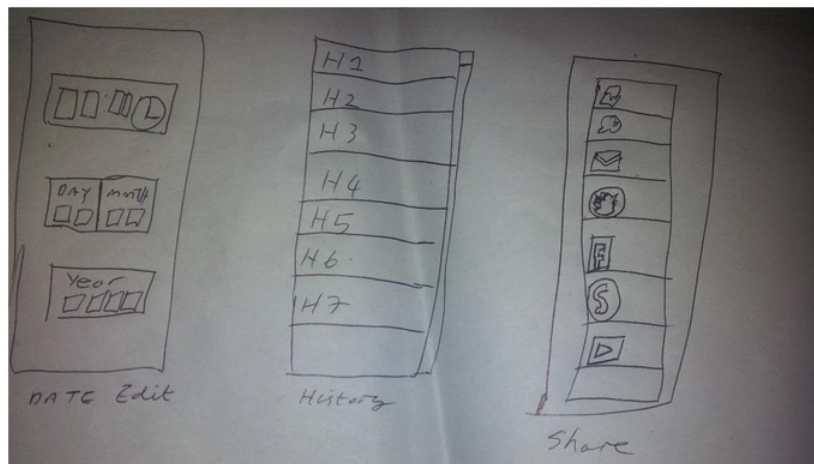


Figure 4: date settings/ history menu/ share feature

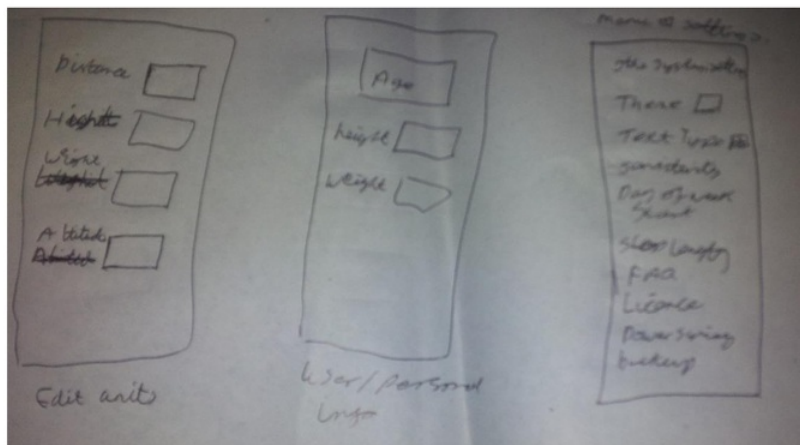


Figure 5: Units settings/ user information/ advance settings

Software Prototype

All of the screens were designed using Marvel App prototyping

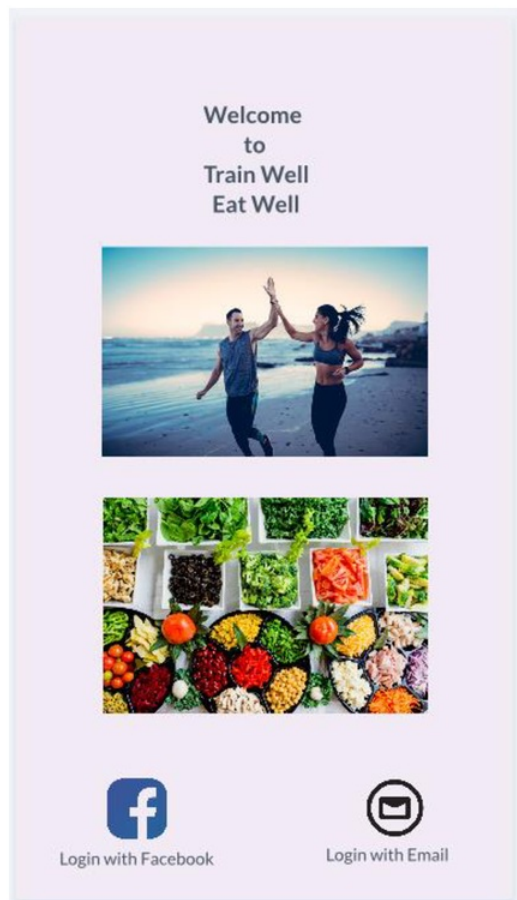


Figure 1. Home Page

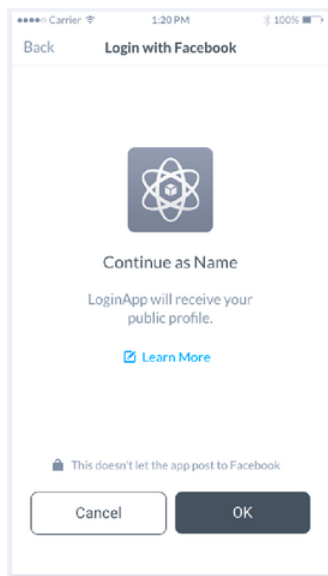


Figure 2. Facebook Login

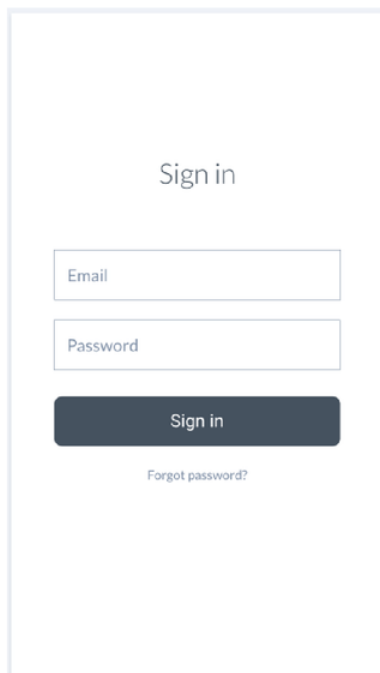


Figure 3. Email Sign in

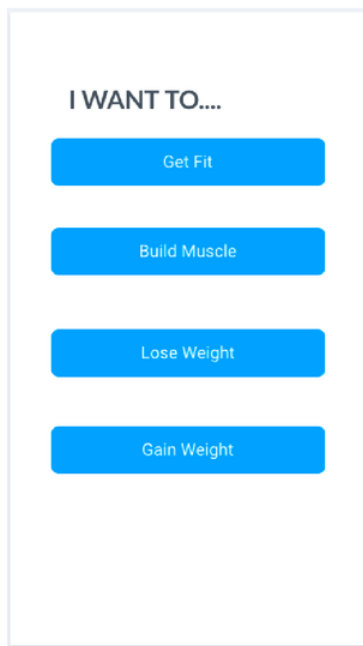


Figure 4. User Goal Selection

Evaluation

This is an evaluation of the usability techniques that were taken into consideration in the creation of this application prototype. The paper prototype gave a rough idea of how the actual application was going to look like and when compared to the software prototype there isn't much of a difference. There are some features that were added to the software prototype that weren't included in the paper prototype, these features were added in order to improve the application for the user. Human factors were taken into consideration when creating the software prototype because things like the colour schemes are very important, these are important for people who are colour blind for them to be able to see a blue and white colour scheme was kept on all the pages of the application. The menu and buttons that were used are also easy to remember for the users this is where human memory was taken into consideration. Metaphors were used throughout the main menu to make it easy for users to navigate.

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Tapi Assignment Final

GRADEMARK REPORT

FINAL GRADE

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GENERAL COMMENTS

Instructor

Introduction

A brief introduction with some referenced content. Some example applications (and images) would have been an improvement.

Task Analysis

Good referenced explanation of Task Analysis. You answer the Task Analysis questions with good analysis – it would have been good to be clear on the process of gathering info from a representative user.

Paper Prototype

Good design work and use of the required hand drawn format. Well structured and includes a range of useful features showing careful consideration of user needs and selection of design components. Also brief explanation to add usage context.

Human Factors

A good and well referenced discussion of Human Factors. You correctly describe the concepts and discuss their application very well it would have been an improvement to show me examples from your own prototype designs as I could clearly see the application there!

Review of Classmate Design

A short review with some useful and constructive suggestions for improvement.

Software Prototype

This is an attractive prototype with good design work and application of usability techniques. Also good discussion of design features. A range of features are implemented. Brief explanation would have been an improvement.

Evaluation

Brief discussion which included good analysis of the techniques used with a few specific application in your work discussed.

Referencing and Format

Good referencing, appropriate and appropriate format.

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