# User Centred Design | Assignment 1

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# PART 1 : COMPETITIVE ANALYSIS

## Introduction / Project Scope

Nowadays, mobile phones have been fully integrated into people's lives. The popularity of various apps has made us realize that APP is one of the main ways to change people's living habits. This time we focus on the Fitness APP because we believe that healthy living habits are one of the conditions necessary for a perfect life. The APP we choose focuses on the user's exercise, which is characterized by the ability to get rid of the requirements of the device and achieve the purpose of exercise through the action of the system. This will not only provide the most professional guidance and the most scientific exercise methods at home, but also share and learn about healthy living by communicating with other users. We believe that this approach can not only help users reduce expenses but also develop healthy living habits.

How much cash we're splashing

Australians spend $712 million a month on health and fitness activities, equating to a $38 monthly spend for the average Australian. Younger Australians spend the most on their health and fitness activities, with Gen X spending $243.4 million a month, followed closely by Gen Y who spend $189.2 million.

Unused new year's resolutions

More than one million health and fitness passes go unused in Australian wallets – a big contributor to missed financial goals – with only a third (36 per cent) believing they get good value out of their health and fitness spending.

These data are from the statistics of commbank. These data are also the main reasons we will pay attention to this app. It is obvious from the data that the spending on exercise in Australia is huge, especially for young people. But the results are disappointing. Many people pay a high price but they either fail to meet expectations or choose to give up the waste of money.

The main purpose of our app is to solve these problems. Through our APP users can achieve the purpose of exercise at home, and the effect is obvious, the most important is free, which will reduce a lot of money output. Secondly, through the guidance of our APP, users can learn professional health knowledge to develop healthy living habits.

**Intended Users**

Our target audience is very broad, because a healthy lifestyle is

| Group 1:  Casual users | Group 2:  Active users | Group 3:  Aspiring users |
|---|---|---|
| - 15-45+  years old<br><br>- No awareness of scientific exercise<br><br>- Will not scientifically control the diet<br><br>- Incorrect exercise<br><br>- Lack of stretching knowledge<br><br>- Very poor sports foundation<br><br>- Starting to be health conscious<br><br>- Average education (to be able to understand concepts of exercising)<br><br>- Have a network connection<br><br>- Because special conditions need to adjust the lifestyle and diet to reach the weight loss group (serious overweight, cardiopulmonary disease, etc.) | - 15-35 years old<br><br>- No cardiopulmonary disease (heart disease, respiratory disease, etc.)<br><br>- Have the intention of exercising<br><br>- Have the conditions and foundation of exercise<br><br>- Be able to keep exercising and complete each training program<br><br>- Ability to complete training individually<br><br>- Basic exercise equipment use<br><br>- Starting to be health conscious<br><br>- Have a network connection<br><br>- Average education (to be able to understand concepts of exercising) | - 15-45+<br><br>- Have a professional knowledge reserve (health, diet, exercise, etc.)<br><br>- Need to share your life<br><br>- Responsible for your own posts<br><br>- Ability to share your knowledge continuously<br><br>- Have good expression or writing skills<br><br>- Have patience to answer questions<br><br>- Starting to be health conscious<br><br>- Have a network connection<br><br>- Higher education, able to have a professional knowledge reserve, and can clearly explain their own ideas. |

regardless of gender and age. Because people have different ways and conditions for a healthy life, we will divide them into three main parts according to the requirements and conditions of users to benefit more people. According to the user's requirements and conditions, we have three types of Casual users, Active users and Aspiring users. In this classification, we consider the conditions of age, sports foundation, and knowledge reserve. We believe that such classification can develop the use of software to The biggest, let users have a better experience.

# Main Competitors

| Main Competitors | Application brief | Target people | Features |
|---|---|---|---|
| Run keeper | Through the GPS function, the software can track and measure the user's movemEnts. It allows users to view their sports history and get their own running data from Runkeeper. | Sports software with membership system. It is very helpful for people who like to run, ride bicycles and exercise. Track the movement route by GPS. There are various training programs. Premium members can get all the training programs and the perfect software experience. | 1.Detecting the user moving distance and time, the current speed, average speed<br>2.Making an exercise plan<br>3. Focus on running<br>4.the running route will be recorded by GPS<br>5.The record will be uploaded to the website<br>6.Customized training for different running events<br>7.Customize different sports plans for different users<br>8.Can create a multi-person running group<br>9.Statistics user's weekly running data |

| | | | |
|---|---|---|---|
| Runstatic | Sports software with membership system. It is very helpful for people who like to run, ride bicycles and exercise. Track the movement route by GPS. There are various training programs. Premium members can get all the training programs and the perfect software experience. | All ages, any gender, beginner or professional runner, fitness enthusiasts and cyclists | 1.Track workouts in real time with built-in GPS 2.Get audio feedback from the Voice Coach in the running app 3.Monitor your running statistics to analyze your training patterns 4.Making your own running goals 5.Track miles for your running shoes. 6.You can join a group, run with friends. 7.Engage in a little friendly competition. |
| Spots tracker | Sports Tracker is a very professional sports and fitness auxiliary recording software. It is relatively popular among similar software. It can not only help you track and analyze your exercise effect, but also develop exercise plans and share exercise data and pictures. | Any sports fans can track their sports in this app. All ages, any gender, beginner or professional runner. | 1.Track reliably and accurately all your sports from running, walking, cycling, swimming, mountain biking to nearly 90 other activity types. 2.Measure distance with Sports Tracker's GPS 3.Analyze your route-specific performance. 4.The voice feedback while working out to know your distance, duration, speed, pace and more. 5.Record data in online service. |

| | | | 6.Sports tracker can connect with Apple Hearth. 7.Autopause stops the GPS tracking automatically when the user stop. |
|---|---|---|---|
| | | | |

# Why did we choose these applications as the main competitors?

The features of these three applications are similar. They have the same goal - to help people exercise better. For users, no basis is required. Suitable for all people. No matter what kind of exercise you are doing, you can use those software to assist you.

They all encourage users to conduct custom training programs to tell users how they need to improve by analyzing the user's actual exercise. Runkeeper and Runtastic allow users to create their own sports teams, exercise with friends, and share their sports experience. We think that good sports software not only tells the user how to exercise, but not only assists the user in exercising, but more importantly, let the user know the correct concept of exercise. In this process, communication between the user and the user is necessary. Listening to other people's sports experience is more important than the developer telling the user. All three software support GPS positioning and tracking. After the end of the exercise, the user's exercise data is analyzed and it is important. By analyzing this data, we can know the user's preferred route and preference time. Help us classify users. In addition, Runtastic has a premium membership system. We think this will not work for new software. In the absence of a certain number of user groups, the charging system is likely to let us lose in competition with other software. We compare these software and combine their advantages.

**Identify Main Tasks**
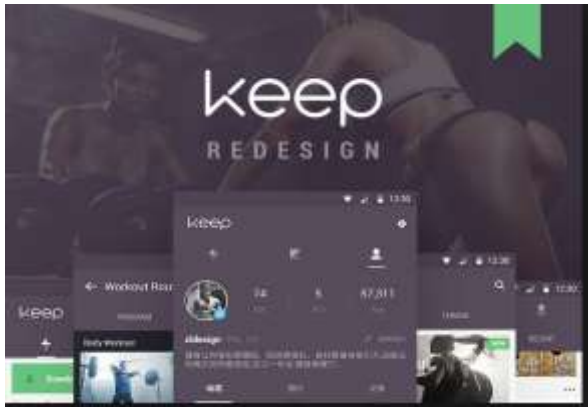


**"Keep" fitness app**

*Main purpose*: The main purpose of this fitness application is to improve students' fitness level and encourage students to have a healthy lifestyle.There are many videos about different exercises,such as yoga, aerobics,boxing and something like this. People can watch the videos just with click the button and replay the videos until they fully remember the steps.In addition,people can use this application in different ways according to their plans.This app provides an opportunity to communicate with famous fitness coach for users.In this way, users are able to learn effective ways to improve their fitness level and get some feedbacks from private trainer.This app also record their progress and achievements based on the first fitness level when they used this app.Furthermore, people can share and exchange ideas and experience with other users in this virtual community.

*Main tasks*:
1.Input data according to different exercises and personal information(age,gender,height,weight,etc)

The app helps keep the user motivated,because this task can record users' daily exercise(time,duration,heart rate,etc) in order to users can witness their changes.The personal information is helped users to find the suitable trainers and meet new friends and partners.

2.Share photos and videos about their experience and their daily exercise.Other users can comment and exchange their ideas.

This task is helped by the application because it can spark users' interest.They can share photos or videos and comment other people's pictures without complicated stages.It is convenient to meet new friends or partners with common interest.

3.Provide massive useful videos and disseminate knowledge of health, and communicate with famous trainers online.

This task is helped by application because users can learn a lot of knowledge about exercise and get rid of their bad habits according to videos.In addition,communicating with trainers is the best way to get some feedbacks and remedy mistakes.

4.Keep track of what users eat every day and count calories so that users are able to control their weight.
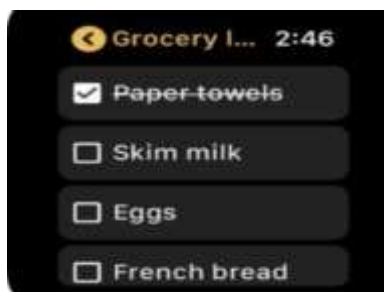


This task is helped by application because it record users' daily diet and calculate the calories they intake,users often don't know the calories of various foods,in this case,this task can help users control their calorie intake according to their plan.

**Application Analysis using Nielsen's Heuristics**

| Nielsen's Heuristics | Rating | Usability | Effects on users | Proposed solution |
|---|---|---|---|---|
| Match between system and the real world | 3/4 | The Home button and workout button is depicted as a bar chart and a thunderbolt respectively | Users unfamiliar with the app may get confused sometimes, especially since the words under said pictures are small | Change the home button to resemble a house and the workout button to resemble dumbell |

| | | | | |
|---|---|---|---|---|
| Flexibility and efficiency of use | 2/4 | Creating a training plan requires a currency called "Calorie Coins", and without it | If a user runs out of said currency, they will not be able to use certain features of the applications. For example being unable to create a training plan | Remove the requirement of currency to training plans |
| Aesthetic and minimalist design | 2/4 | The feature of an infinite scrolling in the posts do not help users to appreciate a minimalist design | It may occur to users that finding certain posts may be hard to find | Limit the recommended posts and put a search engine for specific posts that the user may want to find |
| Help users recognize, diagnose and recover from errors | 3/4 | Errors are a rare occurrence, but when they do occur, for example the application freezing, the application does not show the user what is wrong | The lack of communication between the user and the application may cause them to panic, fearing they did something wrong | Show an error message whenever freezing occurs |
| Help and documentation | 1/4 | There is no universal search engine and no popups nor tutorials are shown to guide through the user | When a new user wants to find something within the application, they may be unable to find it. Furthermore, the lack of a walkthrough by the application may make users unable to use the application effectively | Create a guide through the main key features of the application |

# Part 2 : Survey and Design Discussion

## Survey Participants

More than half of the participants are juvenile range from 15 to 20 ,a third of the participants were young people aged 21 to 25 and only a few of people who aged more than 26.The following chart shows the participants' attributes.

| Group 1: Beginner | Group 2: Intermediate | Group 3: Professional |
|---|---|---|
| ● Age from 15-25 and more than 36 year olds,both males and females.<br>● Exercise only once or twice a week.<br>● Spends a little time (1-10 hours a week) on their physical health and well-being.Because they always tied up with their study or work.<br>● Spends very little money(0-100 Australian dollar) on fitness.<br>● Most of them have no fitness experience or just only a little experience.<br>● Wants to attend to some exercise courses and be able to record their daily process and calculate calorie which from their daily diet.<br>● Would like to listen some musics during their fitness journeys.<br>● Would like to get some feedbacks from professional trainers when exercising.<br>● Wants to lose weight by using this | ● Age from 15-25 and more than 36 year olds,both males and females.<br>● Exercise 3-4 times a week.<br>● Spends some time(10-20 hours a week) on their physical health and well-being.<br>● Prefer to spend money on fitness in order to learn how to keep fit.<br>● Most of them have some fitness experience before and have achieved their goals by attending the fitness club.<br>● Wants to gain more knowledge by using this 'keep' app.<br>● Would like to use videos and guides to help better their form and posture.<br>● Would like to find a suitable trainers and set up more professional plan in order to their improve their health level.<br>● Wants become more healthier and more confident by using | ● Age from 15-25 and more than 36 year olds,both males and females.<br>● Exercise 5-7 times a week.<br>● Spends almost all of their free time on their physical health and well-being.<br>● Spend more than 100 Australian dollar on fitness because they need to more professional train.<br>● They have enough experience compared with their counterparts.<br>● Wants build muscles or perform better by using this 'keep' app.<br>● Would like to share to community about their experience.<br>● Wants to share to the community because it can spark their interest and keep them motivated.<br>● Willing to share their knowledge and experience with others,so that they can reach their goals together.<br>● Would like to have challenges in order |

| | | |
|---|---|---|
| 'keep'app.<br>● Not willing to share their health knowledge and health experience with others because most things are new and they could feel embarrassed and nervous.<br>● Most knowledge of fitness they gain from their friends. | this 'keep' app.<br>● Willing to share their knowledge and experience with others and wants to make friends with same interest and want to cooperate with their friends.<br>● Most knowledge of fitness they gain from Internet. | to improve their fitness and have a sense of achievement.<br>● Most knowledge of fitness they gain from their experience and articles. |

**Contextual Inquiry Observations and Interviews**

The data observed revealed several issues being related to fitness and the usage of a fitness app. The first issue that was observed was that half the people observed shown that they do not use a fitness application to monitor their physical activity. It was observed, however, that people in fact are not lazy and do enjoy to engage in physical activities, but choose to not report it on a fitness application. This tells us that due to the lack of a sensation of being rewarded for their efforts is a major problem in order to keep people motivated in order to keep pursuing. However, of the people that use Keep, the most used feature is to the recording of the daily amount of exercise done. This leads us to believe that those who actually use a fitness application do indeed properly record their fitness activities.

According to the observations, the most wanted feature the surveyees want to implement is that they would like to add a function that allows the users to put music in order to motivate the users to pursuing more physical activity. Other features that were suggested was that they wanted to implement daily challenges and also be able to cooperate with

friends. Likewise to the implementation of music, it will likely increase the motivation of the users.

Most of the response to achieving their goals, whether it be losing weight or building muscle, the average was that most of them did indeed achieve their objectives that they set out from the onset.

The interview revealed that many interviewees wish to lose weight and calculate the calorie intake.

Also other solutions indicated that recipes including low carbohydrates help the users lead a healthier lifestyle.

- wants online sports clothes and equipment

**Survey Results**

This service is better for us to understand our users, and we have got more comprehensive information under limited sampling. The information shows that some people have already started using KEEP. Most of the users are women, and the age group is between 15-25 years old. This also makes us perfect the age group of the main population.
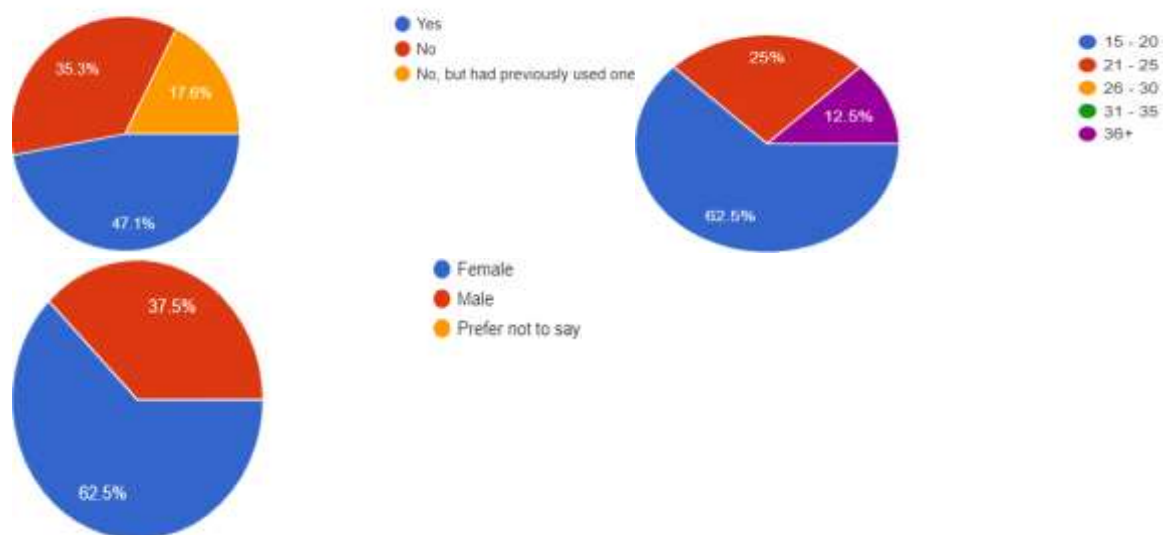
According to the service, we can clearly understand that almost all participants have the habit of exercising, and they all have this perception of the concept of physical health and have also paid different actions.

How often do you use the "KEEP"
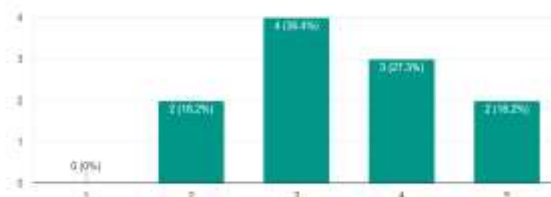11 responses
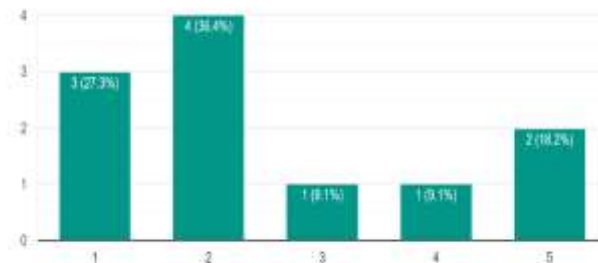


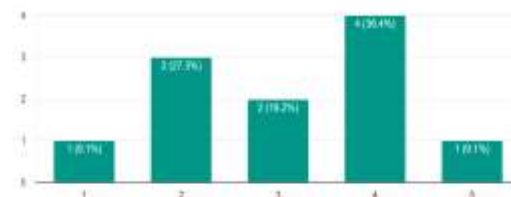How many days do you exercise per week?
11 responses
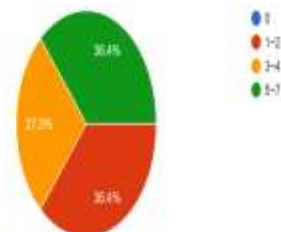


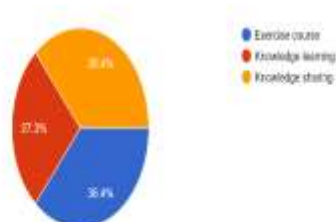How often do you pay attention to your own physical health and well-being?
11 responses



Are you likely to spend money in order to learn how to keep fit?
11 responses



What do you want to get through KEEP?
11 responses



In the survey we see that the users of each category are relatively balanced, which verifies that we classify the users correctly.

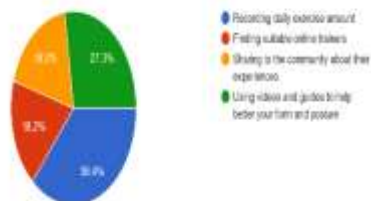Do you have enough time to go to the health club or study health knowledge?
11 responses
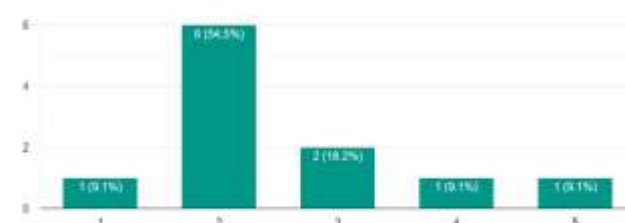


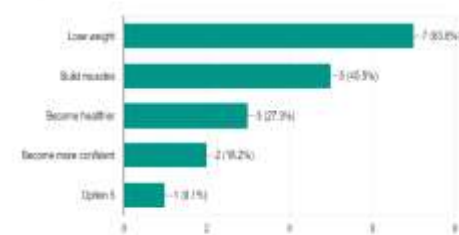No time has become a major problem for most people, but KEEP can be easily solved

## Design Directions

**"Vibrant colors enable enough of contrast helping to increase readability and legibility. Due to contrast layout elements become distinguishable and noticeable. However, high level of color contrast may not always work well. If copy content and the background colors contrast too much, it will be difficult to read or scan the text. That's why designers are recommended to create a mild level of contrast and apply high contrasting colors only for highlighting elements."**



This is a quote from the UI design website. Through investigation, we know that most people's goal is to reduce fat, so we think that the choice of background and color should be a simple match, highlighting the legibility, this is the most important, because we think that in sports or reading should be all Attention should not be spread to a too fancy interface. We need to give users the most effective workout and knowledge they need in the fastest time possible, which will greatly enhance the user experience.
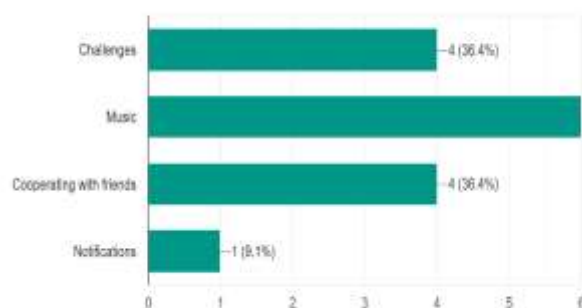


For the design we refer to the results of the survey, the vast majority of users believe that it is necessary to strengthen the music, and also proposed to strengthen the training difficulty and sharing with friends.

We believe that music is indispensable, 6 Reasons You Should Listen To Music When You Work Out (from LIFE) 1. Music is the good kind of distraction.2. It ups your effort.3. Music puts you "in the zone" .4. A good beat can help you keep pace.5. It can you want to move. We believe that good music is essential in a hearty sport, so right

The strengthening of music is imperative for us. Because we take into account the different needs of each user for music, we will adopt the method of setting ourselves. Our idea is to add the option of linking local music to the user in the user settings, so that users can use their favorite playback software to play their favorite. Music. Secondly, for the choice of exercise difficulty, we will design 7 difficulty levels, 1 is the lowest, 7 is the top level, I believe that the meticulous differentiation of this difficulty can definitely meet the user's requirements for the challenge. Of course, we also consider how to interact with friends. Whenever a workout or study is completed, users can share it on social networking sites and invite friends to join your workout or share what you see.

Here are some samples

This is the response when the user clicks on the settings interface, where we will give the response after clicking music and friend.
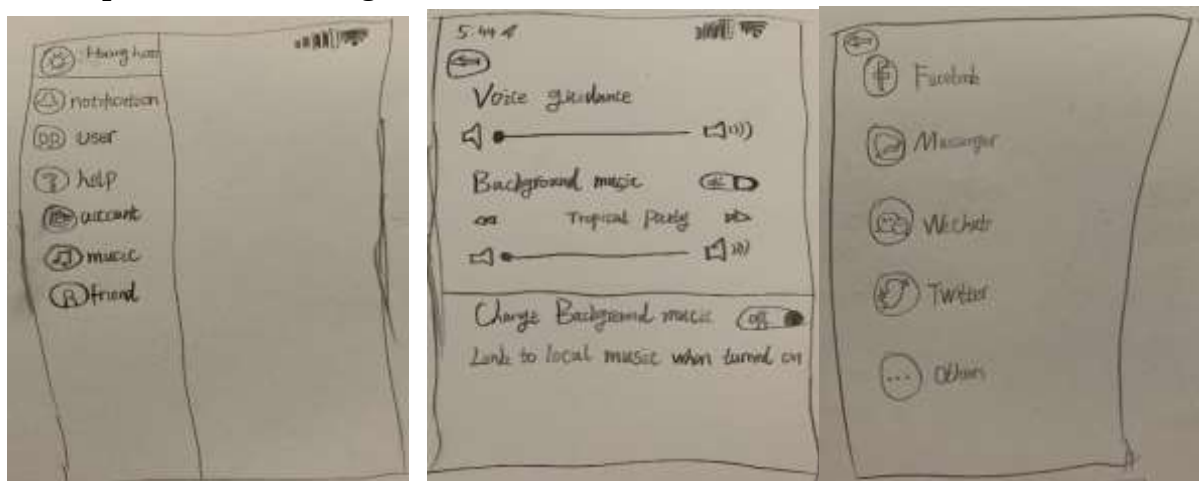


As shown in the above figure, when the user clicks music, it will jump to the setting volume interface, you can adjust or turn off all volume settings, including voice guidance, background music, and we have added a switch that can be used to connect local music, which can be more Good for the user to choose background music. When the user clicks on friend, they will jump to the sharing interface, and they can choose which social software to share the article you see or your plan.
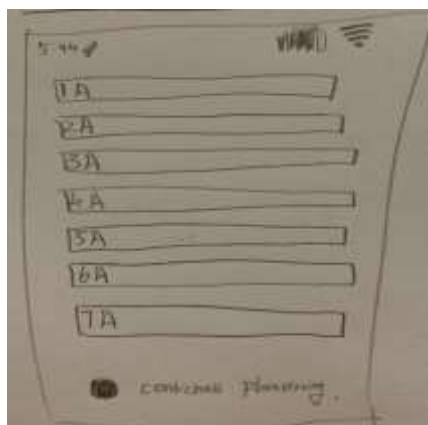


This interface is a challenge selection interface. Users can choose different difficulty based on the original plan. For example, the original plan is A1 abdominal muscle training, A1 will be relatively easy, A7 will be very difficult. Of course, the user can also choose to continue the original plan.

**Design Directions summary**

Nowadays, more and more students are likely to pay attention to health. In this case,we will be designing the fitness application in order to help students to improve their health level and alleviate their pressure. We focus on four tasks to help users which are provide useful videos, progress recording, share and exchange ideas with friends and calculate calories of users' daily diet. In addition,we also provide a platform for users to communicate with professional fitness instructors. In this way, it is convenient for users especially those who always busy with their study and have not enough time to go to gym also can get private plans and feedbacks from coach. Moreover, fitness is boring and it is really a hardship for some users especially beginners, because it needs patience and perseverance. Because of this , we create a virtual community for users, they can watch videos and read some articles from other users and meet news friends with common interest, this feature bring a lot of happiness to users during their fitness journey. Furthermore, we consider fitness is a personal journey, different users have differents situations and requirements, in this case, in the first step, we ask users to provide their personal information,include height, weight, gender, goals, and their previous experience, it is effective for us to analyze data and provide suitable personal plans for users.Finally,all the designs are simple and easy to learn. We hope all the users can enjoy their fitness journey by using this "keep" application.

## Part 3 : References

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