

2022

# PWA – DUO PROJECT



»» Yoana and Lazar

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# INTRODUCTION

For this small project which contains from 4 weeks, I and Lazar were supposed to build a PWA for 4 weeks as we were given a topic and persona from the teachers. During this period we were supposed to build a mobile application starting from scratch using the Human-Centred Design methods, which are Inspiration, Ideation and last and not least Implantation.

In this project we got Kara for our persona and sport as a topic since we had this for the Pressure cooker we decided to stick with the idea, but developed it further and go in-depth. We focused that she is young and would like to earn some money because she does not earn that much and she wants to buy a car. Kara uses a lot the social media and she wants to do something like digital marketing. So, we decided to do an app where she can share content (workouts/challenges), from which she can earn some money as well since she has a lot of spare time she can use the app for training and being motivated and keep herself fit. After we got some idea of what we would like to have as an app we started with conducting interviews and doing a survey, from where we can empathize with your participants, so in this way to understand what exactly they want and if our idea is good enough to be built.



**Energetic Millennial Kara**

**Stats for Kara**

Life-stage: looking to start in the workforce  
Age: 20-25 years  
Annual income: €9,000  
Internet usage: many times a day

**Relationships group**

Marital status: single  
Children: no

**Education/skills school**

Education level: an undergraduate degree  
Technical level: super comfortable  
English level: native

"I just want enough money to buy a good car"

**Kara is newly graduated from her university and is looking for a job to start off her career.**

Kara is motivated by finding opportunities for her future. Kara is 20-25, and lives in the suburbs. Kara is single, has no children and is often kept busy with social media.

Kara is super comfortable with technology.

She wants to use her social media skills to possibly do digital marketing.

Jargon familiarity



Kara is not familiar with the industry specific terms that are used in the industry at hand.

Spare Time



On an average day, Kara has plenty of spare time.

Comfort with technology



Kara is super comfortable with technology.

**Social Media usage**

Of all the time spent on social media on an average day, the distribution of time is as follows:



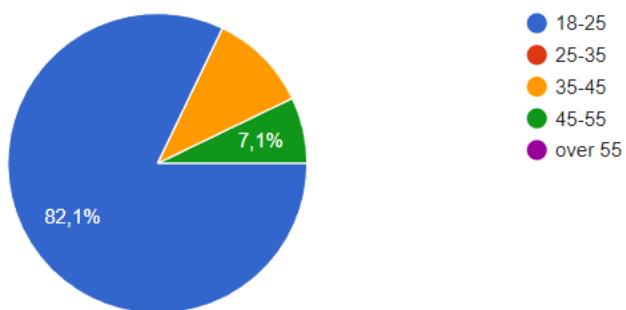
# INSPIRATION PHASE

## Survey

For our project, we decided to use a survey because this method is good for collecting information from a large sample of the target audience so that we get a better grasp of the user needs. So, for sure we know that our **target audience is from the age of 20 to 25**.

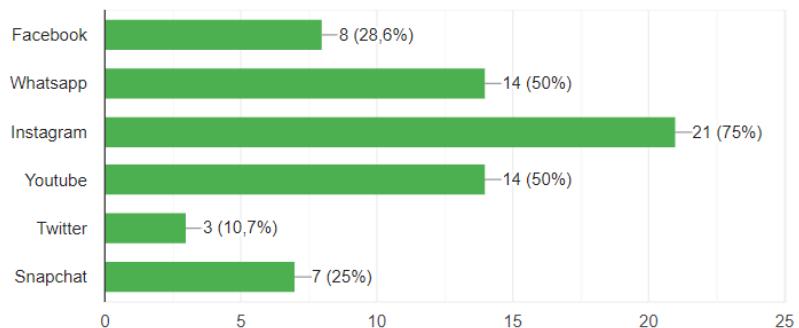
How old are you?

28 отголоса



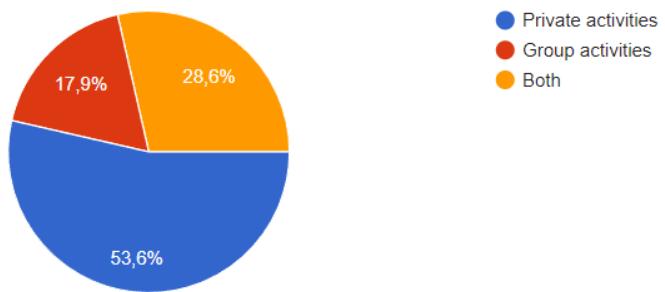
What social media do you use most often?

28 отголоса



What type of sport activities do you prefer?

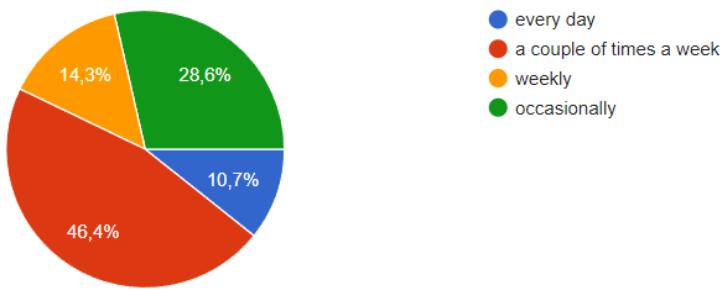
28 отголоса



# INSPIRATION PHASE

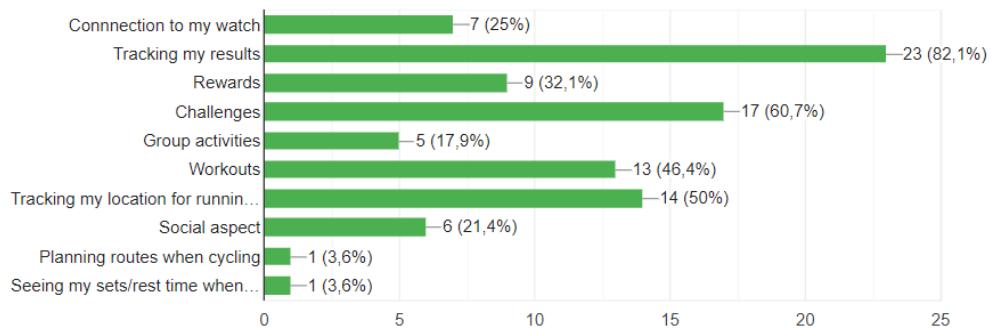
How often do you do sports/workout?

28 отговора



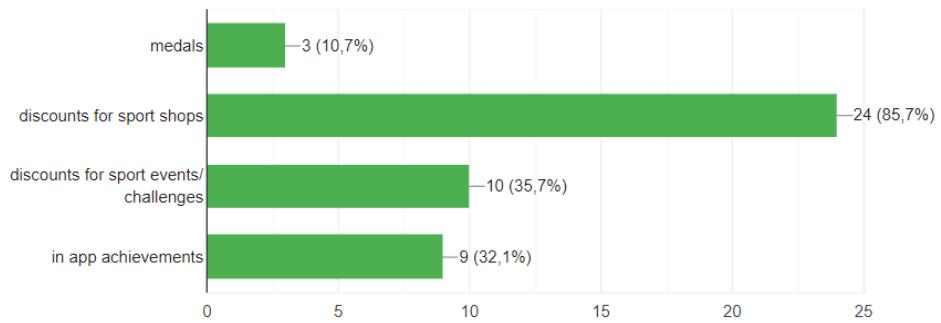
If there is an app for doing sports, what features are you looking to have?

28 отговора



If there are rewards, what rewards would you like to have?

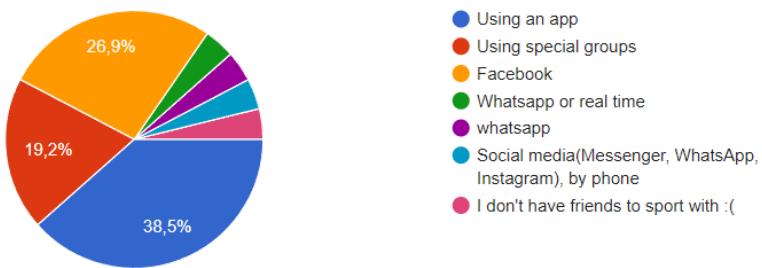
28 отговора



# INSPIRATION PHASE

Where do you make agreements for playing sports with your friends?

26 отговора



## Analysis

From what we gather as information is that mainly people are using Instagram and Youtube. We were wondering what to focus more on as a feature, which is about the app if it has to be for private activities, group activities or maybe both. So, we asked them what type of sports activities do you prefer and 54% of the people said that they prefer private training. Also, we asked them how often they are training and mainly the participants answered that they are going to a couple of times a week or occasionally, so we can boost and motivate the people, who are doing sports rarely and to show some interesting training to the users, who are doing often. Many people are using some apps for training, so we will take inspiration from them and see better what our users want and what is missing in them. Mainly the participants want sports app features such as tracking their results, having challenges and workouts as well as tracking them and having a GPS. Also, if we have the time we will try to implement a connection with a smartwatch. Almost everyone would like to have discounts for shops and the challenges in the app as well as the app achievement. For the last question, people are using social media for organizing events, so we will remove this option in our concept for now. In short, the survey helped us a lot to understand our potential users and to visualize our concept.

# INSPIRATION PHASE

## Interviews

Another method that we chose to do is interview because we can go deeper with our questions and gather their opinions, behaviours, goals, attitudes and experiences.

### Test Materials

- Laptop and phone
- Messenger and Whatsapp
- Time: 10-15 mins

### Interview questions:

*Hello, we are a group of people, who were supposed to create an app for challenges/workouts and sports activities. So, to develop our product in the best possible way by asking you a couple of questions. So, would you like to participate? Let's begin, shall we?*

1. What are your name and your age?
2. What are you doing for a living?
3. What do you do in your free time?
4. Do you like sports? Which? Why?
5. How often do you do sports?
6. How do you keep yourself motivated?
7. In what way do you think an app can motivate you to do sports? Why?
8. Describe one of your training
9. Are you following some tutorials?
10. Imagine that you have to organize a sports event. What will you use to organize it, an app or something else?
11. Would use social media for advertisement, but I guess a sports app is also a very good option for reaching the correct audience
12. Would you be interested in attending a sports event organized by someone that you follow on social media?
13. If you are using a sports app, what features are you looking to have?
14. Would you pay for a challenge?
15. If there are rewards in the app, what rewards would you like to win?
16. Would you use a competitive function of a sport/workout app to compete and "play" with your friends?

Thank you very much and have a nice day/evening.

# INSPIRATION PHASE

## Interview participants:

Participant 1: Hristina, 20, working student

Participant 2: Kris, 20, student

Participant 3: Kristina, 21, working student

- **What do you do in your free time?**

P1: Cleaning the house, going shopping, going out

P2: Playing video games, going out with friends, always trying new activities

P3: Indulge in creative things - writing or drawing. Watch tiktoks for a couple of hours a day, if possible.

## Watch anime. Meditation

- **Do you like sports? Which? Why?**

P1: Jogging/running, reducing stress

P2: Yes, I adore them. I am open to trying new sports and getting good at it, but I especially like volleyball, karate and fitness, because I am competitive by nature and these sports allow me to push myself

P3: No

- **How often do you do sports?**

P1:  $\frac{2}{3}$  per week

P2: almost daily

P3: Never/Maybe once a month

- **How do you keep yourself motivated?**

P1: It's hard, but thinking about the future goals, to be active and healthy and being in good condition and shape

P2: Having goals are very important to me and when I reach one I always think of another more difficult one to keep me going, being on the top

P3: By looking at shopping websites

- **In what way do you think an app can motivate you to do sports? Why?**

P1: I motivate to do 15 min so to do some kinds of sport, just to be active

P2: Personally, I don't need an app to motivate myself, but I think a strictly built program to follow would be perfect since I consider myself disciplined enough to maintain a schedule

P3: Make things are easy to access and understandable. A great option to start doing sports without feeling the pressure of a subscription. A good way to track your progress

- **Describe one of your training**

P1: In the morning, intense and it was cardio

P2: My morning routine began with 100 push-ups, some biceps workouts and 50 squats and I was ready to begin my day.

P3: N/A

# INSPIRATION PHASE

- **Are you following some tutorials?**

P1: no

P2: no

P3: no

- **Imagine that you have to organize a sports event. What will you use to organize it, an app or something else?**

P1: Maybe I will put some ads on social media, for the app it has to be more famous and to have more users to connect with

P2: I would probably just text some of my friends and if we are lacking some players, we would reorganize the teams.

P3: Would use social media for advertisement, but I guess a sports app is also a very good option for reaching the correct audience

- **Would you be interested in attending a sports event organized by someone that you follow on social media?**

P1: Yes, if I have free time

P2: Yes, they already have a volleyball event in which all the viewers participated and as a present they got volleyball.

P3: Yes.

- **If you are using a sports app, what features are you looking to have?**

P1: I would like to have some degree of her goals as weight and some statistics, questions to have every week how much to have weight, to have motivation quote that appears in the taskbar or once in 5 days, not every day

P2: I would like to have functionality for scheduling my workouts and to be reminded of them and also as I said a strictly built program for the desired effect as a coaching program

P3: Something to track process and dieting, perhaps a "Lifestyle" section

- **Would you pay for a challenge?**

P1: If it was important to me obese person and important to lose fast weight, I would put some money in an app to achieve it and to have some guidelines

P2: No, I would not pay for a challenge

P3: Yes depending on the challenge

- **If there are rewards in the app, what rewards would you like to win?**

P1: Some characteristics such as pro characteristics, discount on challenges or having more information for free

P2: For me the only reward that it is worth is seeing myself progress

P3: Discounts

**Would you use a competitive function of a sport/workout app to compete and "play" with your friends?**

P1: Yes, it will be motivational to do it with another person. It will keep my goals on track.

P2: Yes, because I like competitions and proving that I am good. Seeing a leaderboard would motivate me to do sport and to compete

P3: Yes.

# INSPIRATION PHASE

## **Interviews results**

From the interviews, we understand that our participants like sports, because it helps them to stay fit and to reduce stress. Furthermore, it helps you to stay motivated and be competitive and to push this characteristic. Mainly, people are going a couple of times per week, however, one of the participants is not that sporty personality, so she goes occasionally. Another thing that we found out is that they keep themselves to put goals in the future. The participants have different opinions about whether to have a strict schedule or do something every day for about 15 minutes and is to be with a subscription. For the sports events, people also answered the social media or some famous app will use if they need to organize an app. Everyone would participate in an activity that is made by someone whom they follow which is nice because our persona wants to do something with digital marketing and social media, so this app will meet her needs. As features the people that we conduct interviews said that it will be good to have some notification, to track their results and maybe to have a quote which to motivate them when they enter the app. Moreover, having contact with the creator of the challenge or the workout would be nice for them. For the rewards, if they would like to have more information that it is available and some discounts. Another question that we asked them is if they will pay money for a challenge and their answers depend on the challenge and the goals that they have. Everyone is interested in having competitive elements in our app. In conclusion, we believe that we are on a right track as what we are thinking to have as an idea and their answers helped us a lot to validate our ideas and to understand better what we have to do, so to fulfil the needs of the user.

### **Quotes:**

"If it was important to me to lose weight, I would put some money in an app to achieve it and to have some guidelines"

-Hristina

"Yes, because I like competitions and proving that I am good. Seeing a leaderboard would motivate me to do sport and to compete"

-Kris

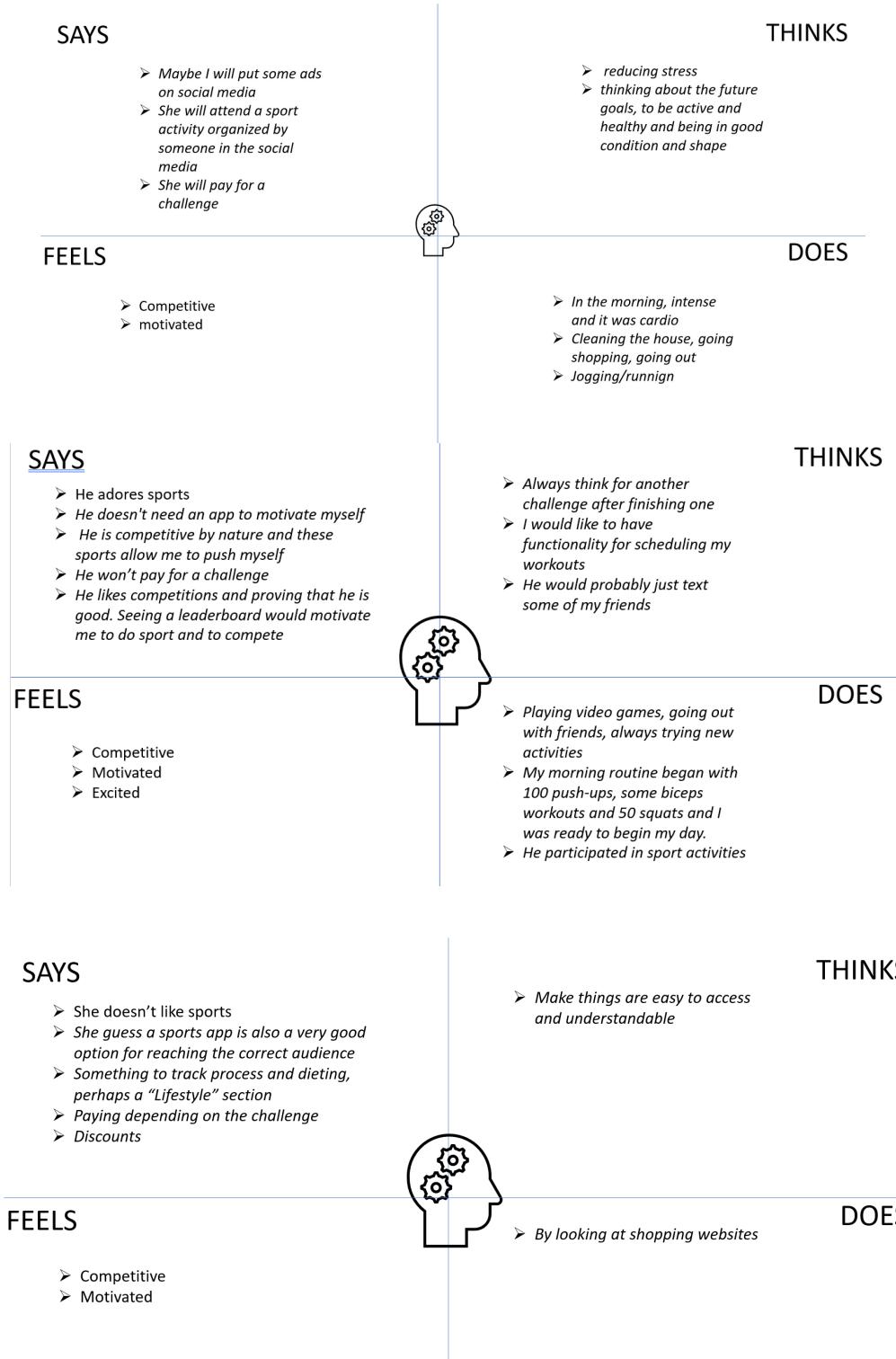


PWA-DUO PROJECT

# INSPIRATION PHASE

## Empathy maps

After we did the interviews, we decided to make empathy maps, thus we wanted to sum up and synthesize findings from interviews in a structured way.



# INSPIRATION PHASE

## Personas

Even though we had a persona that we were given from our teachers we decided to do our personas, which are fitting better concepts and our idea of what they can be. So, after doing research on the users, we created them.



Alexander

Quote:

I LOVE DOING SOME SPORT ACTIVITIES AND TO MEET NEW PEOPLE. IF I CAN MAKE MONEY WITH IT, THAT WOULD BE GREAT.

**Age:**  
23  
**Nationality:**  
Dutch  
**Occupation:**  
working student  
**Location:**  
Eindhoven, the Netherlands  
**Character:**  
friendly and adventurous  
**Hobby:**  
Going out with friends and training sports

**Personality:**  
• hard-working:  
• friendly:  
• open for new stuffs:  
• intuitive:  
• emotional:  
  
**Tech:**  
  
**Brands:**

**Bio:**  
Alexander is a 2-year student at Fontys University. He likes being with his friends and to try new kinds of stuff. He is pretty innovative. In his free time, Alexander likes to go and do some sports as some of the individual and some of them to be with his friends. As he is playing football or basketball. So if there is an app where he can combine his favourite hobbies in one, he would love to use it. As a student, he does not have enough money, so he wants if there is an opportunity to earn some money with it and share his experience in the sport.

Motivations:

- To stay fit
- To have an application where he can train and create workouts

Goals:

- To earn some money
- To create more friends
- To get some discounts in some shops

Frustrations:

- That with this apps sometimes he can not keep his motivation with training



Michael

Quote:

MY WHOLE LIFE IS CONNECTED WITH SPORTS BECAUSE I LOVE TO COMPETE AND TO BE ALWAYS IN FORM, SO I AM OPEN FOR NEW OPPORTUNITIES CONNECTED WITH THE SPORT

**Age:**  
20  
**Nationality:**  
Bulgarian  
**Occupation:**  
student  
**Location:**  
Amsterdam, the Netherlands  
**Character:**  
optimistic and open-minded  
**Hobby:**  
Playing video games and training sports

**Personality:**  
• hard-working:  
• friendly:  
• open for new stuffs:  
• intuitive:  
• emotional:  
  
**Tech:**

**Brands:**

Bio:

Michael came from Bulgaria to study in the Netherlands because he wants to try something different. His whole life is connected with sports as doing different types as a box, volleyball for instance. He loves spending his free time not only with sports but and with playing video games. Moreover, he is active in social media as always showing his progress and likes to follow people who inspire him to live a healthy lifestyle. Michael is a competitive type of person because this keeps him motivated.

Motivations:

- To stay fit
- To try new stuffs

Goals:

- To track his results
- To share his achievements in the social media
- To have a strict schedule
- To have a leaderboard where he can see his results

Frustrations:

- That sometimes is hard to have strict schedule in such an apps



Kristina

Quote:

FOR ME IT'S WAS AND IS IMPORTANT TO BE HEALTHY, HOWEVER, I AM NOT THAT SPORTY PERSON AND NOW I HAVE FREE TIME IN THE EVENINGS SO I WANT TO TRY DO SOME SPORTS AND TO STAY FIT

**Age:**  
22  
**Nationality:**  
France  
**Occupation:**  
working in ICT company  
**Location:**  
Paris, France  
**Character:**  
kind and shy  
**Hobby:**  
Creative things - writing or drawing

**Personality:**  
• hard-working:  
• friendly:  
• open for new stuffs:  
• intuitive:  
• emotional:  
  
**Tech:**

**Brands:**

**Bio:**  
Kristina loves doing something with her hands as drawing. She is a more shy person, so for her, the security is in the first place. She was never a sports person, however, she was always taking care of herself and eating healthy. Now, she wants to start doing some small exercises so she sees in the social media a sports app, where you can do a different type of sports. Since Paris, is a big city and she has free time in the evening she would like the app to give her security so she wants to have an option to share her location and to have the opportunity to talk with the creator of the training that she followed

Motivations:

- To change her lifestyle
- To get in shape

Goals:

- To track her results
- To have easy instruction
- To have some rewards
- To have GPS so to feel secure if she is outside running
- Be connect to the user of the content

Frustrations:

- That sometimes there is nothing that fits my abilities in the sports, so its hard to follow the exercises

# IDIATION PHASE

## Concept

Since we were continuing we had already done some brainstorming that it's included in our previous documentation for the Pressure Cooker.

The concept for our application was to make a way for people to make some side money with the help of sport and fitness. It utilizes social media as a main source of popularization due to the wishes of our persona - to use her social media influence as a digital marketing platform.

Our app has a progressive design in which you can say the goal is to somewhat level up. Our users can create 2 types of things - workouts and challenges. The way our basic system works is that a user tries another user's workout - as all workouts are free. They get an achievement for their first completion and are notified about the progression they could make. After 5 workouts are posted from the same user the working out one receives a discount on the "basic" challenge of that particular user.

Challenges are paid and they have a base price determined by the app which also depends on the type of challenge being done - basic and advanced. Challenges take longer to complete, are harder and give you better rewards. You can also compete with your friends using our social feature. In short, after completing a basic challenge the user gets a valuable rare achievement that can be shared in social media and an "advanced" challenge.

The advanced challenge is the "Ultimate" challenge. It is harder, longer and requires more dedication and willingness to put oneself out there. This challenge gives the best reward as it contains all the things a basic challenge does, but the app also offers a discount for a sports brand upon challenge completion. These discounts start small and the more advanced challenges you rack up the bigger the percentage you get.

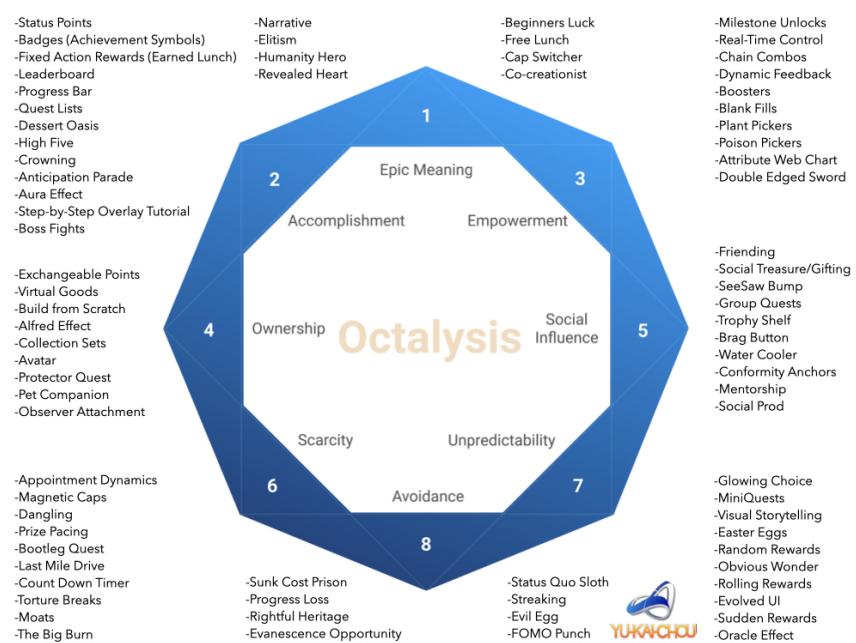
The challenge creator has the option to also increase the price by their understanding and is also given the option to provide a better, more personal reward - for example, a workout between user and creator.

Since we have to create a playful and engaging app, we decided to do a gamified app. So, we researched what are the best practices for it we looked at the octalysis as we wanted to stick to it as much as possible. Also, we researched what the other apps and not only for sports are doing to succeed exciting experience in the apps. Another thing that we found is that it's hard to motivate people to train without a trainer, partner or encouragement. The easiest way that to happen is through validation in their media or showing their progress as having pictures before or after. Competition with others is also an option since everyone wants to be in the first place. Integrating the app is hard so through the notification that we will have they won't forget. Also, in one book it said that person needs to create a habit for 21 days, so if they enter and do some training in our app it will become easier at a later point.

# IDIATION PHASE

Also, since we want the users not to forget that they have to train and sometimes it's hard to motivate themselves, we decided to have notifications and also after they do the trick to have some tips and reminders as don't forget to drink water. Another thing that we are planning to implement is to have a custom button for installation. Sharing a location is important because sometimes people do not feel secure to run in certain areas or to share with their friends where are they. Another thing is that they can connect with a smartwatch because they can track better how many calories they burnt out.

For the octalysis, we have social involvement as having a connection with friends and competing with them. Moreover, one of our achievements is that the user can connect with the creator of the challenge in this way he can ask further questions and get more information about the challenge or for some diet tips. On our statistic page, we included a challenger which to show which days they were doing and this will help them to get some badges for streaks as in this way we want to motivate them to train more. Also, from the research, we got that most of the people feel themselves we put something as a mini-race where they can compete if there is a lot of finishing the competition. In this way, our app is again gamified because it is accomplished. For us is important for people not to cheat in the app, so they not get the rewards without not doing the challenge, so when the person creates a challenge he has to choose how the user to show his progress and that he was training. In this way, the user will see the result of using the app, which is the main idea to stay fit. Some people are not interested only to get badges in the app, so we made an off-line, material reward as getting some discounts in shops since when you are doing sport at some point you will need some sportswear from Nike or Addidas for instance. Connection with other companies or partnerships is a new innovative marketing method, where our app can be promoted and to have more users as well as for the other part will be useful since the users will go in this particular shops to buy items or products.



# IMPLEMENTATION PHASE

## DESIGN DOCUMENTATION

The first thing that we did after getting better was the idea, we started thinking about what our mobile will look like. In the beginning, we did wireframes. They're at the beginning, our menu was a burger menu, but after research, we understood that it is not that convenient for the users since mainly they are holding their fingers/hands in the bottom of their phones. However, if the menu is bigger than 5/6 elements it can be as a burger menu. Our menu contains 5 elements, it is on the borderline, but it is simple and contains only icons. Moreover, thanks to the competitive analysis we got inspired by how the app can look like, so we got ideas from Netflix, FitForFree and Samsung Health and we implemented them in one. So, the home pages look familiar to Netflix, because it has a recommendation and person list in this way the user will feel more confident in using it because it will be more natural to use it. We decided to stick to Material Design. For colours, we used black, white and green as the main, because they represent power, clearness, wellness and sport, which is the idea of our app. Another colour that we used was golden, which will help the user to understand which of the training is a workout(free) and which is a challenge(paid). Another idea that we used while we were building our app is the neomorphism in this way we give some depth to the pages. Furthermore, it is meant to be soft on the eyes. It calls for minimal colour contrast and very few pops of colour, which creates a clean, solid look. The typefaces that we chose is Poppins.



#1A1A1A



#EFEFEF



#00784E



#00E091



#C19239

# IMPLEMENTATION PHASE

## User testing

After we did the prototypes we wanted to be sure that the users will use our product and that they think it's user-friendly and if there is something that needs to be changed as a design.

### Test Materials

- Laptop and phone
- Messenger and Whatsapp, In-person
  - Time: 10-15 mins
  - Methods: think aloud, brand testing and usability testing

### Questions

Interview questions:

Hello, we are a group of people, who were supposed to create an app for challenges/workouts and sports activities. So, could you see our prototype and tell us your opinion on answering the following questions?

**Think aloud** - going around the app and saying freely what he/she thinks

1. What is your overall impression of the website?
2. How easy was it to complete the tasks/missions for you from 1 to 10?
3. Are you confident in using it?
4. What do you like the most about the product?
5. What would you change about it?
6. Are you satisfied with the rewards?
7. Would you use it and share it with your friends?
8. 10. Do you like the idea of the challenges?
9. Do you like the design?
10. Choose 3 adjectives from the table below that best describe our website:

Adventurous	Active	Authoritative	Bold	Brave
Bright	Bubbly	Calm	Carefree	Caring
Classic	Comfortable	Creative	Determined	Earthy
Elegant	Empathic	Enchanting	Energetic	Enthusiastic
Fancy	Focused	Friendly	Fun	Gentle
Glorious	Goofy	Graceful	Homely	Healthy
Helpful	Imaginative	Innovative	Kind	Lively
Luxurious	Modern	Natrual	Nuturing	Optimistic
Organic	Playful	Pleasurable	Quaint	Reserved
Secure	Sophisticated	Spontaneous	Timeless	Trustworthy

# IDIATION PHASE

Interview participants:

Participant 1: Iris, 22, working student

Participant 2: Rostislav Rusev

Participant 3: Kristina, 21, working student

## **Think aloud:**

*Iris:* She liked the design, she asked what is the difference between workouts and challenges, after it was explained, she got interested and said that she liked the idea of it. She liked the idea of completion in the app because she believed that many people are competitive and they want to be number one. She said that creating a challenge/workout is something new and liked the idea of it.

- **What is your overall impression of the website?**

P1: I liked the idea of having such an app and having reminders, badges. Also, the idea of having workouts and challenges. The idea of competition is nice because most of the people would feel motivated to win and to keep training. Creating challenges/workouts is something that I did not see in other apps and I like the idea behind it.

P2: Looks very good, impressed by functions, likes discount function, very social and motivating that you can compete with other people

- **Are you confident in using it?**

P1: Yes, I feel confident. It's pretty straightforward

P2: Yes

- **What do you like the most about the product?**

P1: Creating content is the thing I liked the most. The idea with the smartwatch as well.

P2: Discount function

- **What would you change about it?**

P1: The menu to be static

P2: Will add more free things. Try to make it completely free with adv introduction

- **Are you satisfied with the rewards?**

P1: Yes, I am.

P2: Yes definitely

- **Would you use it and share it with your friends?**

P1: Yes, especially since we can compete in the app.

P2: Yes, yes, I would compete with them if they used it

- **Do you like the idea of the challenges?**

P1: Yes, it seems like a nice idea

P2: Yes

- **Do you like the design?**

P1: I liked the design, it reminds me of Apple design

P2: Yes yes I like it

- **Choose 3 adjectives from the table below that best describe our website:**

P1: Timeless, focused and fancy

P2: Active creative friendly

# IMPLEMENTATION PHASE

## Analysis

In the previous documentation, you can find also some testing. The people who took part in our testing said that their overall impression of the app is that it is a sports application for training, where you can motivate yourself and connect with friends and compete with each other, which is our idea, so we were satisfied with the answers that we received. All of the participants feel confident in using the app. People like the idea of creating content because is something different from the other apps for sport as well as the discount part. The thing that we have to change is the navbar to be static and to include more free things. They would share with their friends especially because they can compete with each other. The participants liked the idea of having challenges, which to be paid as well the design that we did. It looks familiar to some of them because it seems like Apple apps. The words that they think describes our app is timeless, focused and fancy active creative friendly, which coincides with the idea that we have. In short, people liked our app, they were not having any things that do not like, so we will focus on implementing it.

## Coding part

Due to the amount of time distributed for the technical and coding part is not much - one to two weeks we needed to choose certain things that we would use and decide on the complexity of the technology we would be implementing. After discussions with the teachers there was a conclusion that we should not focus so much on different things working sustainably, but more on design and making one playful experience from start to finish.

This for us meant a lot of HTML and CSS, with not so much JavaScript. In summary, we used plain HTML and CSS to create and link all of the pages. Our JavaScript part is expressed in making the site a Progressive Web App as well as making one of our main functionalities - map tracking. To track the user's location we have used one of Google's APIs. We also implemented push notifications using node.js and JavaScript.

# IMPLEMENTATION PHASE

## Heuristic evaluation

1. *Visibility of system status* - we have this on our app because it's visible for the user for instance that he is offline through the text and that he is not able to access all the pages
2. *Match between system and the real world* - it's easy for the user to understand the text everywhere and the images and icons that are used are been chosen to be closer to the user
3. *User control and freedom* - we also think that we have this in our PWA because for example in the "Create" page they can undo what they did it.
4. *Consistency and standards* - we believe that our design is consistent because the user flow is pretty straightforward
5. *Error prevention* - unfortunately, our app does not have error prevention, but in the future, this can be implemented
6. *Recognition rather than recall* - everything is been made to be easy to remember and to be easy for the user to use it
7. *Flexibility and efficiency of use*
8. *Aesthetic and minimalist design* - our design choices were made that our design to be minimalist, playful, meaningful.
9. *Help users recognize, diagnose, and recover from errors* - as we mentioned earlier we don't have recovery or prevention, or some kind of tips for the user when he uses the app
10. *Help and documentation* - we need more accessible information for the user in our app

To sum it up, we believed that we did a user-friendly, playful and minimalistic design. Fortunately, most of the requirements we have, however, in the future is good to focus on the help and documentation as well as the error prevention, so our app be even friendlier.

# CONCLUSION

In these four weeks, we learned a lot about creating an app, especially a PWA. We had our difficulties, but we are learning from them and in this way broadening and deepening our design, concept, and software skills. Our group is proud of the progressive web application that we created for this short amount of time. We learned how to empathize, inspire, ideate, and implement. These new skills helped us create our modern design and nice functionalities. While there is always room for further improvement we believe we managed to achieve the best version of our product for the time we had.

# IMPORTANT LINKS

- **Survey:** <https://forms.gle/ekS69vEVNR6BJgVk6>
- **Gamification:** [https://www.gamify.com/gamification-blog/7-best-gamification-examples-2021?utm\\_source=canva&utm\\_medium=iframely](https://www.gamify.com/gamification-blog/7-best-gamification-examples-2021?utm_source=canva&utm_medium=iframely)
- **Gamification:** <https://yukaichou.com/gamification-examples/octalysis-complete-gamification-framework/>
- **Prototype:** <https://www.figma.com/file/Sutvlk6JK44baissgeTmnt/Duo-project?node-id=11%3A46>
- **Group Git:** Golomeev,Lazar L.V. / DuoProjectPWA · GitLab (fhict.nl)
- **Yoana's Git:** Churkina, Yoana Y.K. / Portfolio Yoana Churkina · GitLab (fhict.nl)
- **Lazar's Git:**