Realizations

This document will showcase the features of EliComp after working on it for 13 weeks. Our project goals and project realizations don't exactly match. But that is the natural way of a product's development. We responded to our mentors feedback and priorities as best we could to deliver a final project we were proud of and that they would appreciate.
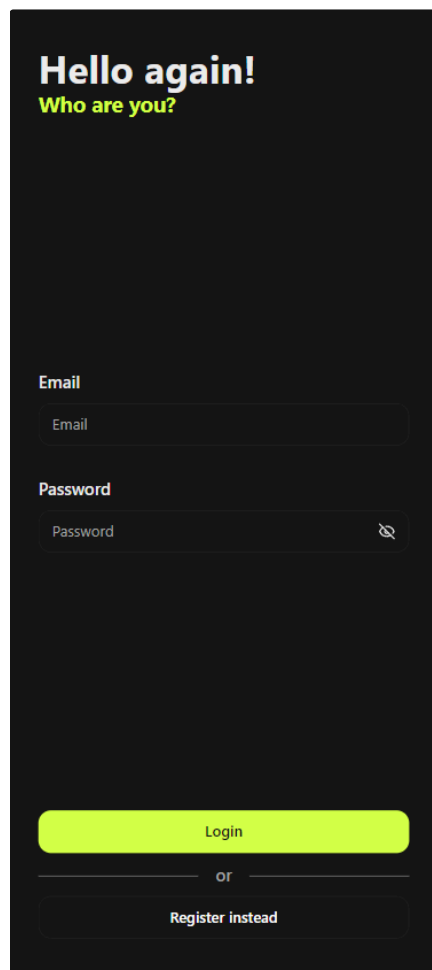
Disclaimers

- There is no image hosting, so all images you'll see are placeholders.
- Elision asked of us to take a mobile-first approach while developing the application. A desktop-friendly version wasn't really in scope for our 13 weeks of internship. Only the admin section of the application is desktop-first.
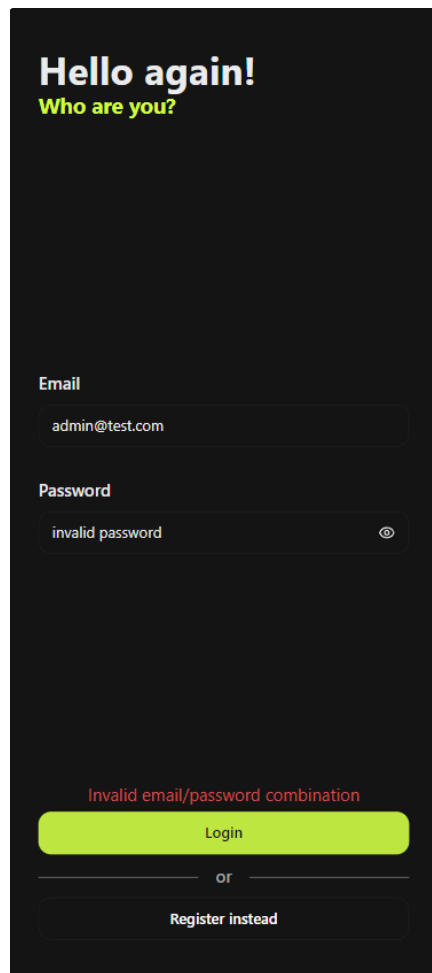
Authentication

Login

When the user navigates to the application they are prompted to log in, as can be seen below.

Login

Upon sending an authenticate request, the backend checks the provided credentials against those in the database. If no email like the one provided was found or an invalid password was provided, an error will be returned.

Error on login

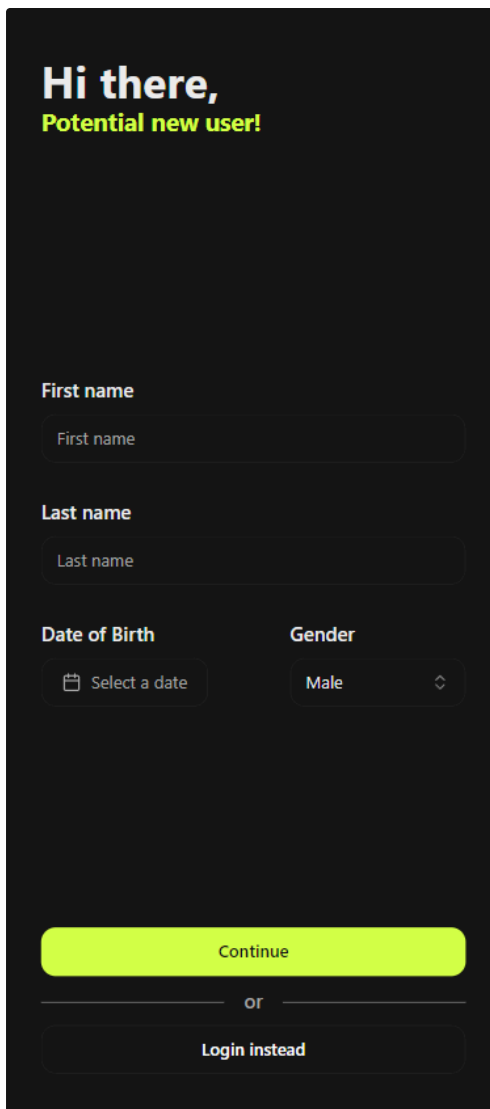Upon successful login, the user is redirected to the homepage. They've received a JWT from the backend which the frontend can use to authenticate the user for making requests.

This was made by Seppe.

Register

If a user doesn't have an account yet, they should register. The registration is a 2-step process. Firstly some personal details are provided and then the user has to input their email and password.
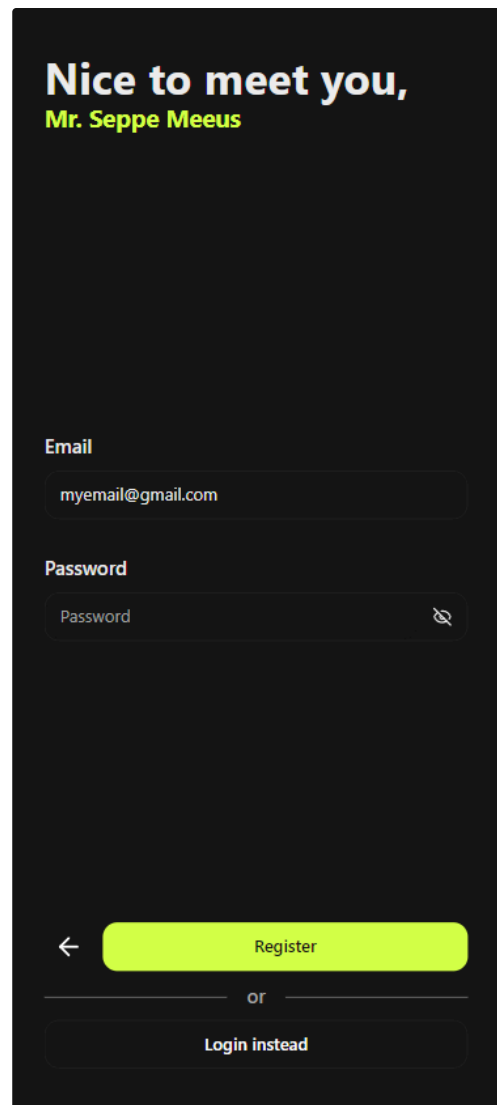
Inputting general information

Choosing credentials

Upon sending the registration request with the backend, some basic stuff is checked first like whether or not account exists and password policy. We had plans to implement Microsoft single sign on as well but there was ultimately no time for this. Our own implementation of the authentication does hash passwords to provide some security. Extra security measures like salting are not implemented. After a user has successfully signed in, the backend returns a JWT token which the frontend can use to authenticate the user. They will then be rerouted to the social login page.

Here they can connect with any activity tracker app we choose to implement. Currently this is only Strava. By clicking on the *external link* icon the user will be redirected to the Strava login page. They'll need to grant our app access to their public and private activities so we can pull these in whenever the user logs any.
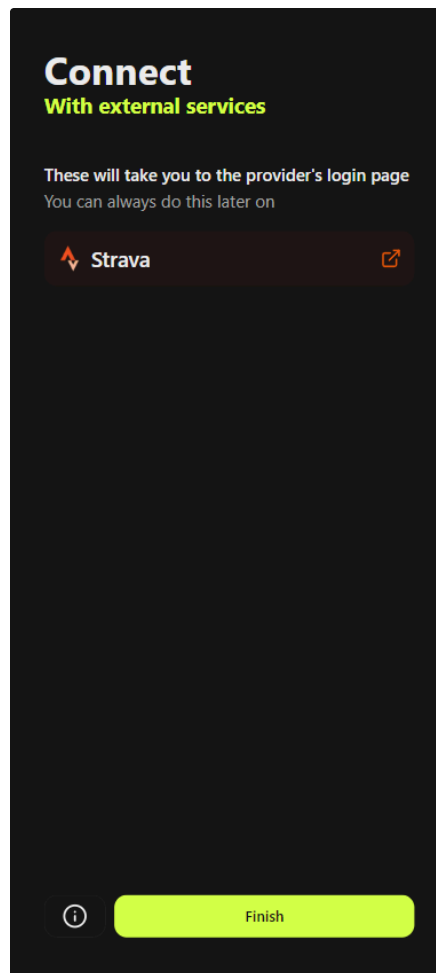
Connecting with external services page

This was made by Emre.

Seppe made the page for connecting to external services. He also implemented Strava OAuth.

Home page

The homepage greets the user and shows their current streaks and any upcoming challenges (more on these later). At the bottom of the page a navigation bar can be spotted. This contains the items "home", "search", "create", "ranking" and "profile". The "search" and "create" buttons will show a pop-up when pressed, revealing the actual pages. By having the navigation bar at the bottom, it is more accessible on mobile.
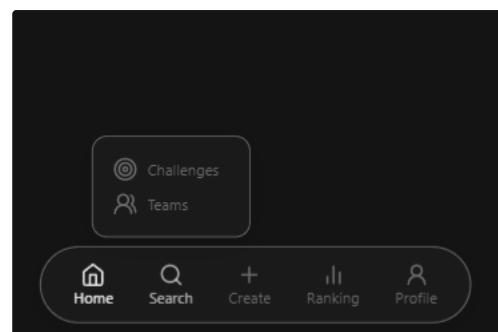
Navigation with search opened
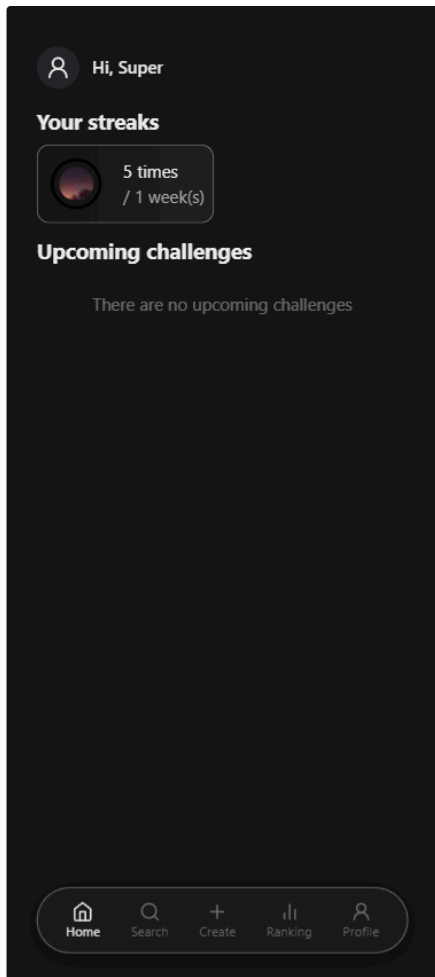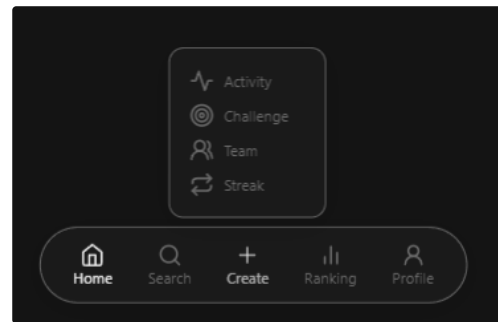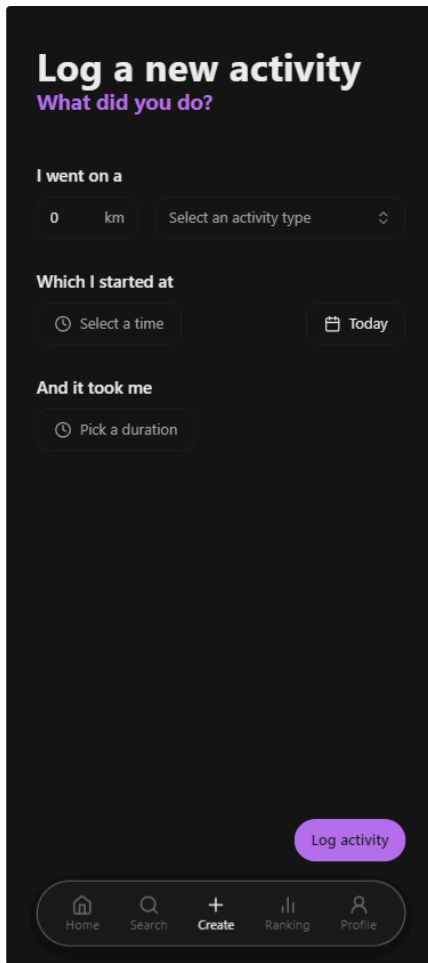
Navigation with create opened

Home page

This was made by Emre.

Logging an activity

In order to contribute to challenges and make sure users progress their streaks, they will have to log activities. This can be done in 2 ways:

- Manually: the user can log activities manually in-app. These will have to be reviewed by an admin to prevent cheating the system easily.
- Via third-party: as mentioned earlier, users can connect their Strava account to EliComp so their newly logged activities get populated in our database whenever they are logged. This way the user doesn't have to manually log them. People can manually log activities on Strava, but when this happens they, just like normal manually logged ones, will have to be reviewed by an admin in our application.
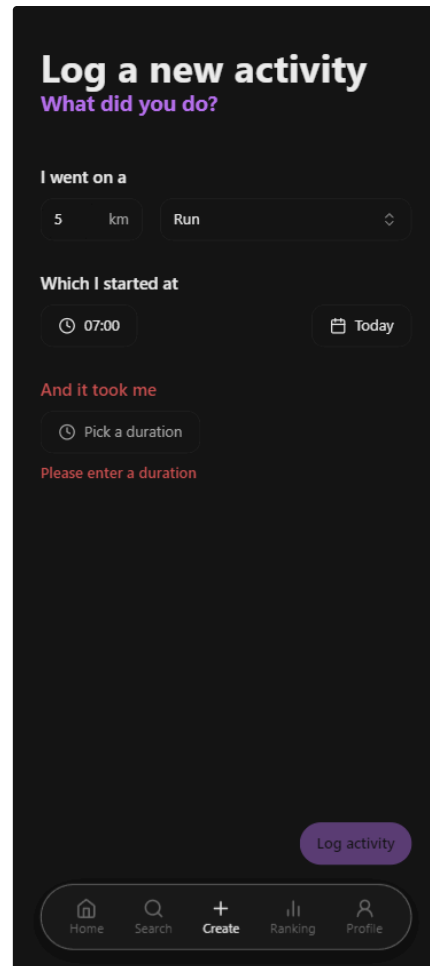
Empty log activity page

Validation error

This was made by Seppe.

Challenge system

The challenge system is easily understandable. Any user can create challenges. A challenge is defined by its *completion phrase*. An example of this could be "Run 15km each week". This phrase makes it very clear what the challenge is about/ what has to be done. A challenge has a start and an end date and it is split up into periods or cycles. The cycle part is the "each week" from before. Each challenge also has a leaderboard where every ones completion for any period (or cumulative) can be checked out. A challenge can of course be completed. When a user completes every cycle successfully, they will get the most amount of XP. If they fail any one cycle their reward XP will get smaller and smaller. More on the rewarded XP will follow.

Creating a challenge

Creating a challenge is a multi-step process. On the first step they'll have to enter some basic info about the challenge and also point our whether or not it should be a team-based challenge.

This might be a good time to explain the 2 types of challenges we have.

Individual challenges

- These challenges can be created by individual users and admins. Challenges created by admins also award experience points while non admin user created challenges are more for competition and friendly rivalry. Otherwise people would abuse the challenge system to level up faster.

- Any activity any participant logs between the start and the end dates of the challenge are added to their progress towards completion.
- The detail page for these kinds of challenges contains a user-based leaderboard.

Team-based challenges

- The participants of the challenges are teams. Teams will compete against each other. The activities of the users belonging to said team count towards the teams overall progression of the completion for the challenge.
- These challenges can be created by any user who is a captain of a team for that specified activity type. For example: a captain of a cycling team can create a cycling challenge, a captain of only a running team cannot.
- Team challenges are a commitment, so while members of a team can leave the team and thus resign from the challenge (along with their contributions), team captains are restricted from leaving team challenges as their members might still want to compete.

General information for the challenge

After the first step the user is prompted to select an activity type. To repeat, for individual challenges this can be of any type. For team challenges it can only be any type for the teams the user is captain of.
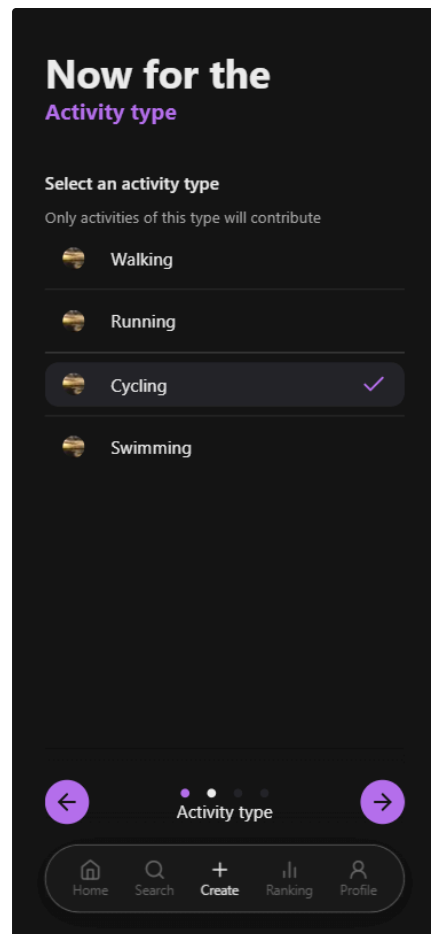
Activity type of the challenge

Next up is selecting the challenge type. Currently there are 2 of those: distance and repetition. If it can't be deciphered what they do by their name, an explanation is shown below it. Then the user will also have to input how many kilometers or repetitions a participant will have to complete in the to-be selected period duration.
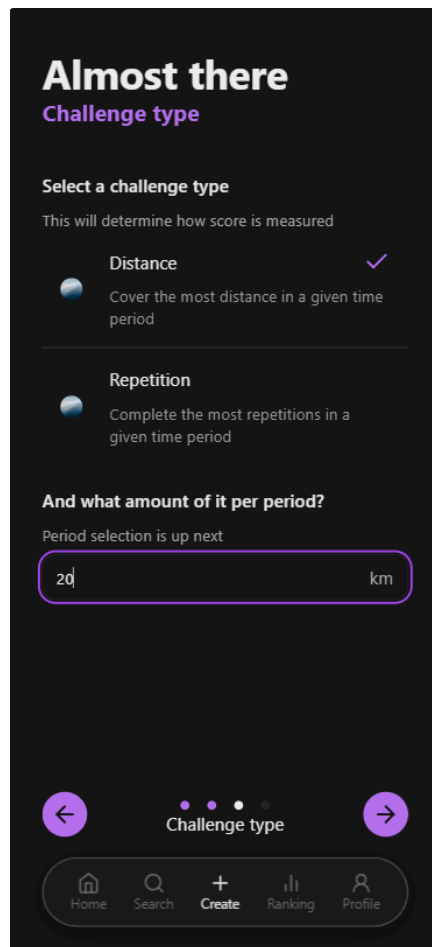
Challenge type and target amount

The last step then is selecting the start and end date. The end date selectable options depend on the period duration, as can be seen in the second screenshot.
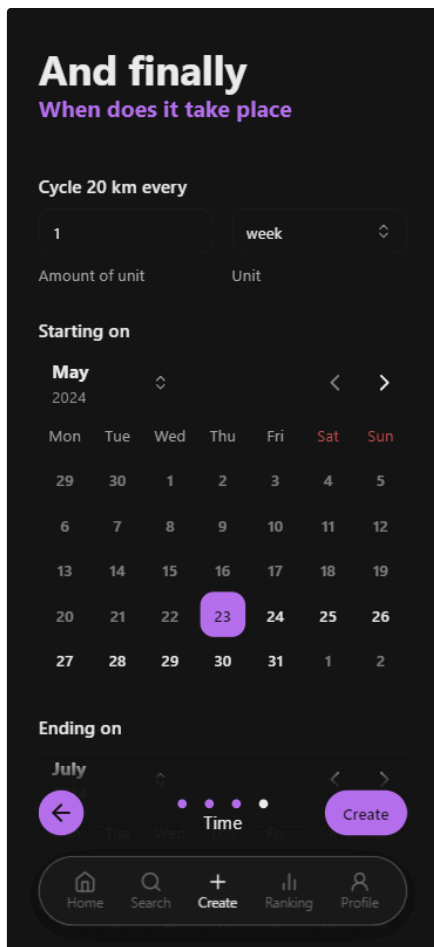
Time period and challenge dates
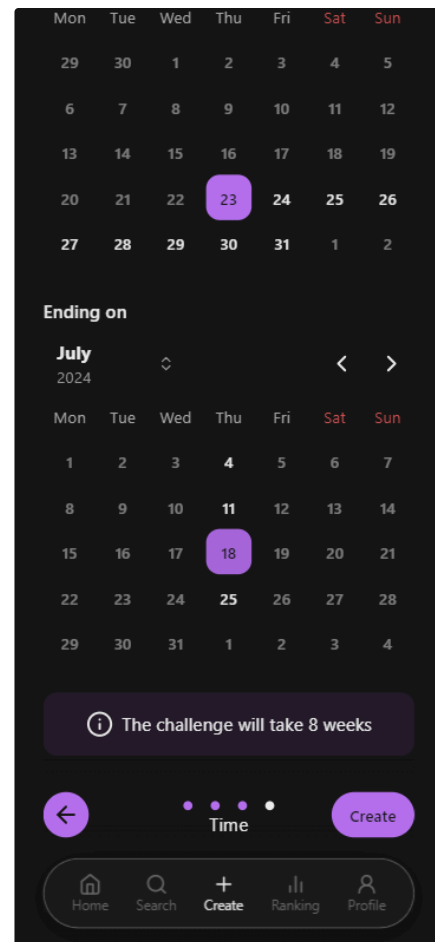
Time period and challenge dates continued

Searching for challenges

Users are able to search for challenges via its search page. They are provided with plenty of filter and sort options to make searching a more pleasant experience. Whenever a challenge is in progress, an infinite bouncing animation bar is shown in the bottom left of the card. There is also a subtle gradient to enhance this. A user can join or leave a challenge via the button on the bottom right of the card. For team-based challenges only the captain will be able to join.
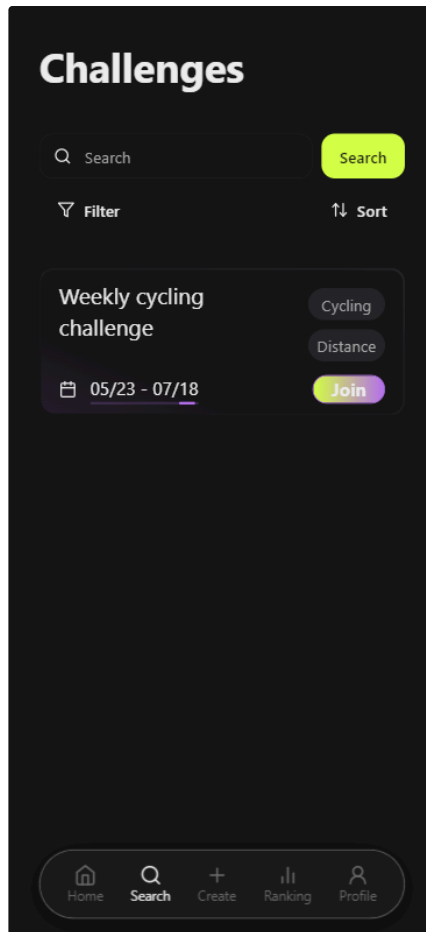
Challenge search page

Viewing a challenge

In order to see how a user is progressing, they can go to the a challenge's detail page to view all available information on it. This can be reached via any challenge card. The leaderboard boasts filters to go to any period/cycle and also has a sorting option to view the leaderboard reversed.
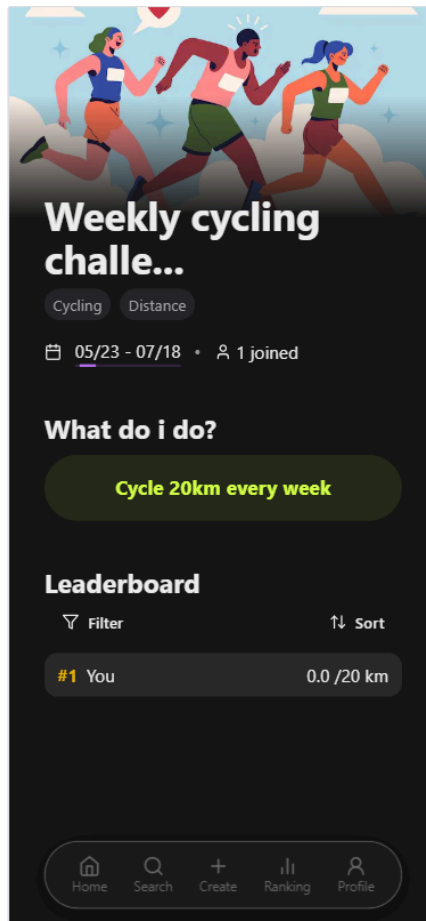
Challenge detail page

This was all made by Seppe.

Emre created the logic for completing a challenge. He set up a CRON job to check every day at midnight after all activities have been logged and approved, whether any challenges end on that specific day. Once a challenge ends, the flow triggers to calculate the completion percentages for each participant and reward the necessary amount of experience points for the participants, if any.

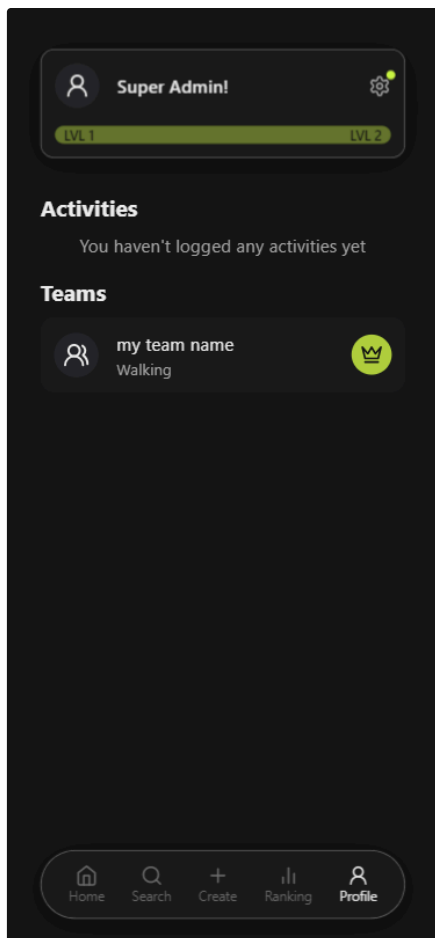# Reward system / XP

The experience system allows users to level up their accounts by logging activities. We believe adding XP to this gamifies the system a little and will encourage users to keep logging activities and partake in challenges.

Users will gain XP in any of the following ways:

- Completing a challenge
- Logging activities

Below is an example of gaining a level by logging a new activity.

Super Admin!

LVL 1   LVL 2

Activities

You haven't logged any activities yet

Teams

my team name
Walking

Home   Search   Create   Ranking   Profile

User at level 1

Log a new activity
What did you do?

I went on a

2.5   km   Walk

Which I started at

🕐 06:00   📅 Today

And it took me

🕐 00:30:00

Log activity

Home   Search   Create   Ranking   Profile
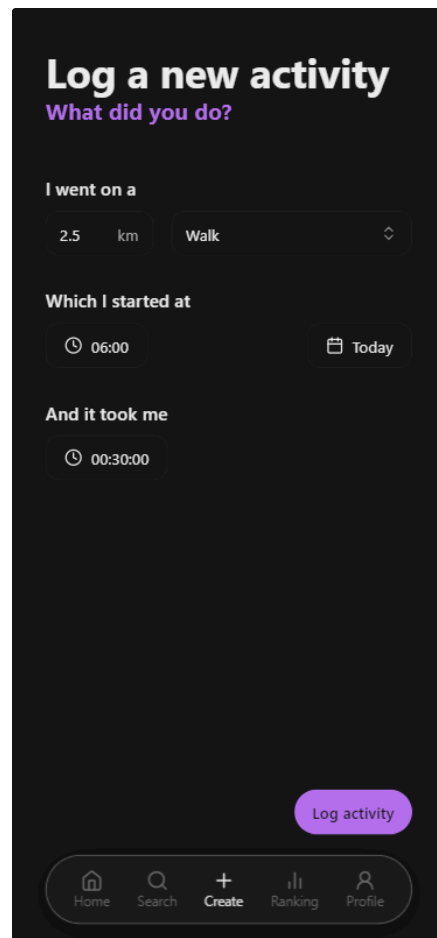
Logging an activity
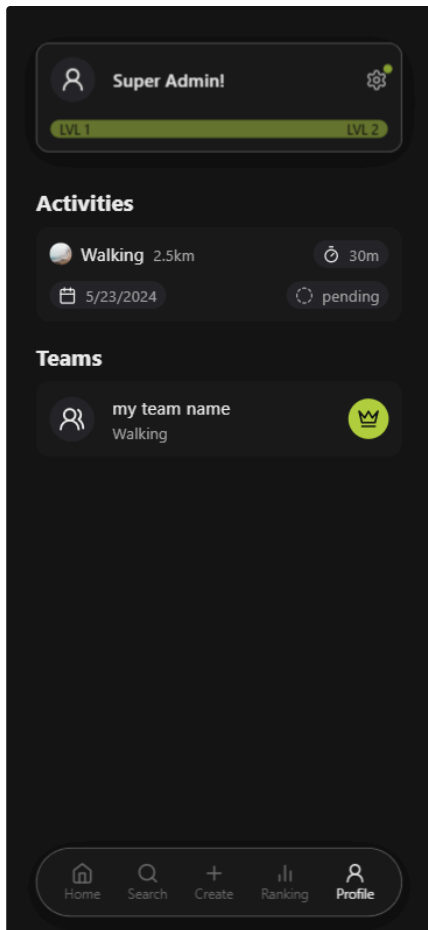
The activity is now pending admin approval
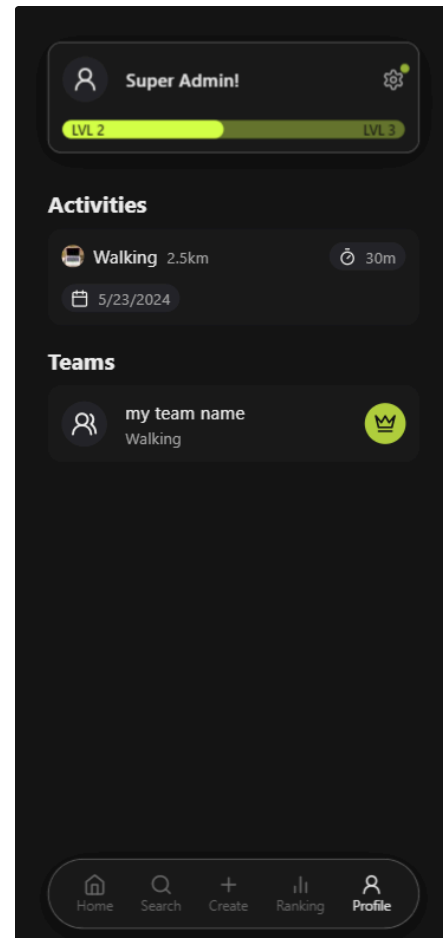

Level has increased after admin approval

Though we had initially set out to include badges inside of our reward system, after discussing with our mentor at a sprint review, we decided to put the badges as rewards on the backlog as a possible addition in the future.

For more information regarding the reward system like how level thresholds are calculated for example, you can refer to the technical documentation.
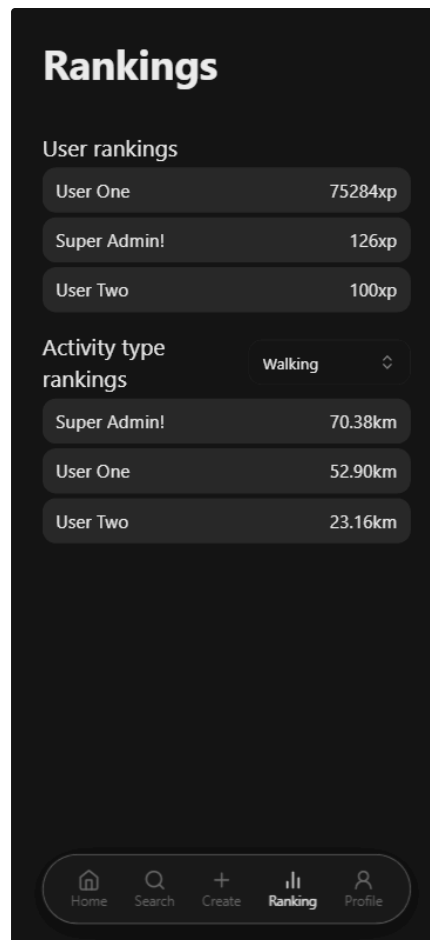
This was made by Emre.

Rankings page

Much like challenge leaderboards, overall rankings allows users to view their standings, thus promoting competition inside of the application and the workplace.

There are currently 2 sorts of leaderboards on this page:

- An experience leaderboard shows the top users of the application with the most experience points accumulated.
- An activity type leaderboard shows the top users who have covered the most distance for any given activity type. This can be filtered per activity type.

For each sort of ranking, the users in the top 10 will displayed. If the user themselves is not inside the top 10, they'll be shown below the leaderboard. The user will also always see who is directly ahead and behind them.
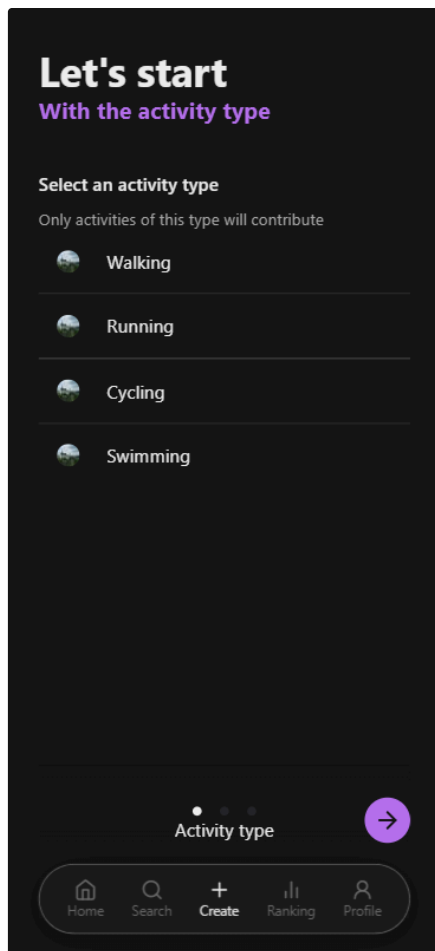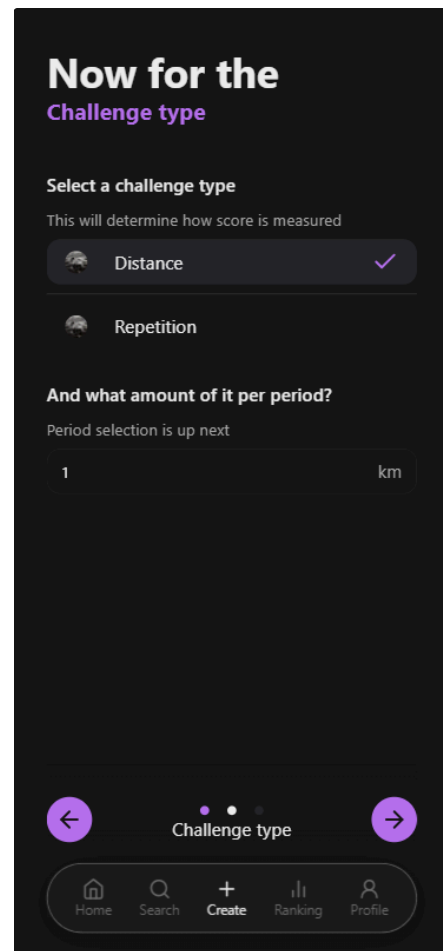
Rankings page

Streak system

The streak system allows users to create challenges just for themselves, which we call streaks. By letting users create streaks we hope they'll have additional incentive to keep exercising. This feature also kind of targeted towards people who are newer to exercising and don't want to end up on the bottom of a challenge's leaderboard. By creating streaks they can still challenge themselves and have their activities in the system.

Creating a streak

Nearly all of the steps of creating a streak are the same as for creating a challenge. The only difference is in the last step. When selecting the end date users can also choose to have an indefinite streak, meaning it will keep going on until they fail a period. As long a the user doesn't fail their challenge the streak keeps going.

Let's start
With the activity type

Select an activity type
Only activities of this type will contribute

🌑 Walking

🌑 Running

🌑 Cycling

🌑 Swimming

● ○ ○
Activity type

→

Activity type of the streak

Now for the
Challenge type

Select a challenge type
This will determine how score is measured

🌑 Distance   ✓

🌑 Repetition

And what amount of it per period?
Period selection is up next

| 1 | km |

←   ● ● ○   →
Challenge type

Challenge type of the streak

Challenge type of the streak and the target amount

Time period and end date of the streak (indefinite)

After successfully creating a streak it will show up on the user's homepage. They can see what needs to be done via the text and their progress towards it via the green ring.
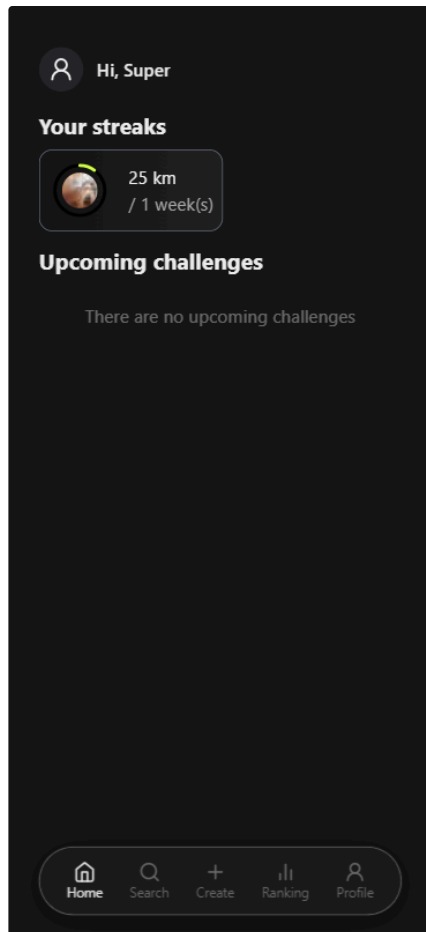
The streak is displayed on home page

This was all made by Emre.

Team System

The team system allows users to create and join teams of certain activity types (eg. a running team, a swimming team…). We felt like having teams could encourage users even more to contribute towards completing a challenge, as they'll have team members who will expect them to. We hope it will provide an environment for comradery and teamwork, not just individual progress.

Users can request to join a team from the teams detail page, once the user has requested to join, the team captain will have the option of accepting or rejecting their request. Users in these teams can then participate in team challenges in which their activities of the associated activity type will contribute to the teams progress in the challenge. The justification for the team system is so that the application

Creating a team

Creating a new team all starts with entering some basic information like the team name and an optional description. Next up the user will have to choose the type of team they want to make by picking an activity type.

Team creation begins with general information

Each team has a specific activity type

Searching for teams

Users should of course be able to search for teams and this can be done via the team search page. Much like the challenge search page, this also provides some filter options so users can more easily find the teams they want. On the bottom left of the card the team's admin can be found. In the bottom right is a button to either join or leave a team. A team captain cannot leave their team as long as there are still members in it. When the captain leaves the team, it will be disbanded.
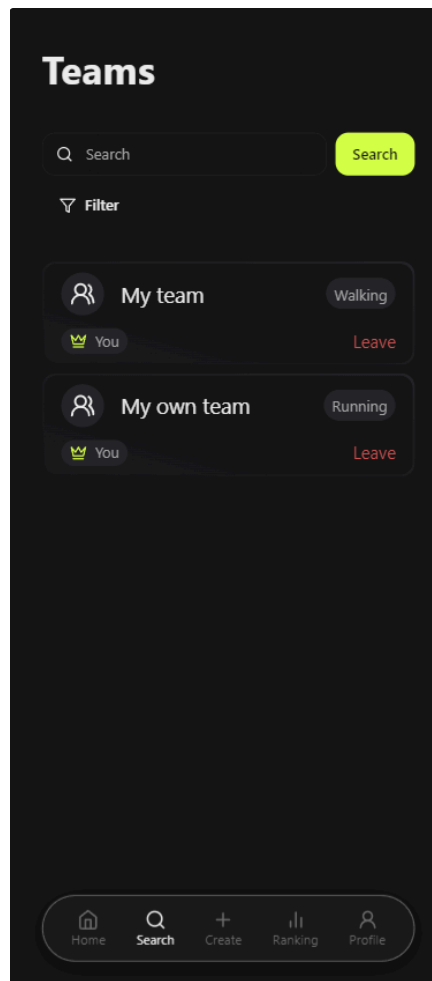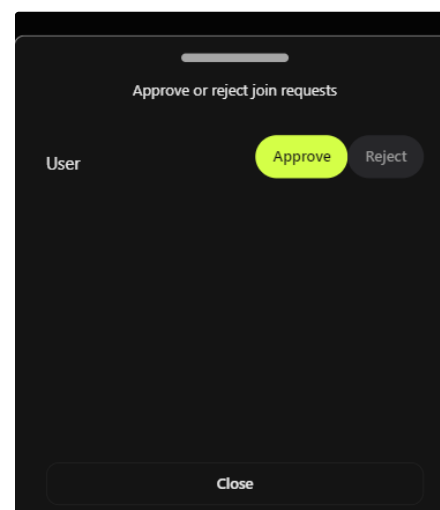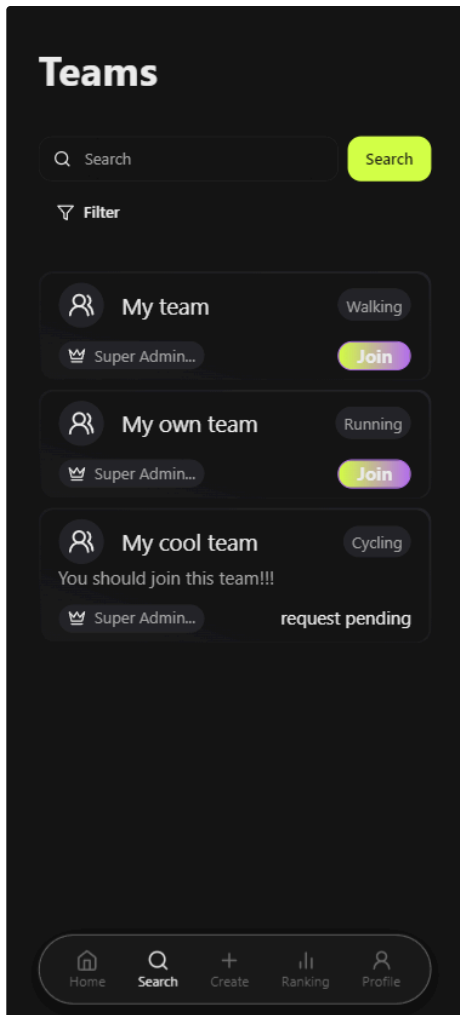
The team search page

Team detail page

The team detail page stays consistent with the challenge detail page. Users can see how many people joined the team and who the admin is. The teams members are also visible in a column. If the team captain views the page, they'll be able to see 2 extra buttons near the bottom. The team captain can view all join requests and approve or deny them. A join request is made when a user requests to join the team. The captain can also edit information about the team.
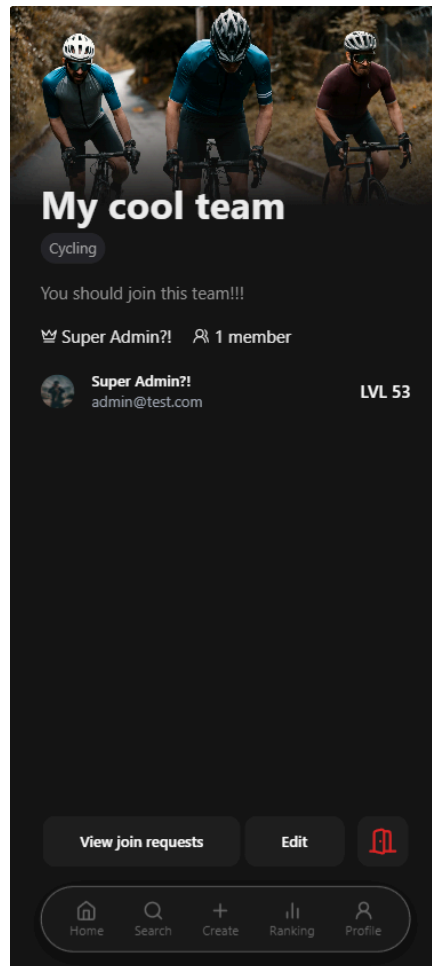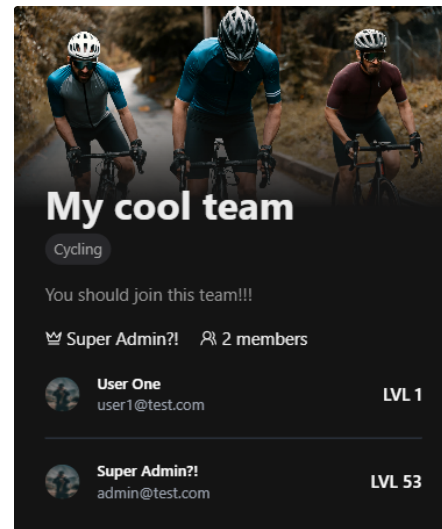
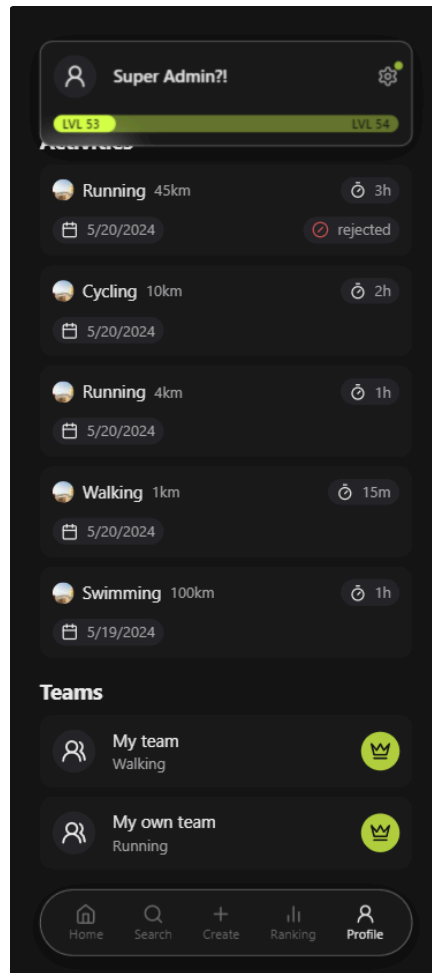Team detail page (admin)

Join requests

User requesting to join the team

User is accepted into the team

Viewing teams on profile page

The teams the user is a part of can be found on their profile page. This way they won't always have to search for their teams.

Teams on profile page

Profile

On the profile page the user can see their 5 most recently changed activities (created, updated) and the teams they joined. At the top of the page they can see their current level and are also able to open the overlay to expose some settings. With this opened, they can edit their personal information, change to light or dark mode, connect an external account (e.g. Strava), go to the admin page (if admin) and log out.
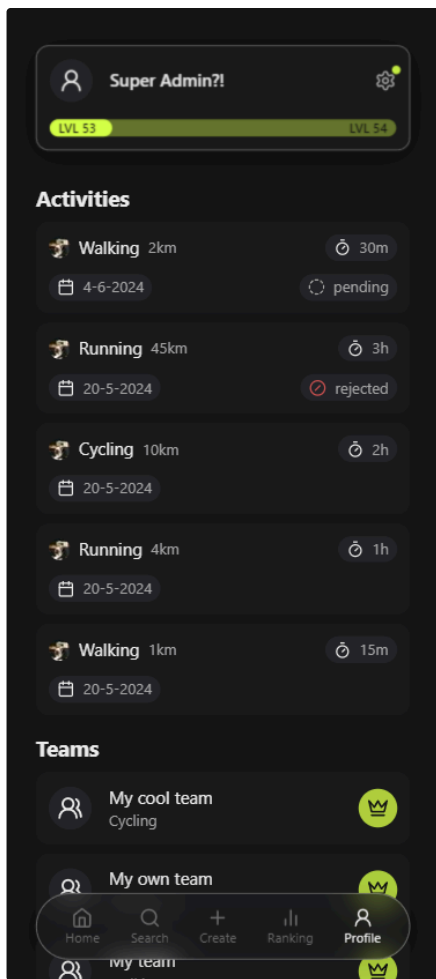
Profile page
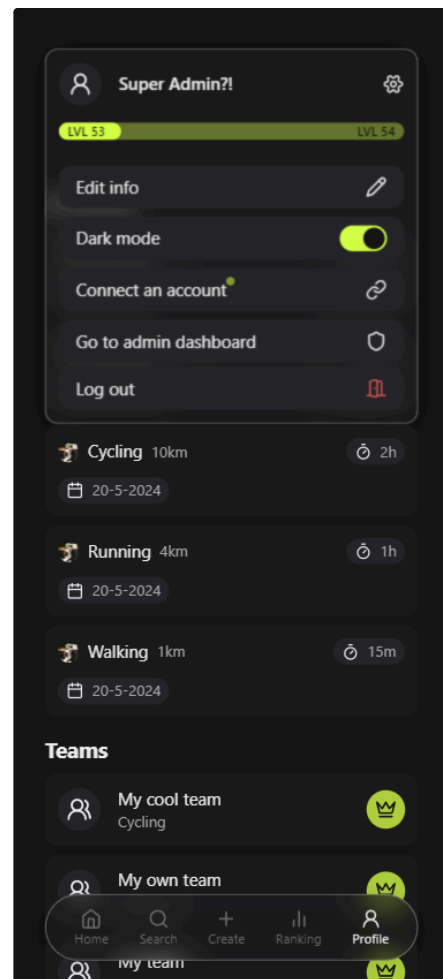
Opened settings

Edit profile information

A user can edit their profile information as can be seen in the screenshot below.

Edit personal information

Updated last name

This was made by Emre, reworked by Seppe.

Admin dashboard

The admin dashboard is only accessible by those with admin privileges in the application. It uses a side navigation that contains several pages. Currently only approving activities is working, since that one had priority. Admins can also go back to the application itself of course.

This was made by Seppe.

Approving activities

Admins can approve or deny activities as indicated by the 2 buttons near the end of the table row. The rows contain other information such as the duration, activity type, etc. There are also filter options for user name, activity type and the amount of items per page. The multi-selection was intended for mass approving or denying activities. This is not yet implemented.
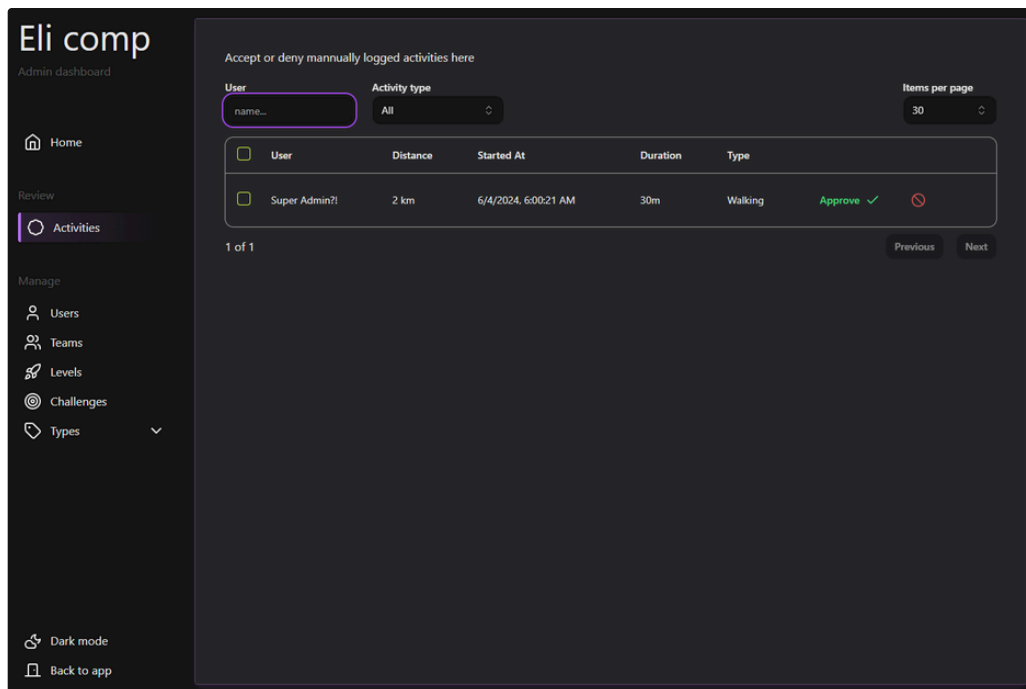
Admin dashboard for approving activities

This was made by Seppe.