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School of Information Technologies

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Time tracking webapp for amateur motorsport

Project proposal

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MSc

Tallinn 2024

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1 ANALYSYS

The goal of this project is to create a web application for organizing amateur rallies and to track time in them.

The idea of this project stems from the fact that at the moment there are no viable systems on the market that would allow accurately, and cost effectively organize and track amateur rally events. Those events have very limited budget and are primarily organized as a hobby and not for profit. Based on this, there is a need for a new system that does not use expensive timing devices and is more convenient, accurate and easier to use than the currently most common way of using stopwatches and Excel tables. There are time tracking applications, but they lack convenience and accuracy needed for motorsport events.

First, there must be a possibility to create rally events. Those events consist of different competitions, which may have different restrictions applied to them. Those restrictions can be seen as classes, but they aren't exactly that. Restrictions provide more flexibility in creating competitions.

Competitors can use different cars throughout the event but can use only one car during a competition.

Competitors and their car will be assigned to a heat. Heat is like a subsection of a competition. There's a need for heats because not all competitors would fit on a track at the same time.

There are many different types of competitions, for example: best lap time, total time over many laps and mass start (which is more reminiscent of a demolition derby than a rally).

Time tracking of the heats will be done as following. Every competitor in a heat gets a number from 1 to 9. To register time, the person tracking the time will first press ENTER to save current time to the time buffer, after that the time can be assigned to a competitor by pressing the corresponding number. For example, two cars, first a black(4), then a blue(2) pass the checkpoint and the person tracking the time will press ENTER twice exactly at the moment when the cars passed the checkpoint. Then time tracker presses 4 for the black car and 2 for the blue car to assign previously saved times to them.

Best times from all the heats will be combined into a singular results table.

Spectators must be able to easily find events and look for information and results.

2 USER FLOWS

2.1 Public user

1 - Find event using content browser or search
    1.1 – Look for event information on “Information” tab
    1.2 – Look for competitors on “Competitors” tab
    1.3 – Look for results on “Results” tab

2.2 Organizer

1 – Go to “My Events” tab
2 – Create new event by clicking on “Add new event”
3 – Add new competitors and their cars on “Competitors” tab
4 – Add new competitions and heats on “Competitions” tab
5 – Assign competitors to competitions on “Competitions” tab
6 – Track time by clicking circled T near a heat on “Competitions” tab

3 ERD

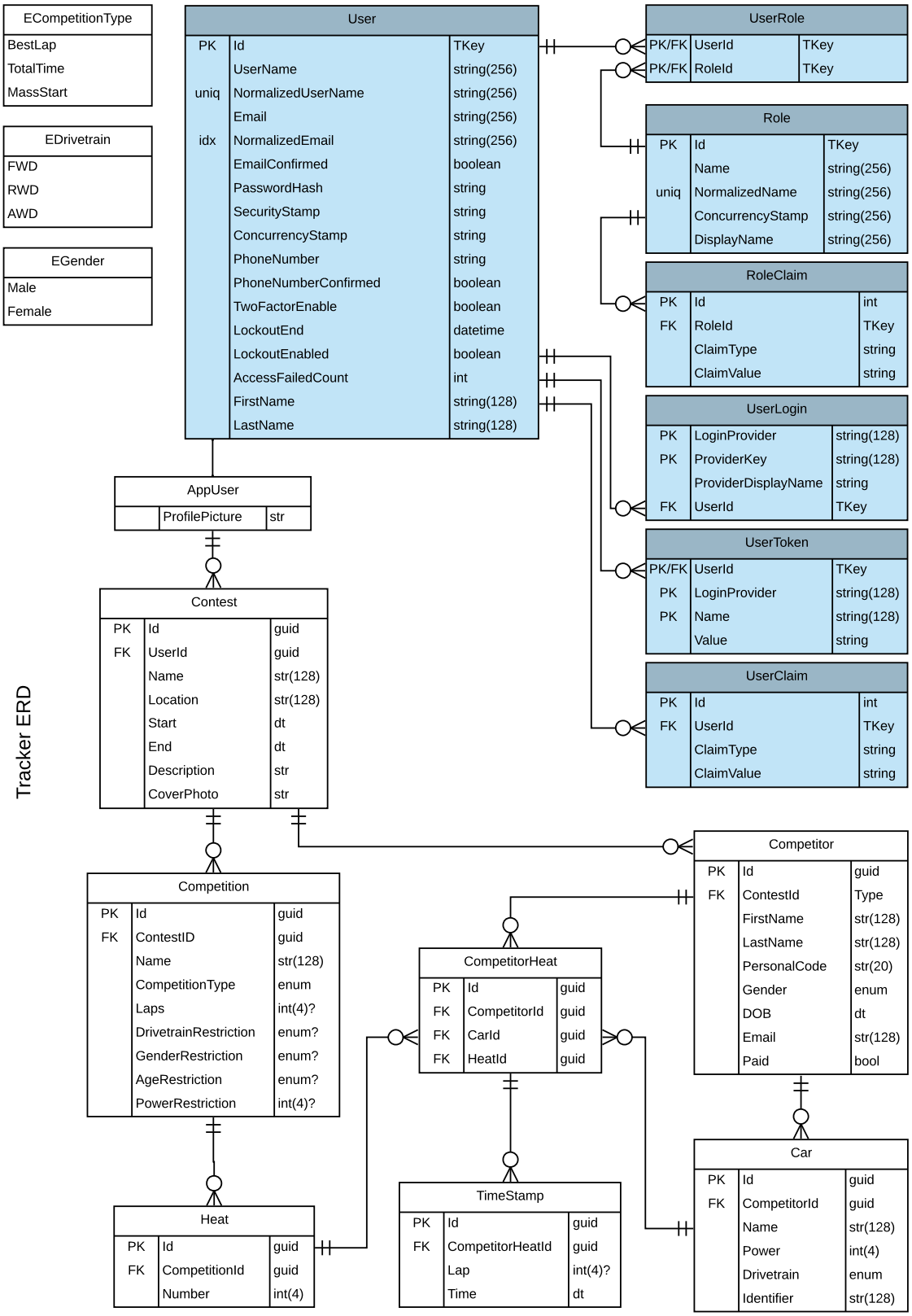
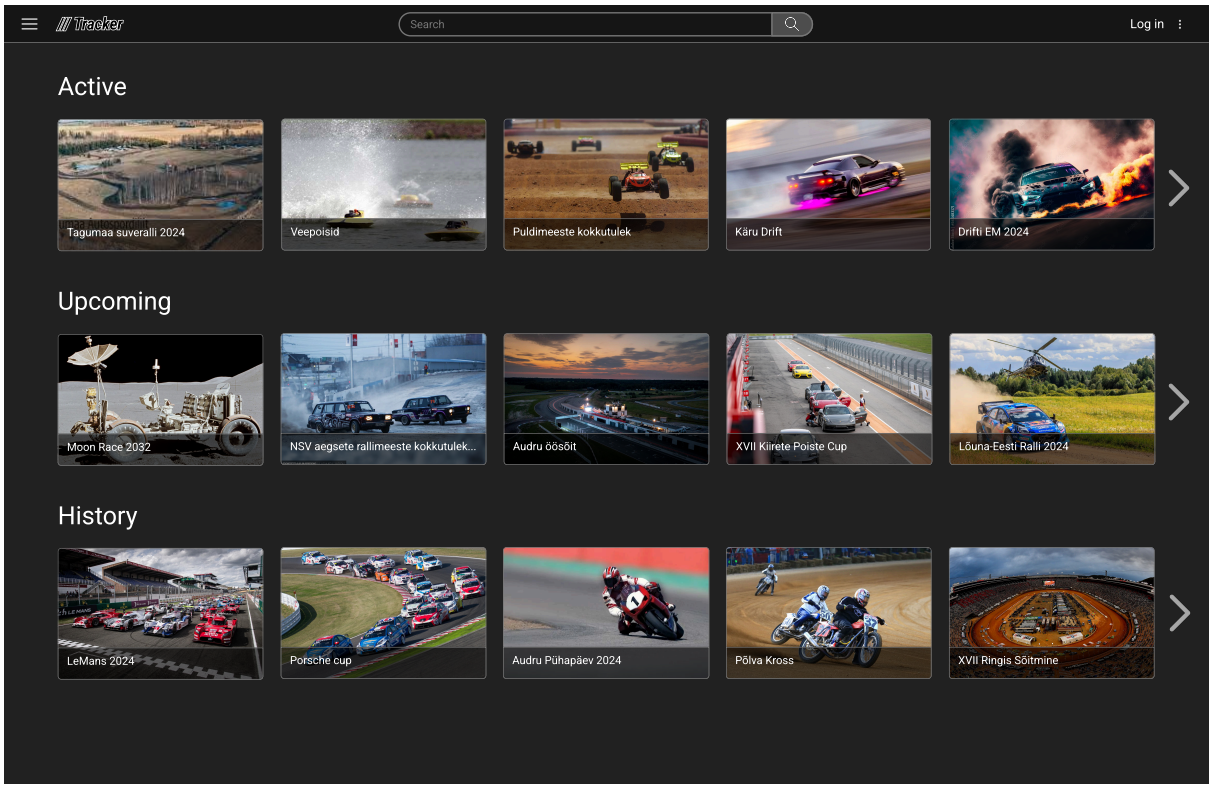


Figure 1: ERD Schematic

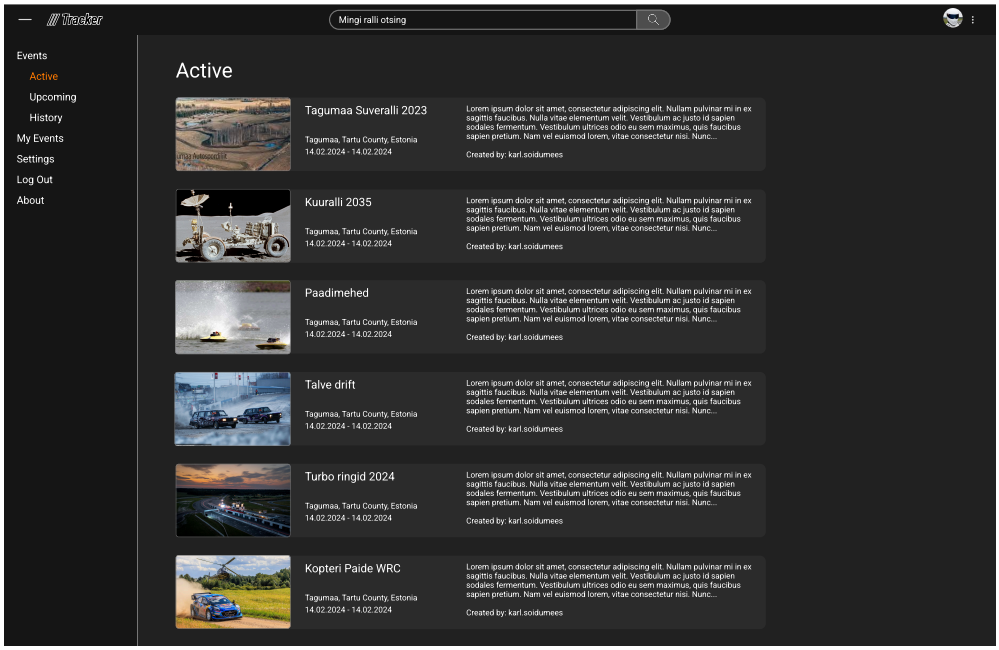
4 UI SKETCHES

Figma link:
https://www.figma.com/file/8NZmenkivC037kfOjAdV9v/Tracker?type=design&node-id=0%3A1&mode=design&t=ToqOqMBjhvcTSBdv-1

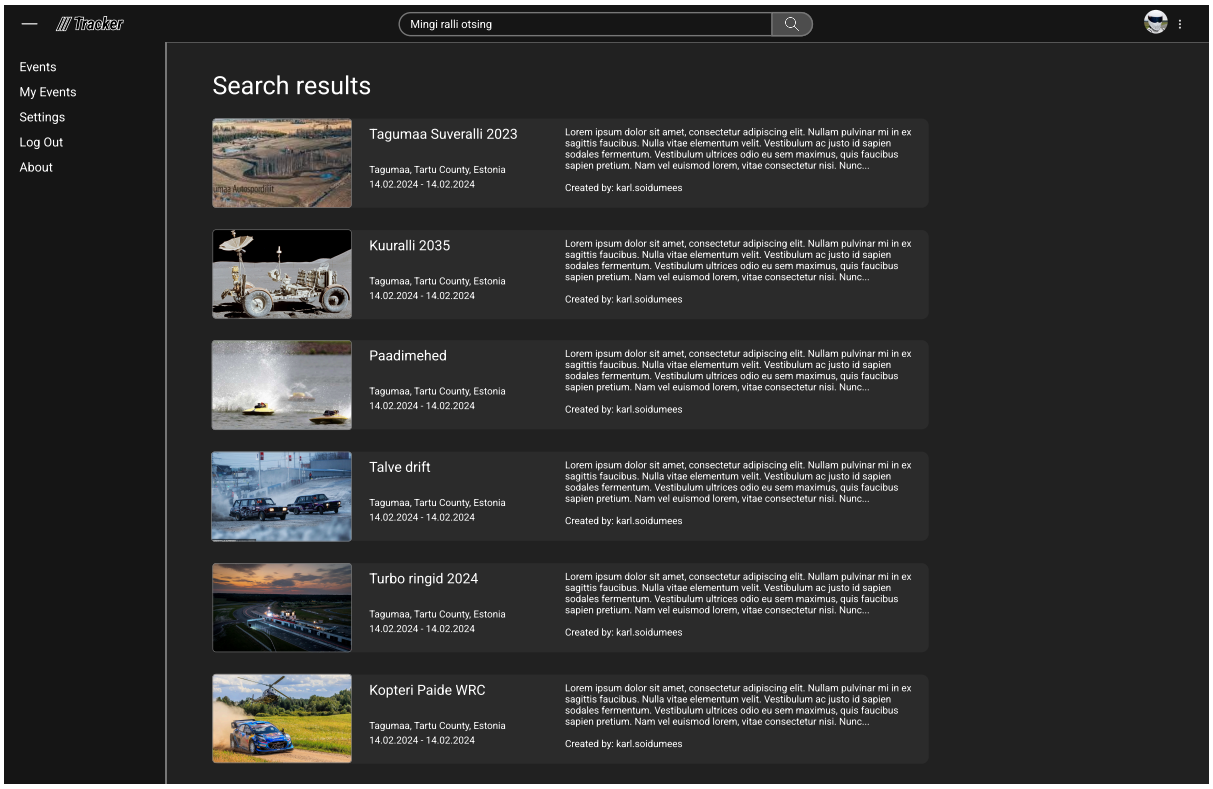
4.1 Front page



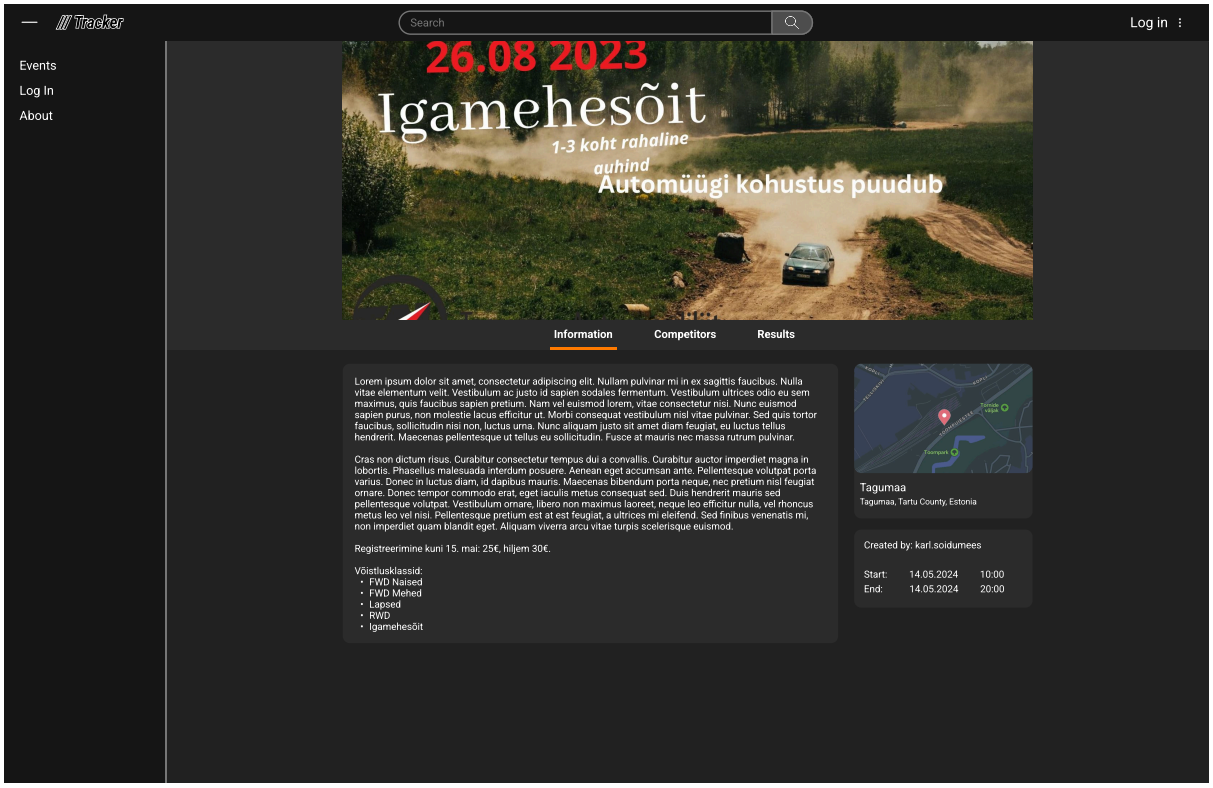
4.2 Active events page



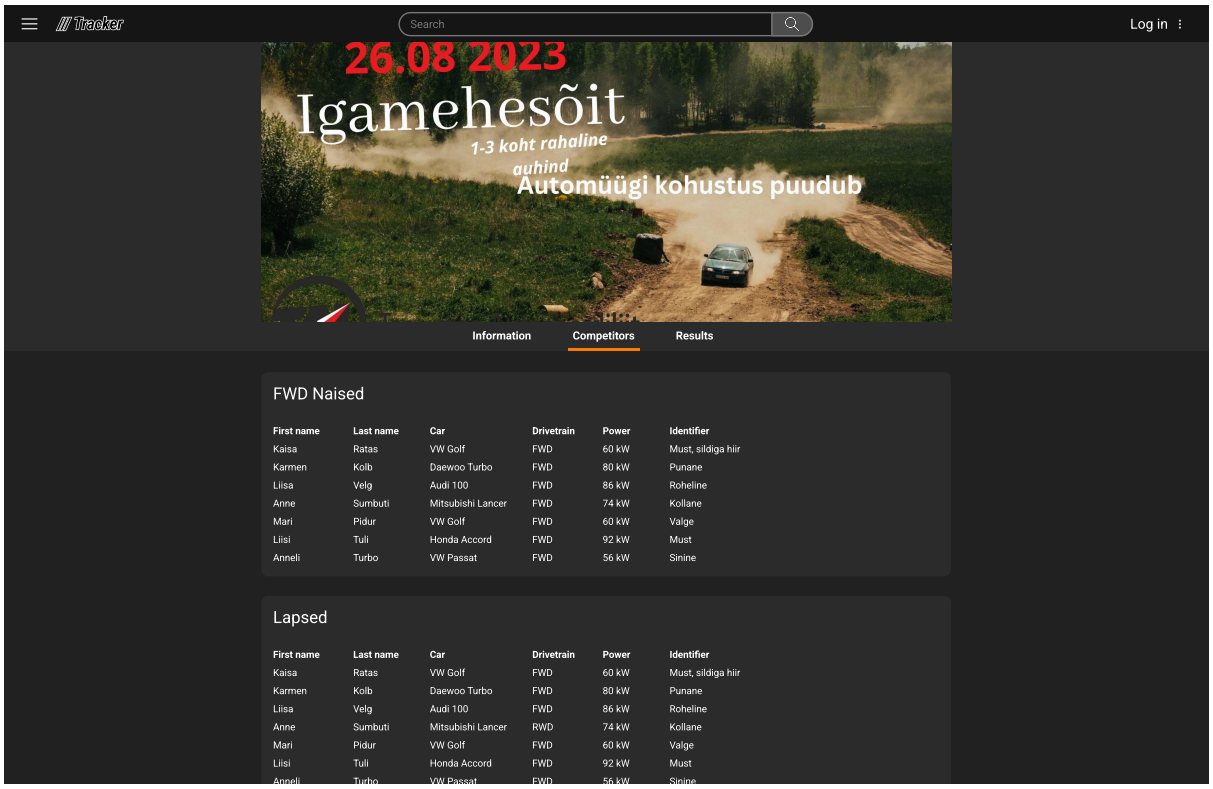
4.3 Search results



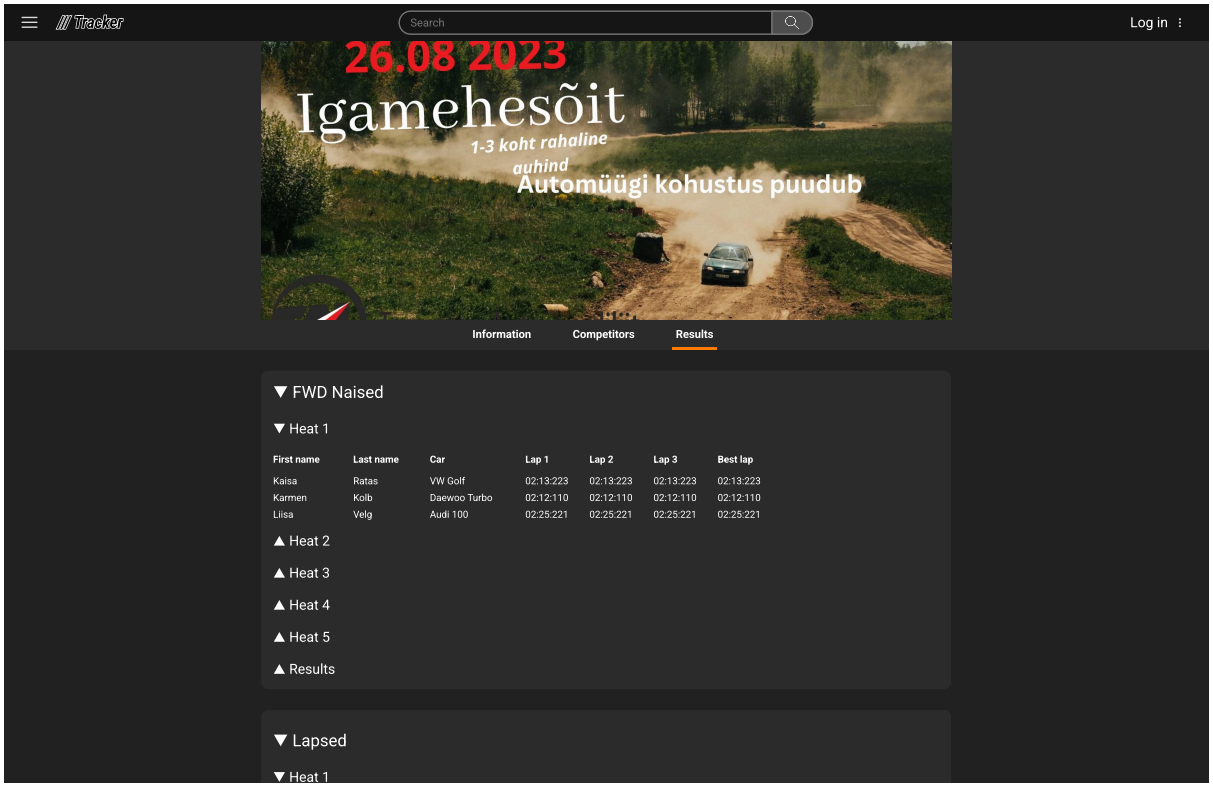
4.4 Public Information page



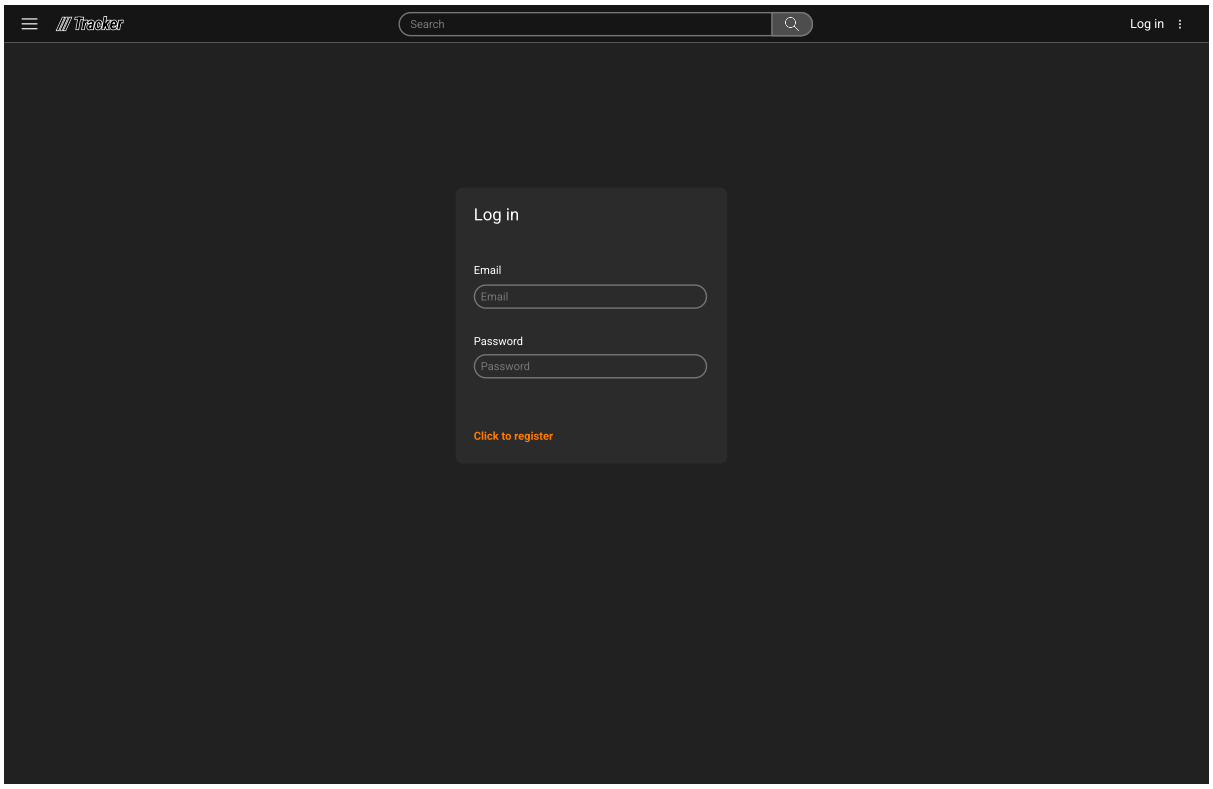
4.5 Public Competitors page



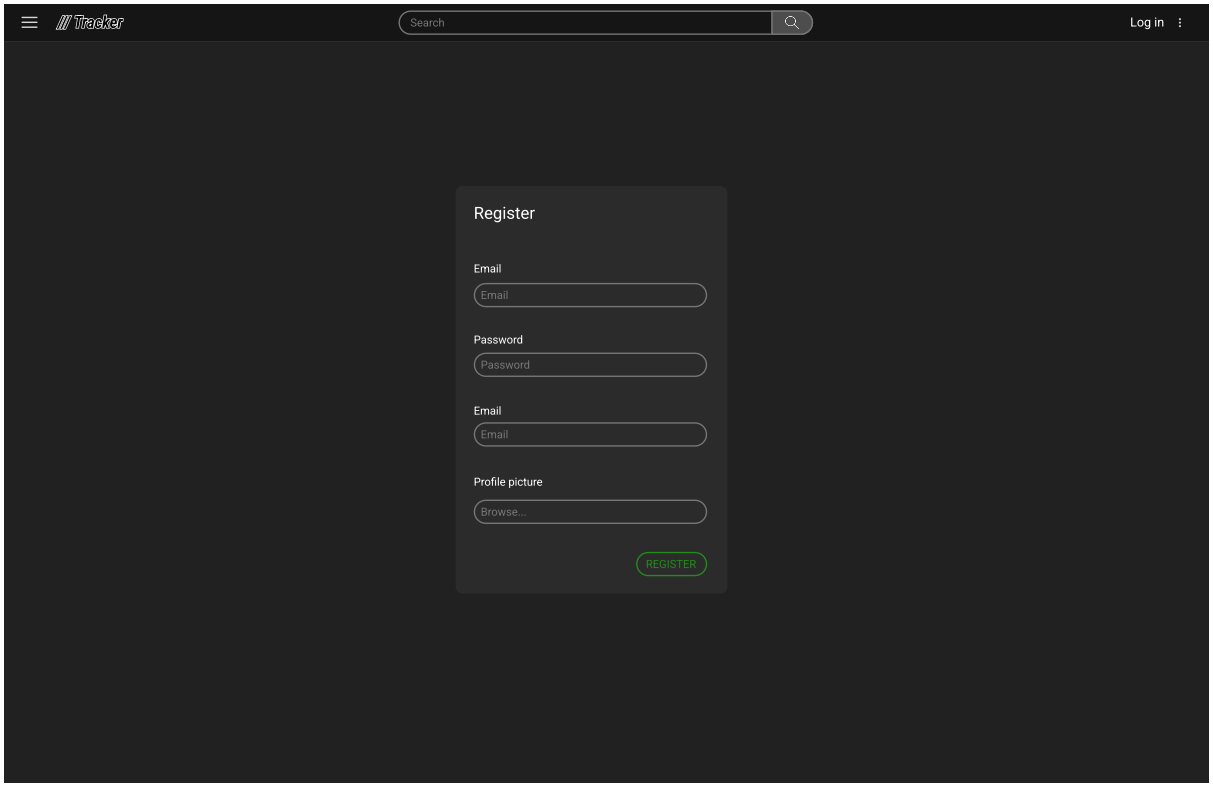
4.6 Public Results page



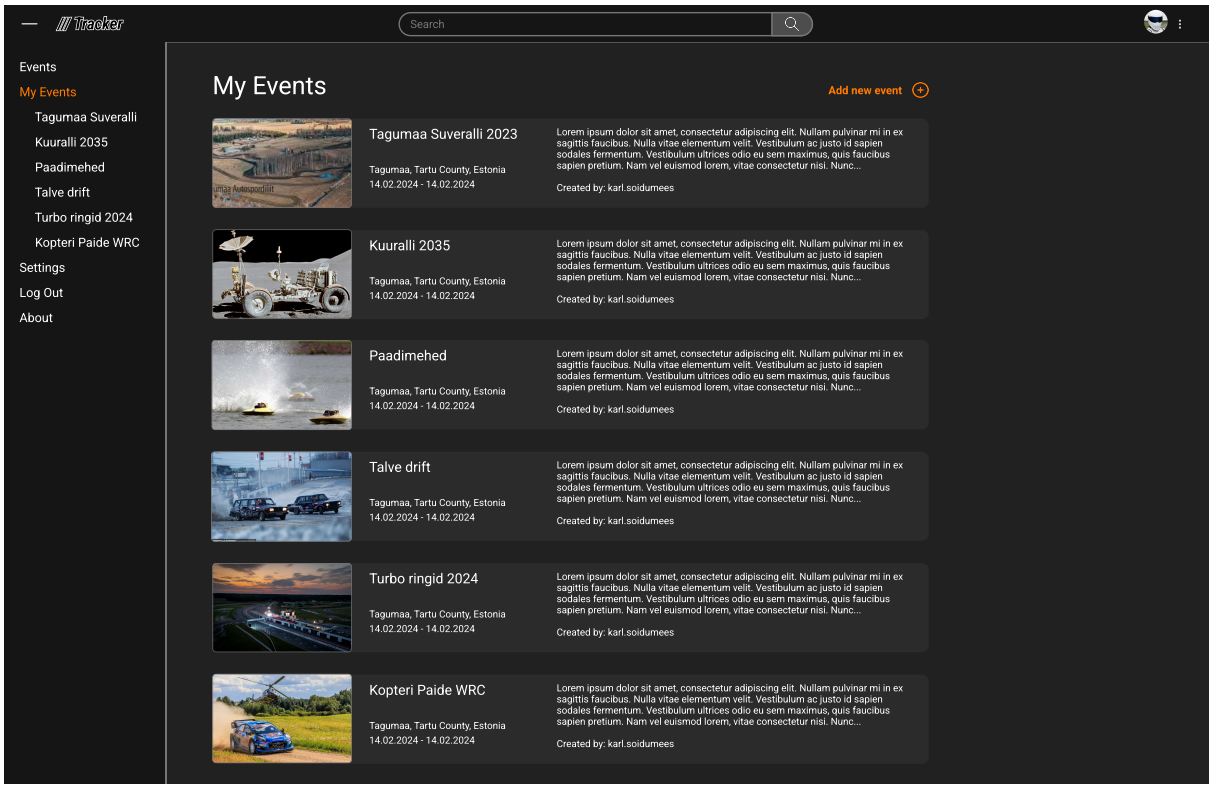
4.7 Log in page



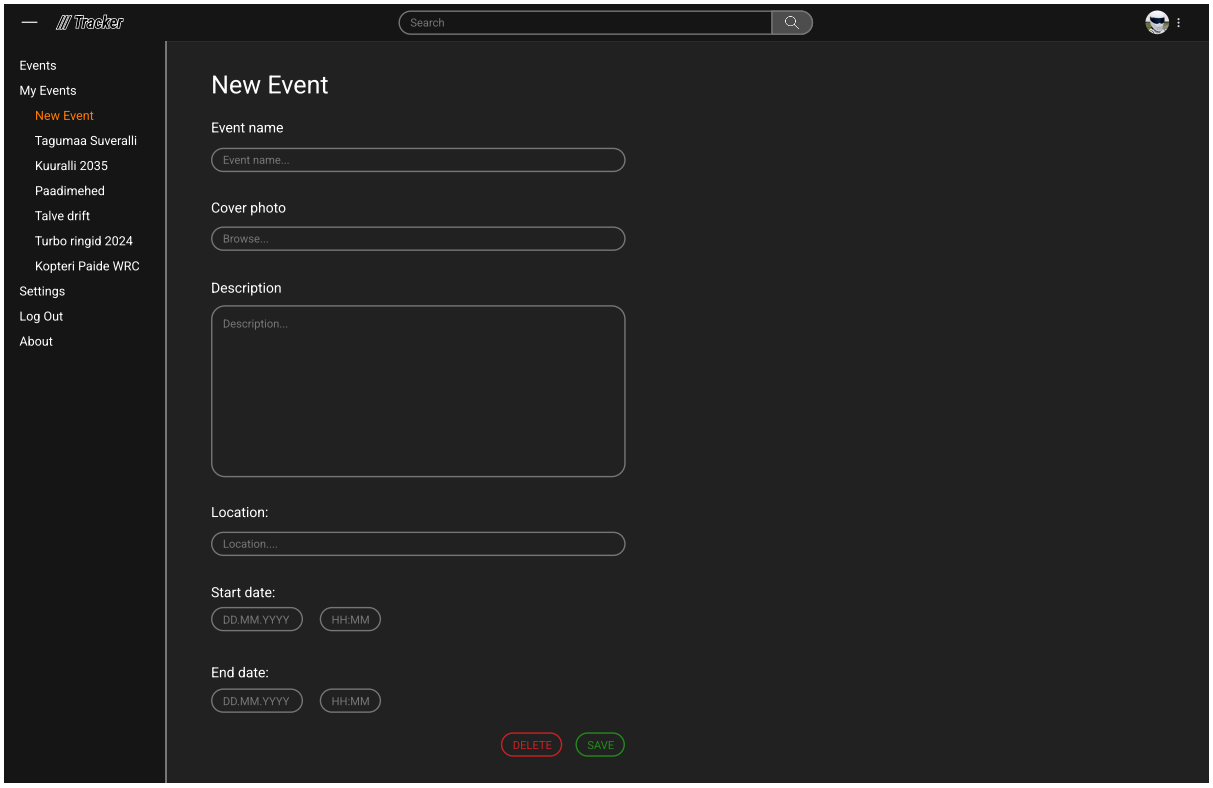
4.8 Register page



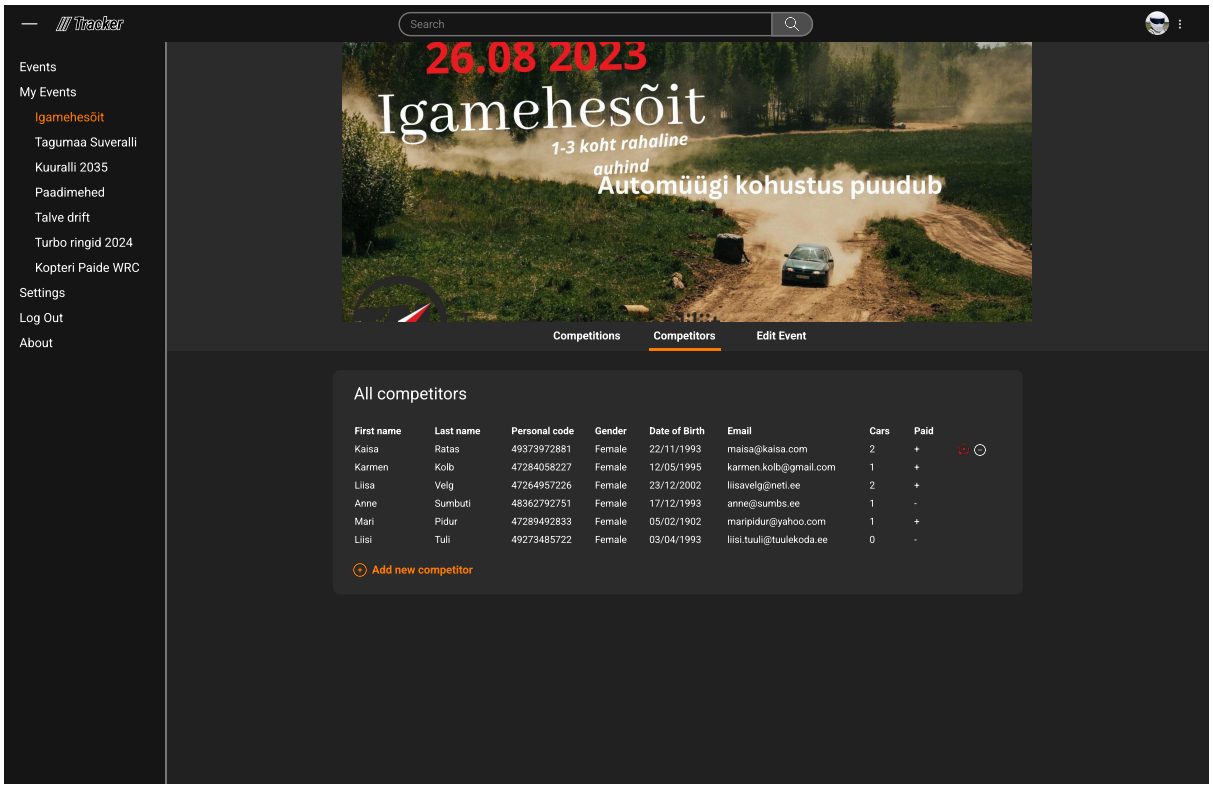
4.9 Organizer My Events page



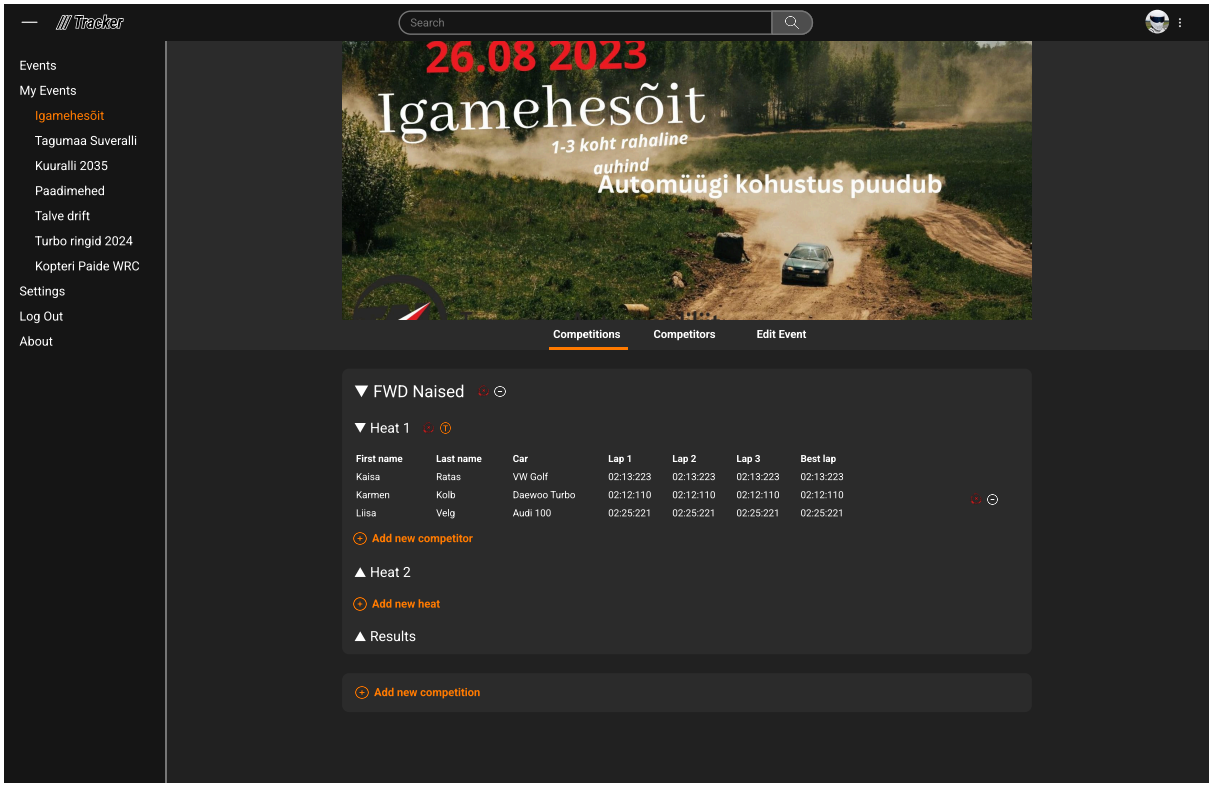
4.10 Organizer New Event page



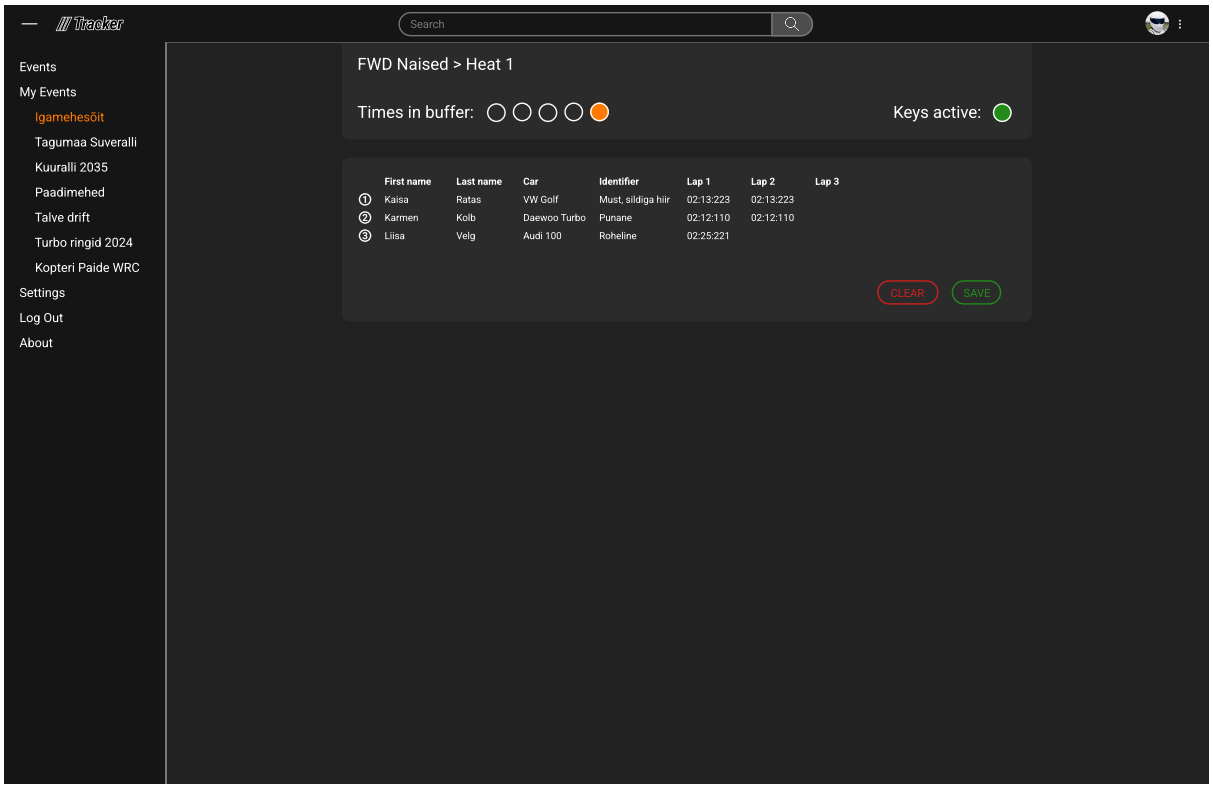
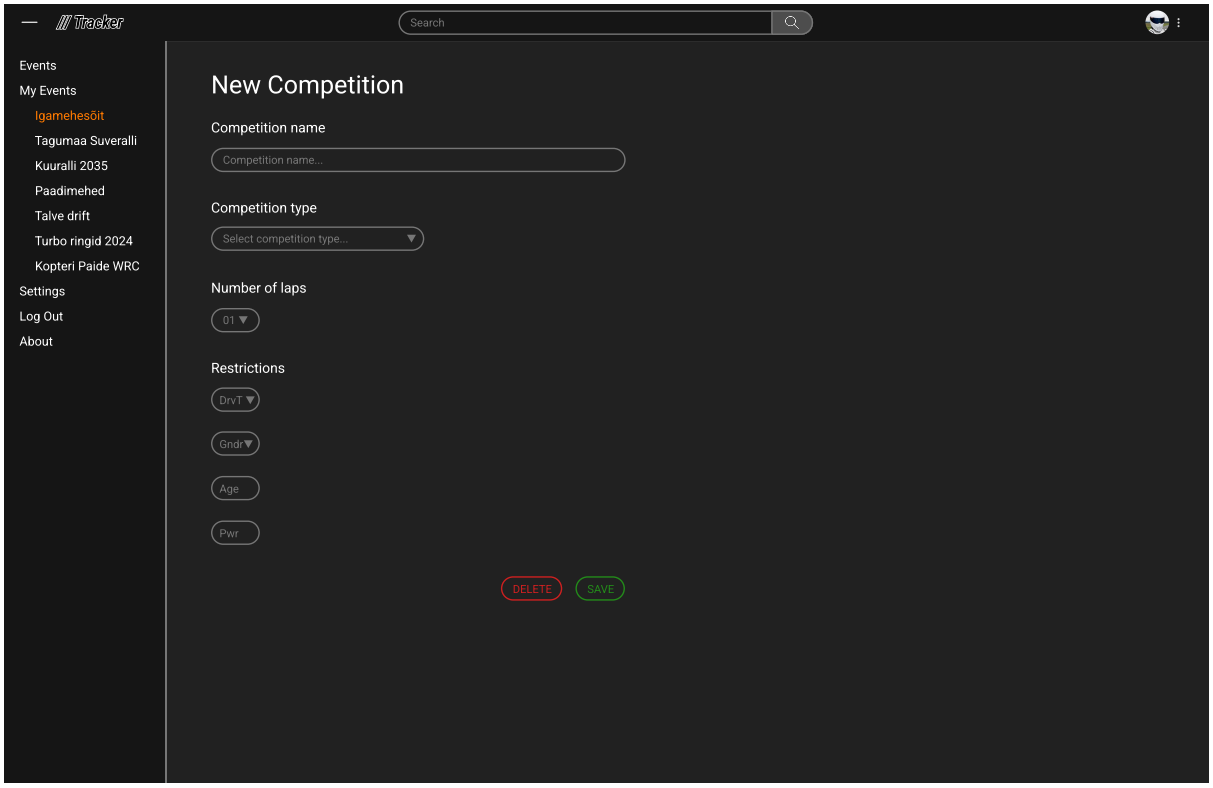
4.11 Organizer Competitors page



4.12 Organizer Competitions page



4.13 Organizer Time Tracking page



4.14 Organizer New Competition page