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Play~Link

Play games together on a virtual map in real life!

Smartphones have become an integral part of our daily lives. In Flanders, the smartphone usage has been consistently increasing year over year [1]. This is especially prevalent for young people aged 6 to 18, of which 96% owned a smartphone in 2022 [2]. Along with this increase in smartphone usage, there is also a stark decline in outdoor play for these young people. A study from 2019 shows that outdoor play has decreased by no less than 37% compared to 2008 [3].

PlayLink aims to mitigate this issue by leveraging the high rate of smartphone ownership and providing a mobile platform which offers a fun and compelling way to do outside activities through technologies built into our smartphones. By digitizing and modernizing existing offline outdoor games through features such as location tracking, virtual power ups and virtual checkpoints, we will give players the opportunity to both rediscover classic games as well as discover completely new ones by allowing users to create these without any prior programming experience by dragging and dropping Scratch-style UI blocks.

Our initial release will already contain two ready-to-play games. Using these as a baseline, players can already get a feel of what our platform is capable of and also gather ideas and inspirations for their own custom games. These games will be made available in a public marketplace where everyone can try them out and review them.

One of the available games is called Hunter-Prey. As the name implies, it's a game that is played with two teams where the team of hunters has to catch all prey in order to win, and the team of prey have to survive a set amount of time in order to win. The hunters will get access to the real time location of all prey, whereas the prey should get a predetermined time to spread out and run away before the game starts.
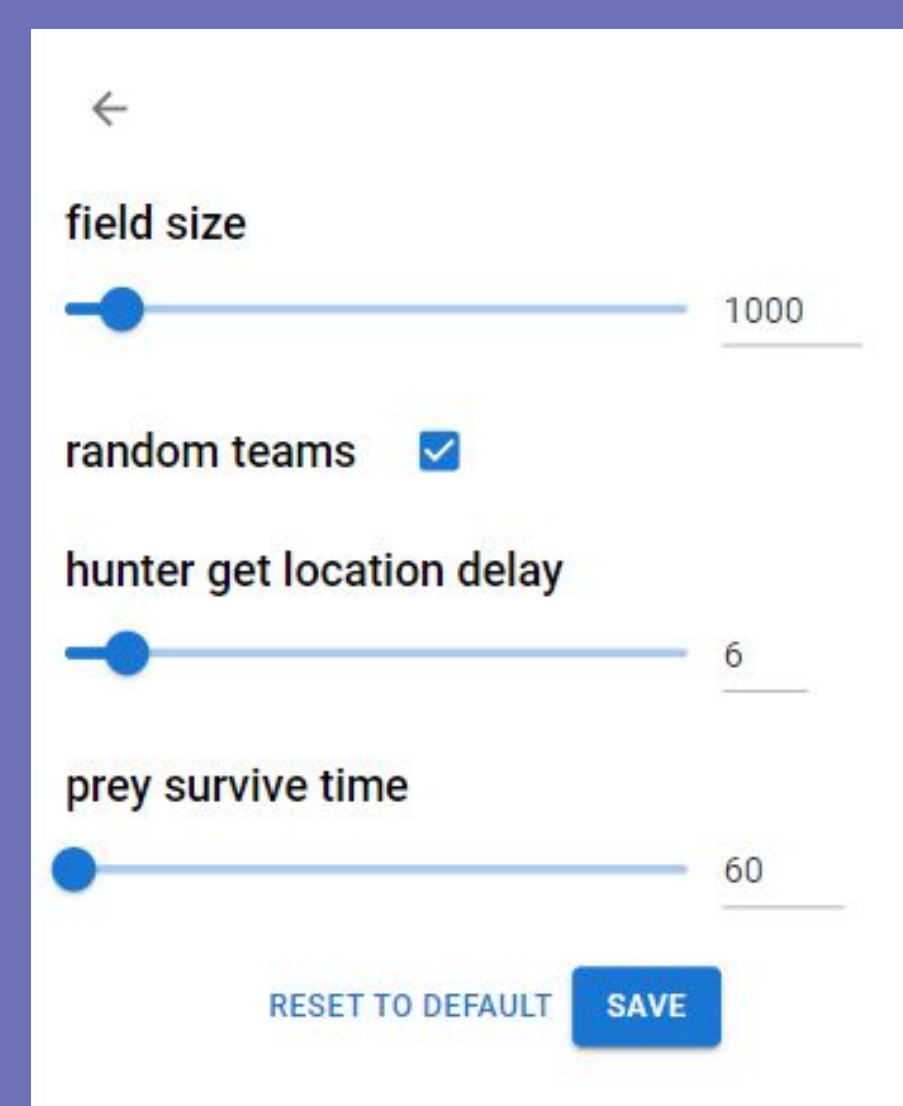
Playing Hunter-Prey

Create Game Room

Before playing the game, the first step for a host is to create a game room. The host can then share a game room ID and invite other players. After this, each player can choose a team. Teams are required in Hunter-Prey but this does not have to be the case for every game.
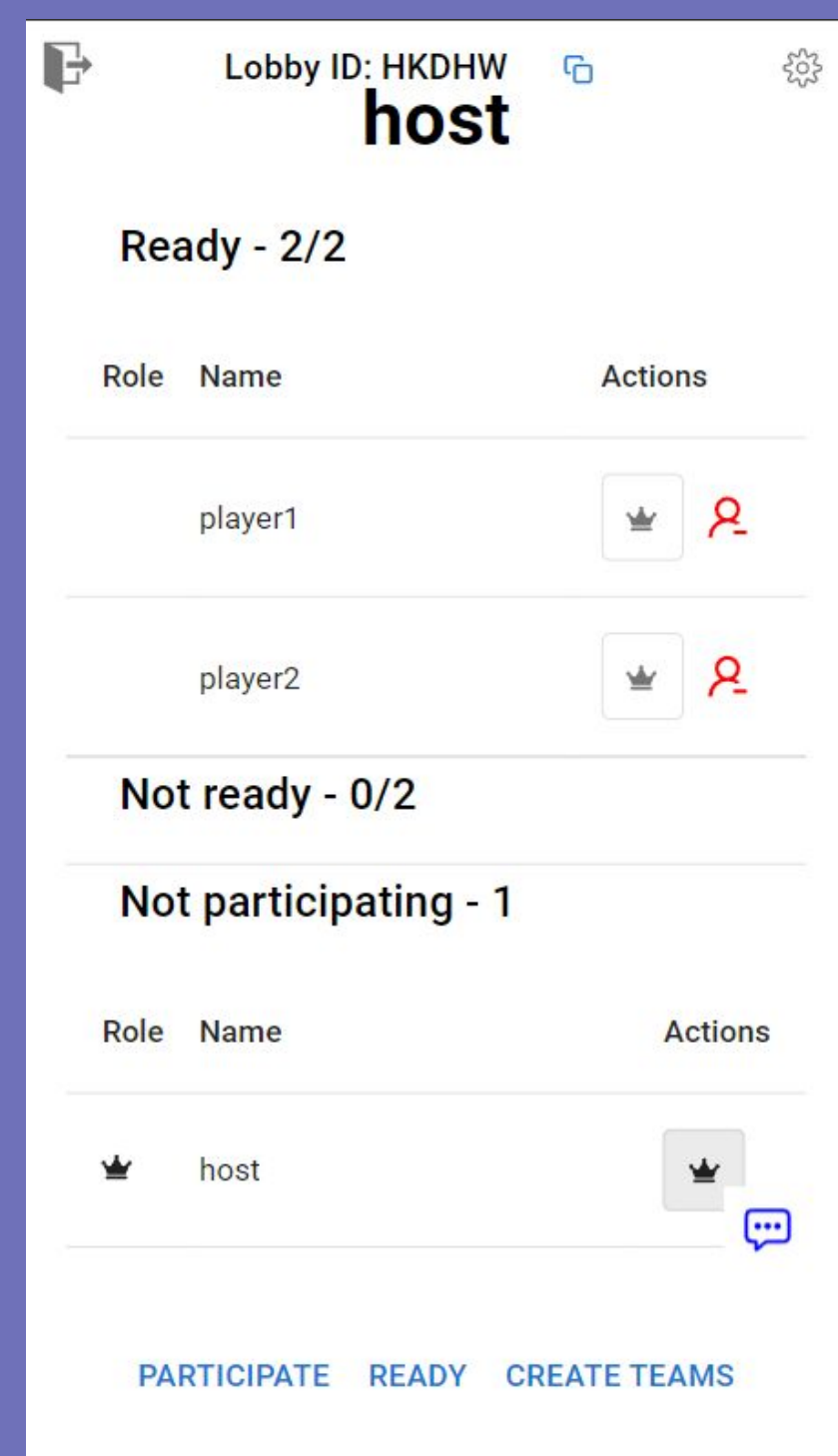
Press Ready and Create Teams

Set settings

To customise their game experience the host of the lobby can change the settings of the game, or simply use the default settings.
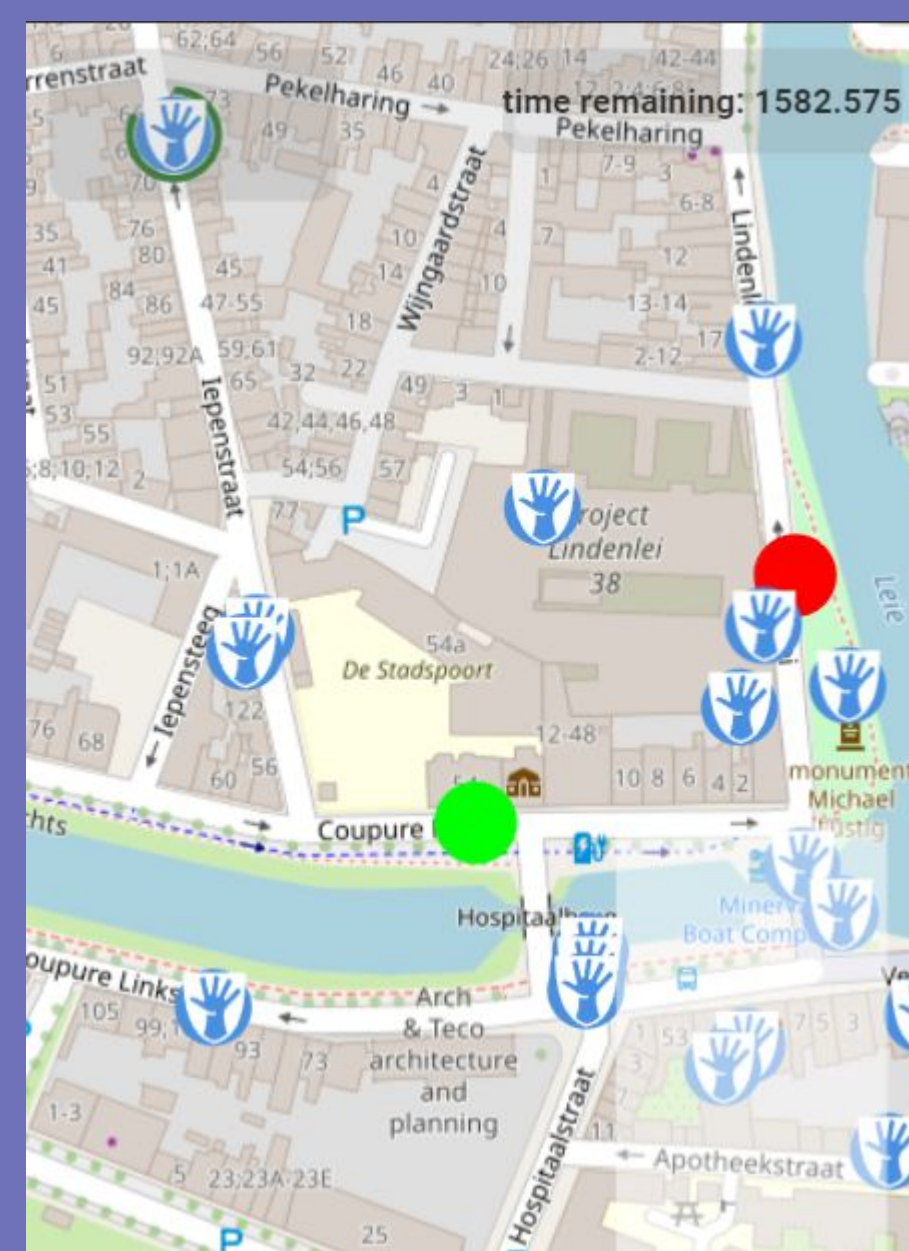

Set Settings

Catching Prey

When a hunter is close enough to a prey, they will see button on the bottom right of their screen to catch that prey.

Catching Prey

Collecting & using power ups

Both hunters are prey can collect power ups which will give them various effects depending on their role. Hunters can for example get a bigger view range (called the Hawk) whereas prey can temporarily disable their real time location to hide from the hunters. These power ups can be used at any time once they have been collected and are present in the inventory.
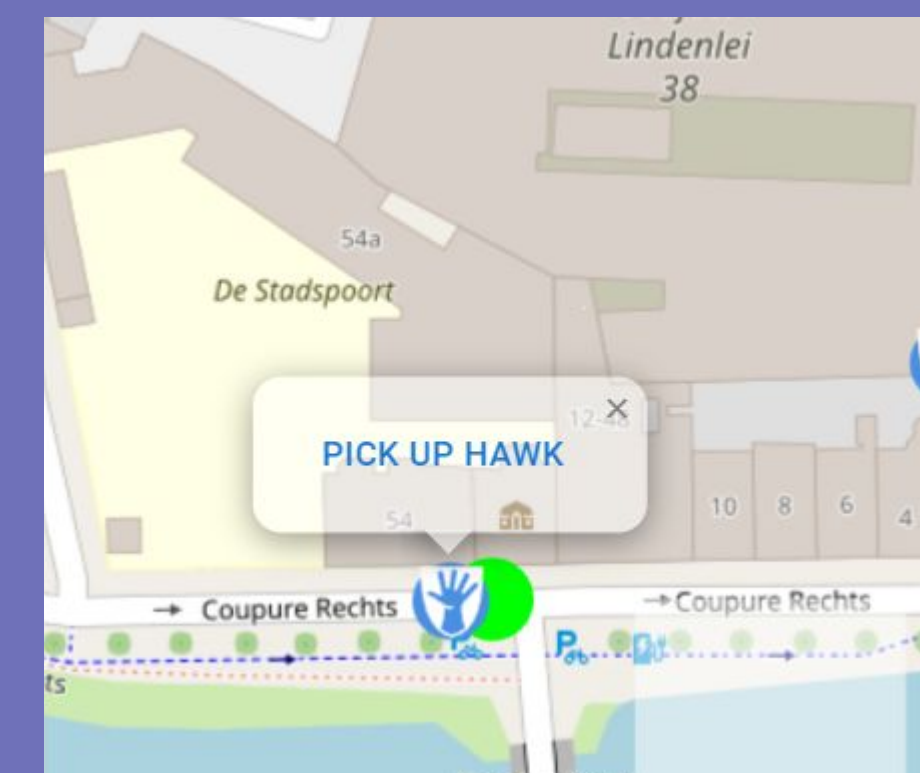
Pick up power up

Hawk power up active

Finishing the game

The prey will win once the timer has run out and there are still prey alive

The hunters will win when all prey have been caught before the timer runs out

After the game

Once a game has finished, players will be brought back to the same game room where they can choose to restart the game. Players will also get the opportunity to leave reviews and ratings which will aid other players in finding popular games.

Developing New Games

On the desktop web application users can let their creativity loose to make their own playlink games. When a user is making a game in this environment we call them a developer. Developing a game is done using a block-based drag and drop development environment. There are different kinds of blocks that have to be made in different tabs in order to define the rules of the game:
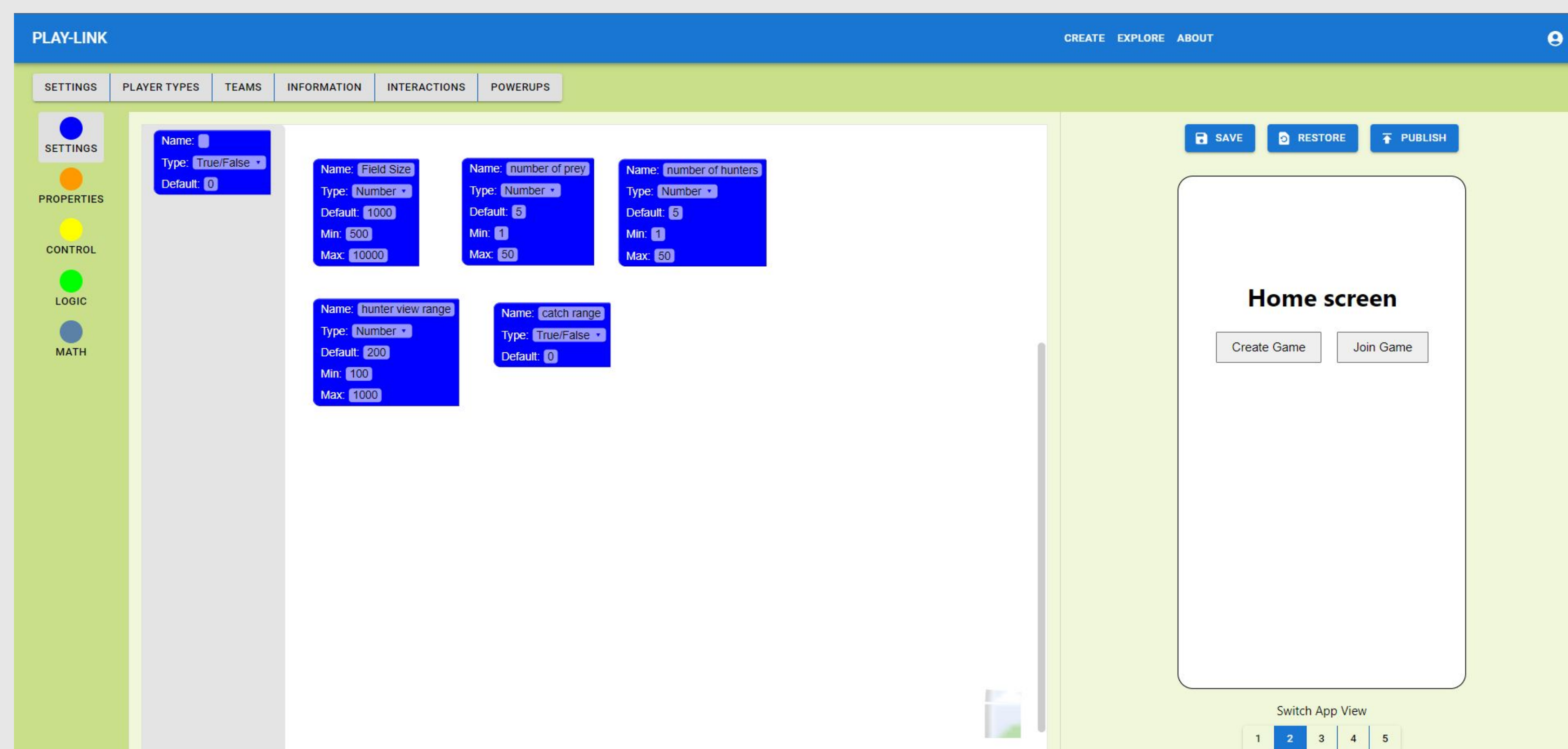
Settings: These are settings for the game that the host will be able to set before starting a game. This means the developer is choosing here how the players will be able to customise their game room.

Teams: These are the types of teams that will play the game. In Hunter-Prey this is a team of hunters and a team of prey. Many properties can be set here for more complex games.

Power ups: Finally the developer has to define the power ups that the game will have. A power up is tied to a player type. In Hunter-Prey we made the "Hawk" power up for hunters, which increases the view range of the player using it.

Player Types: Here the developer defines the different types players that will be in the game. In Hunter-Prey for example, these are, as the name implies, the hunters and prey. Many properties can be set here for more complex games.

Information: Here developers can define what information players of a player type will get about players of another player type. This means for example how often they get the location.

Interactions: In this tab developers define how players of a player type can interact with players of another player type. In Hunter-Prey, we define the "catch" interaction between a hunter and a prey.

Sources:
[1]: https://www.vlaanderen.be/statistiek-vlaanderen/media-en-mediagebruik/mediabezit
[2]: https://www.apenstaartjaren.be/vorige-edities-0
[3]: https://k-s.be/spelen-en-vrije-tijd/spelen/het-grote-buitenspeelonderzoek/