

# Garden Planner Application

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## Design Process

We listed the main tasks into the following points:

- 1) Design the landing page (at least 2 user can join)
- 2) Calibrate 2 phones with the use of markers
- 3) After calibration place objects, scale and rotate them
- 4) Delete objects
- 5) View objects from different perspectives
- 6) Ground plane doesn't move even if the camera is moved to a different location

For the main menu we designed something simple and easy to understand, having only two input fields and two buttons. We decided to add a background image to make the application visually more appealing.

For the object selection part we decided on a preview-based view, where you can see a preview image for all the possible objects, making it easier to choose rather than just displaying some name for the objects in a list. We had to find some available models for the objects.

## How to Install

You can install the application on your Android phone by installing the garden\_planner.apk file, just copy the file to your device and follow the instructions on the screen. Make sure that the device supports ARCore. Minimum API level: Android 8.0 'Oreo' (API level 26).

## How to use

### Main menu

In the main menu you have to write your name and the name of the room you want to create, or join to. If there's an existing room with the given name, and you click on the join room button, you will enter the room. If there's no room with the given name, you get an error message asking you to type a valid name. Similarly, you can't create a room with an existing name.



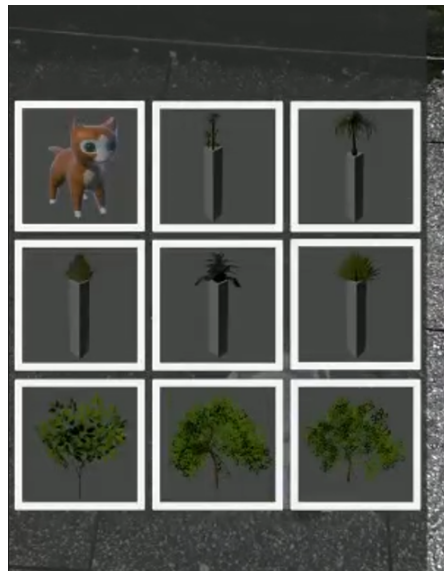
## Calibration

After you have entered a room, you have to calibrate with the marker.



## Selecting objects

After calibration you can see the objects that were placed in the garden by other users, and you can place more objects yourself. You can select an object from the list of available objects. Currently we have 8 kinds of plants and a cat, but we are planning to add more plants, some garden furniture and other garden objects like fountains, small lakes and sculptures.

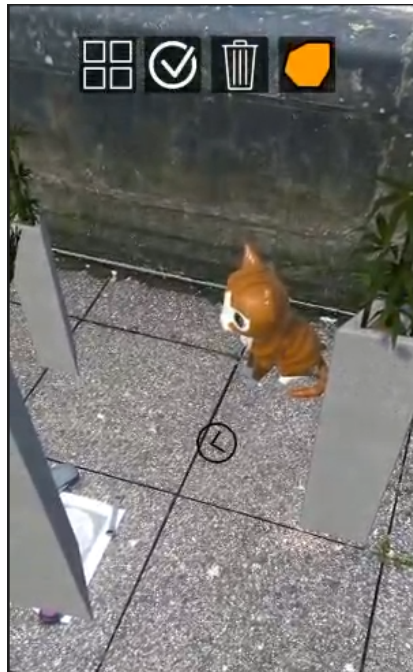


## Rotate / scale objects

After placing an object you can rotate or scale it any time.

## Delete objects

You can also delete objects regardless of who placed it in the garden.



## Testing

We tested the application in both one-player and multiplayer mode.

## Video Demo

We recorded some videos and edited them to create a demo for the application. In this we show how to create a room, place objects, how to join an existing room, etc.