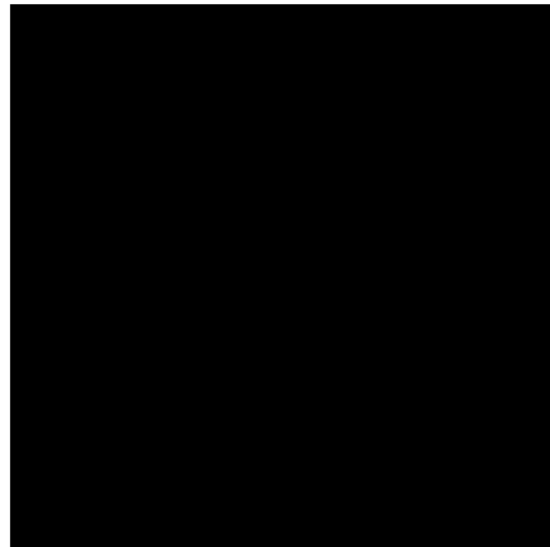# Assignment 4

I have implemented square pyramid, disk, cone, cylinder, sphere, rectangle and cube. The different objects I have are in the "src/objects/" folder.

On the index page of the application, you can see a black canvas with some fields below it, as well as a drop-down menu containing all the different shapes you can make.

Position: 0 0 0
Scale: 0.1 0.1 0.1
Radius: 0.1 (For disk:)
Rotation along z-axis (in deg): 0.0
Shape: Quad

ADD

Quad
Cube
Square Pyramid
Disk
Cone
Cylinder
Sphere

Position: 0 0 0
Scale: 0.1 0.1 0.1
Radius: 0.1 (For disk:)
Rotation along z-axis (in deg): 0.0
Shape: Quad
ADD REMOVE

GameObjects
RESET

If I create a cube with the size of 0.1 this is what gets displayed. When I select this cube in the list of different objects, I have implemented a range of different actions. If it is desired to scale the figure up or down, you can select the object you want to scale and press "s" to scale up and "d" to scale down. I've also implemented change in the translation, this is done by the arrow keys, and "w" and "x" for forwards or backwards in the z- direction. Last thing you can do to one or multiple of the objects is rotate them around the x-axis, this is done by selecting them and pressing "e" and "r". I have also a reset button which resets all the selected objects back to the base scale and base position.
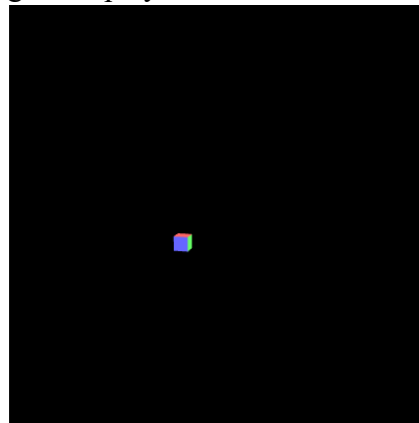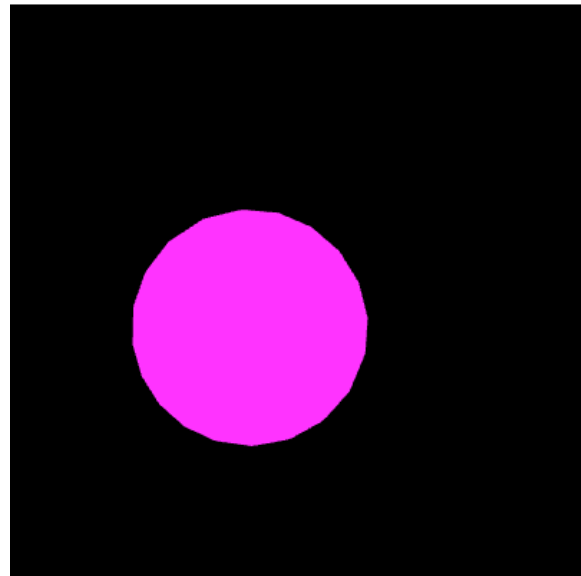
In the picture below I have created a sphere.
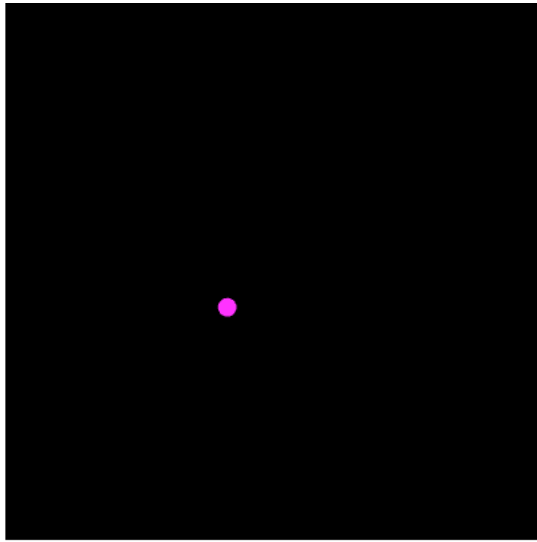
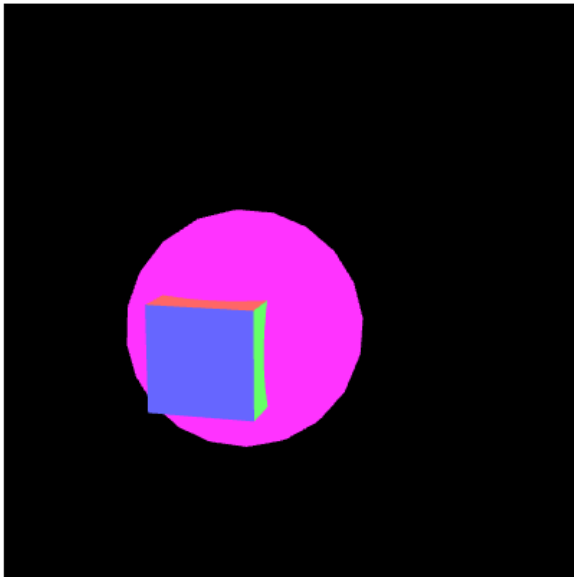This is the list with different objects that is made and where you can select the objects.

Rotation along z-axis (in deg): 0.0

Shape: Sphere ⌄

ADD | REMOVE
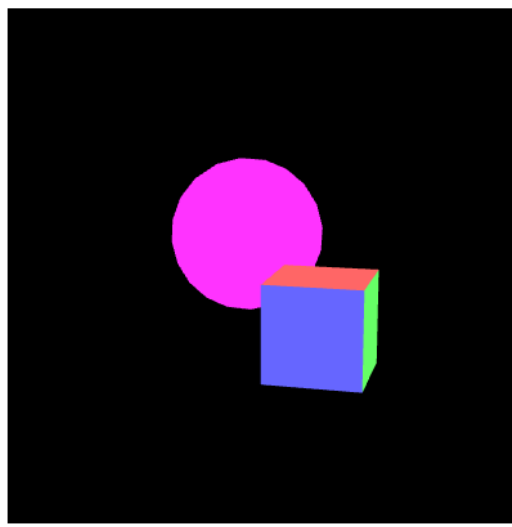
object_sphere1702574583223 ▲

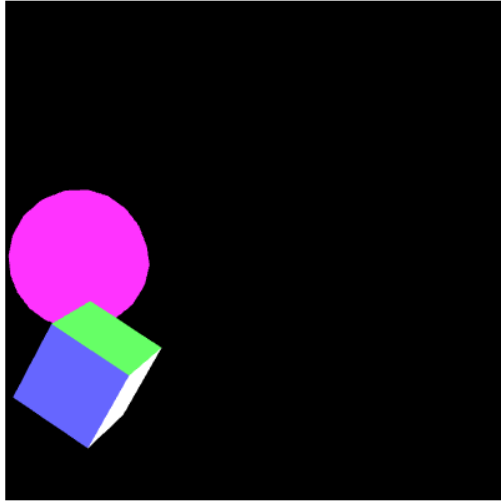However, this is a small circle, I hold down the "s" key to make it more visible.

Nice, let's also create a cube and scale it up a bit.

By selecting the sphere from the list, and pressing "arrow left", I move the sphere to the left and do the same to the cube but uses "arrow right". And then shift the sphere a bit backwards with the "x" button.

Now I can select both of the objects and move them around and rotate them a bit. This is done with selecting both of them and using the arrow keys and the "e" or "r" to rotate.

Now if I deside that I don't want this cube to be like this, I want it back to how it started, I can select the cube and press the button "RESET". This is how it would look.
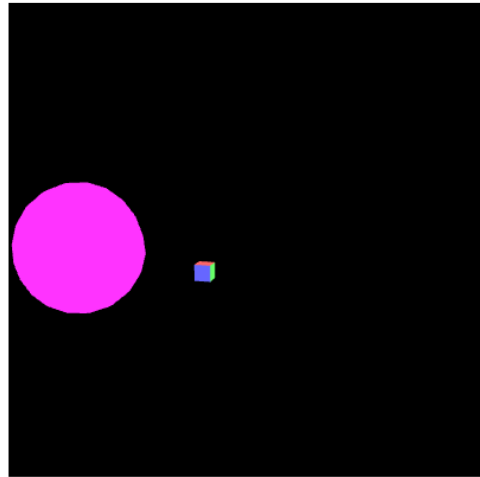
All these movements are achieved with a switch case in the main.js which determines which object to be interacted with and what interaction should be executed.

The add button and the remove button also works.

I have not implemented the option to select colors for the objects. However this is quit simple, and the only step needed is to pass the desired color into the shape, and use this color when pushing to the vertices. If I had more time I would have implemented this, and allowed the user to either pick colors from a predefermined list or have a color picker which allowed the user to create their own desired color.