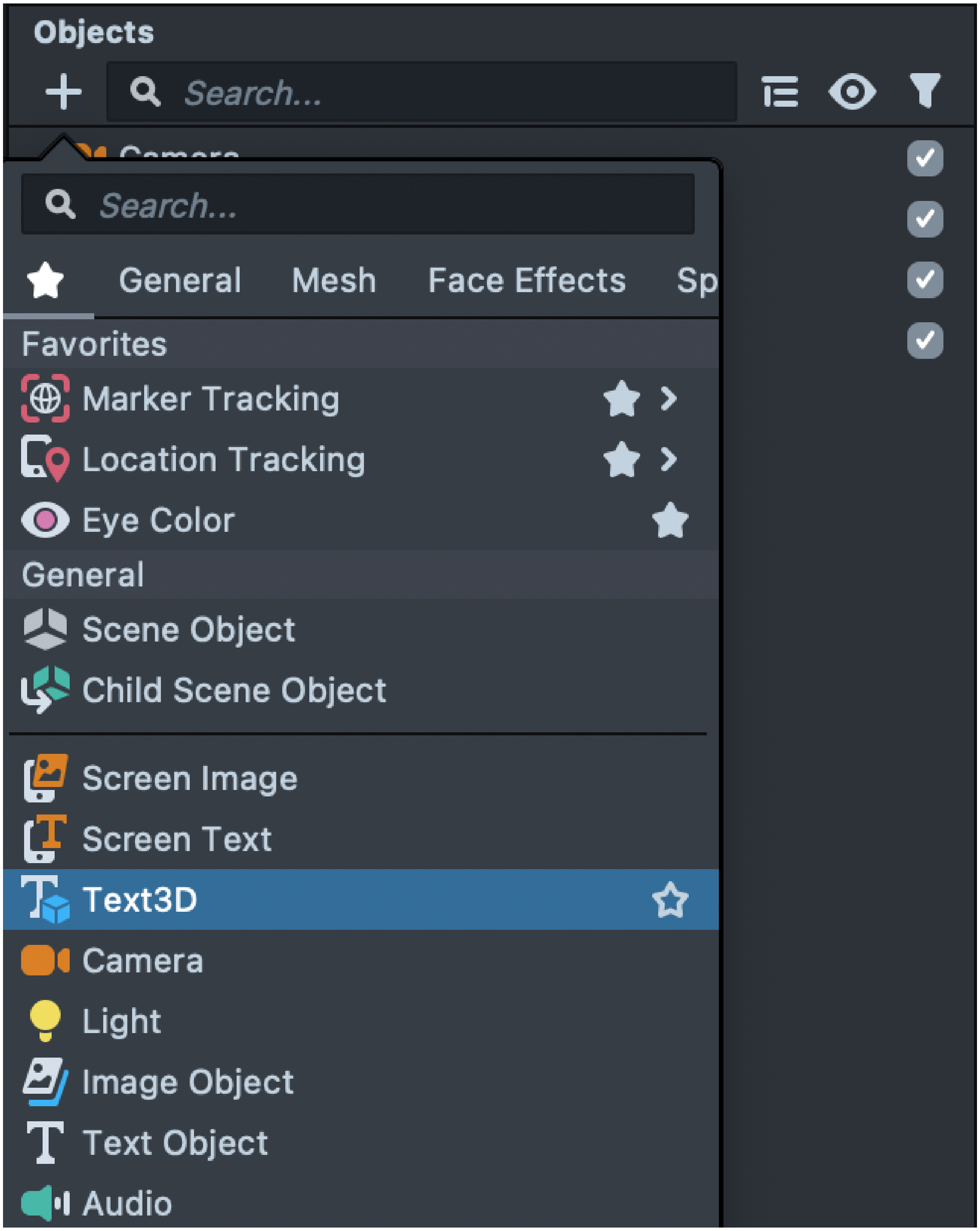
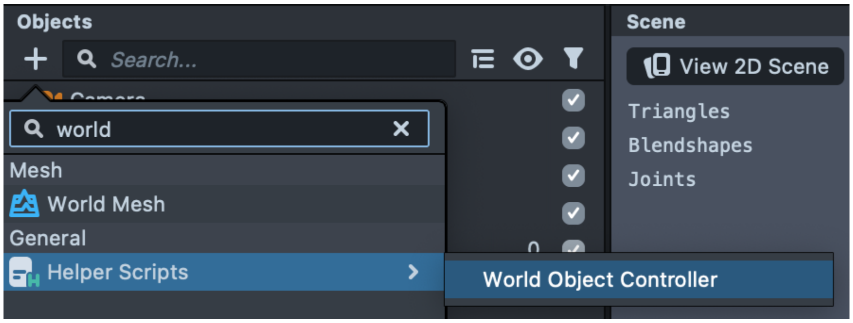
Calculating Distance in Lens Studio

Open a New Project in Lens Studio

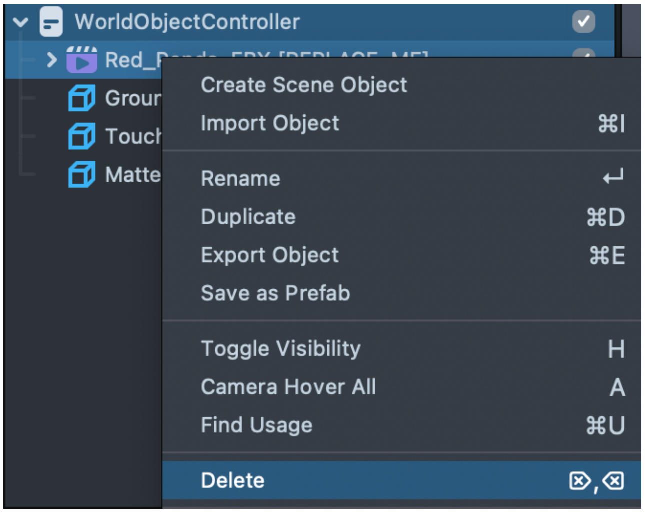
In the Objects panel, create a new *Text3D* component.



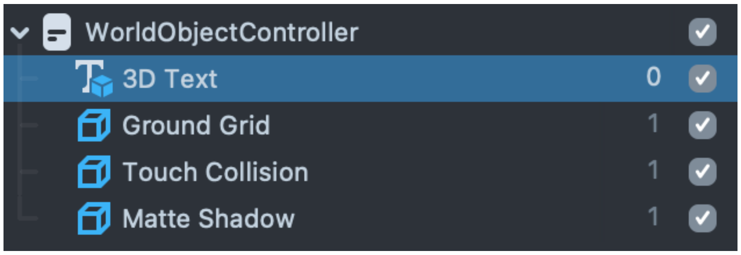
Also add a *World Object Controller* to the Objects panel.



Delete the example FBX file



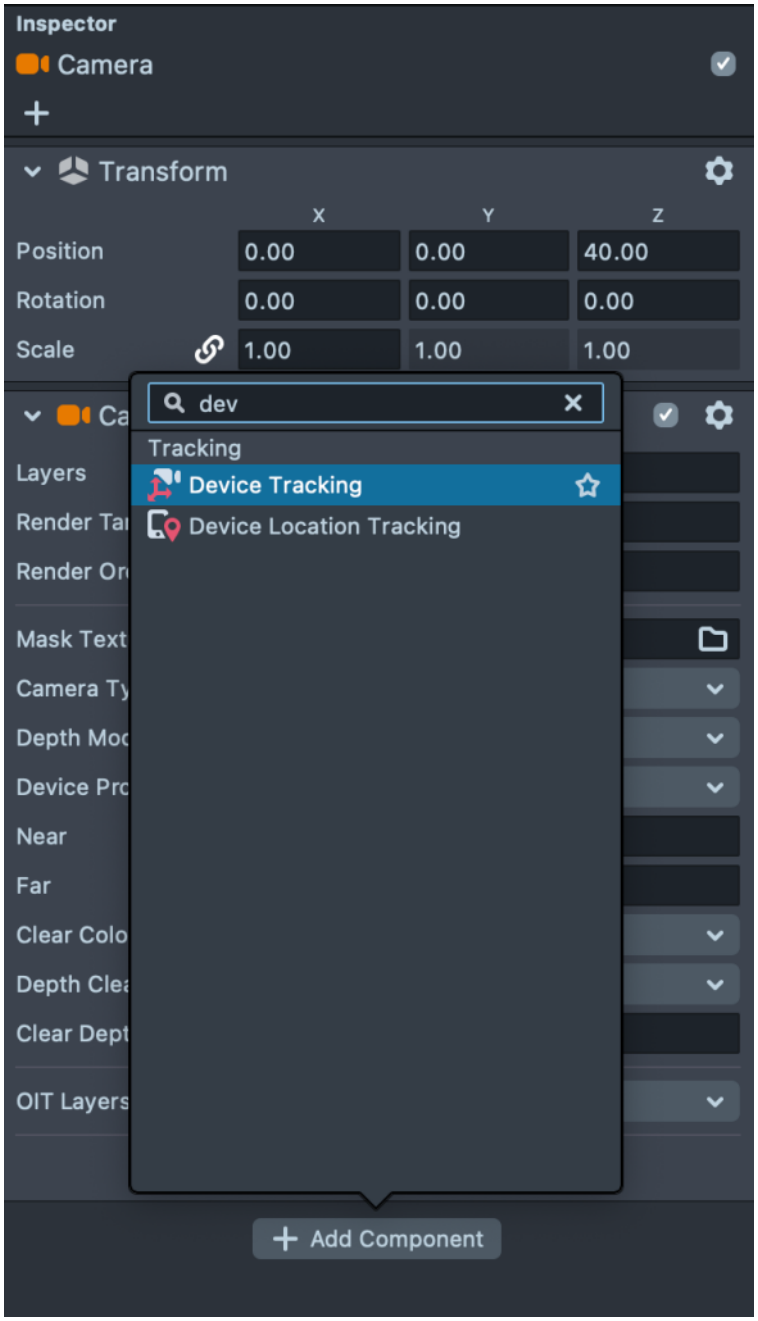
Replace the deleted resource with the 3D text component and drag it to the top of the World Object Controller’s hierarchy.



WorldObjectController ☑

- 3D Text 0 ☑
- Ground Grid 1 ☑
- Touch Collision 1 ☑
- Matte Shadow 1 ☑

Select the main Camera and in the Inspector, add a new Device Tracking Component

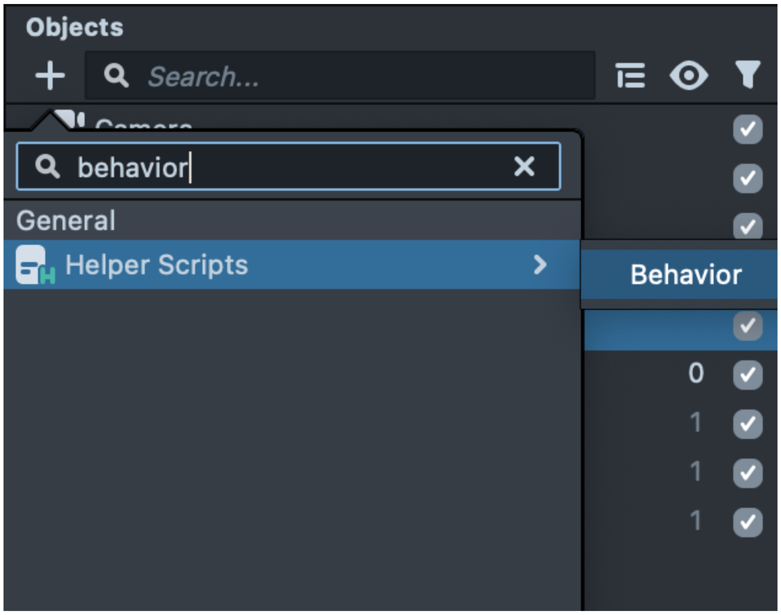


	X	Y	Z
Position	0.00	0.00	40.00
Rotation	0.00	0.00	0.00
Scale	1.00	1.00	1.00

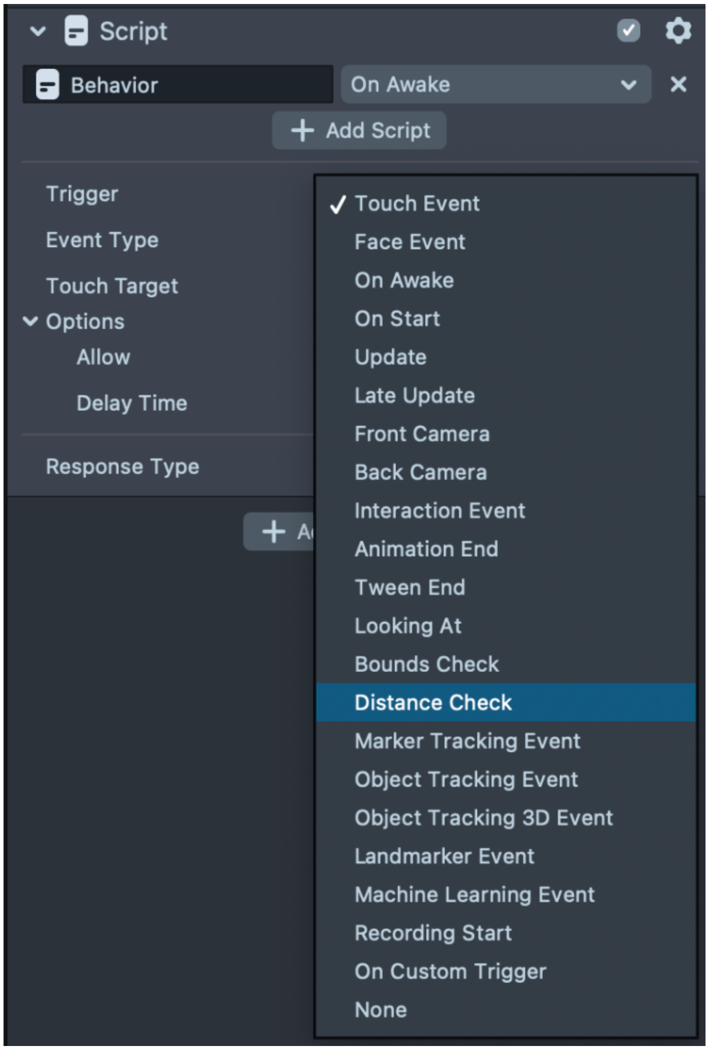
dev

Layers
Render Tar
Render Or
Mask Text
Camera Ty
Depth Moc
Device Prc
Near
Far
Clear Colo
Depth Clea
Clear Dept
OIT Layers

Select the *World Object Controller* in the Objects panel and add a new *Behavior* script. (this script should be a child of the *World Object Controller*)

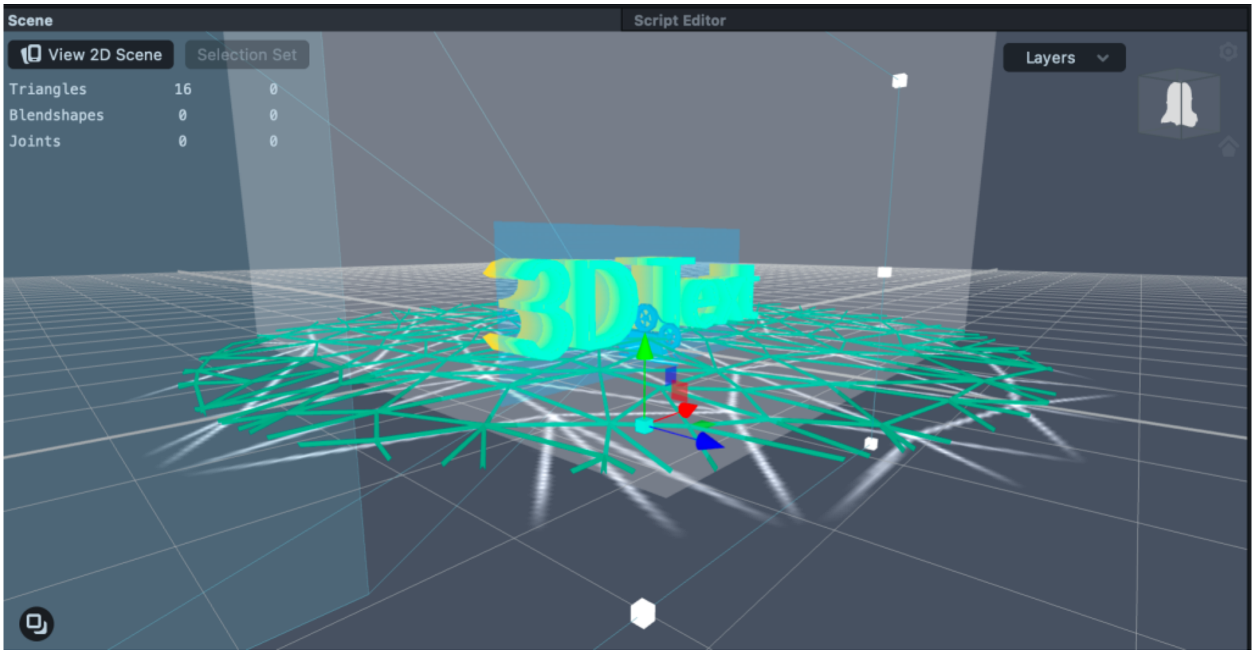


Select the newly created *Behavior* script and in the Inspector, switch the trigger to *Distance Check*



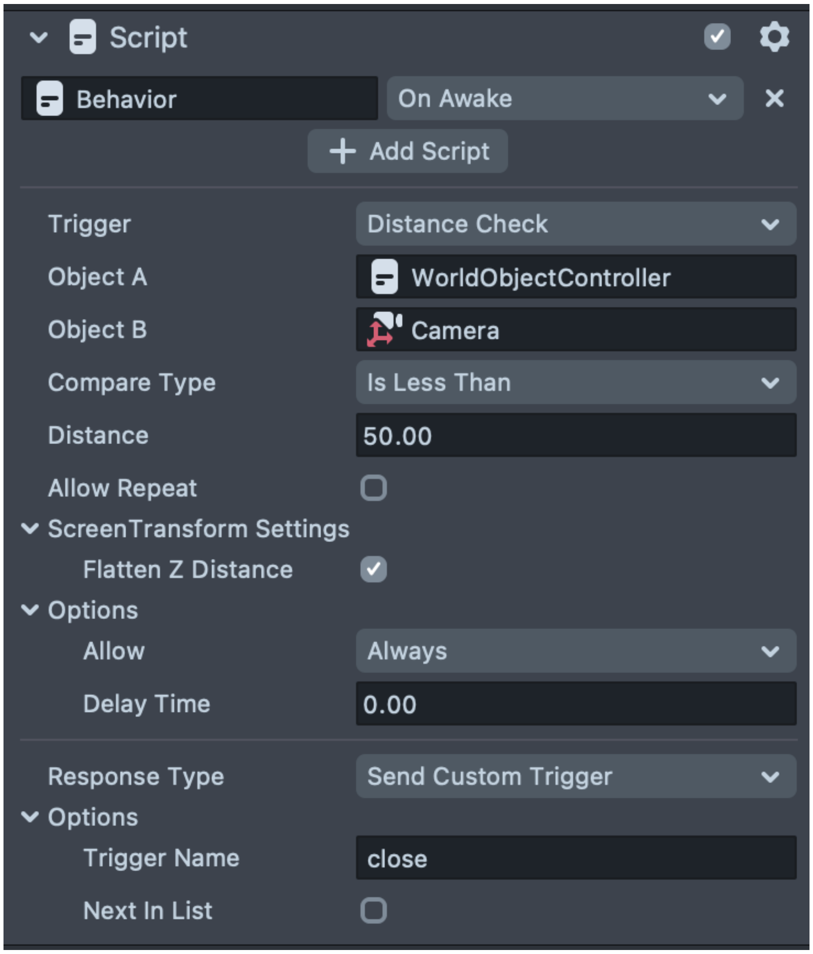
In the same window in the Inspector, set the *Object A* and *Object B* to the *World Object Controller* and the *Camera* with the *Device Camera Tracker* component.

Make sure the *3D Text* Component is resting comfortably on top of the green grid.



Set the Compare Type to *Is Less Than* and provide a unit of distance to compare.

Under the *Response Type* drop down box, select “*Send Custom Trigger”* and set the *Trigger Name* to “close”.



Script ☑

Behavior — On Awake

+ Add Script

Trigger: Distance Check

Object A: WorldObjectController

Object B: Camera

Compare Type: Is Less Than

Distance: 50.00

Allow Repeat: □

ScreenTransform Settings

Flatten Z Distance: ☑

Options

Allow: Always

Delay Time: 0.00

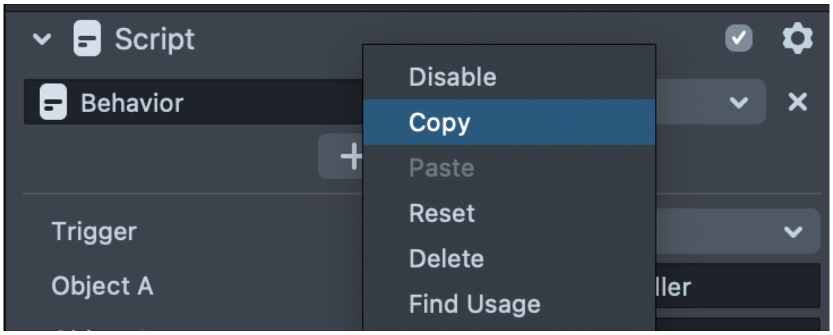
Response Type: Send Custom Trigger

Options

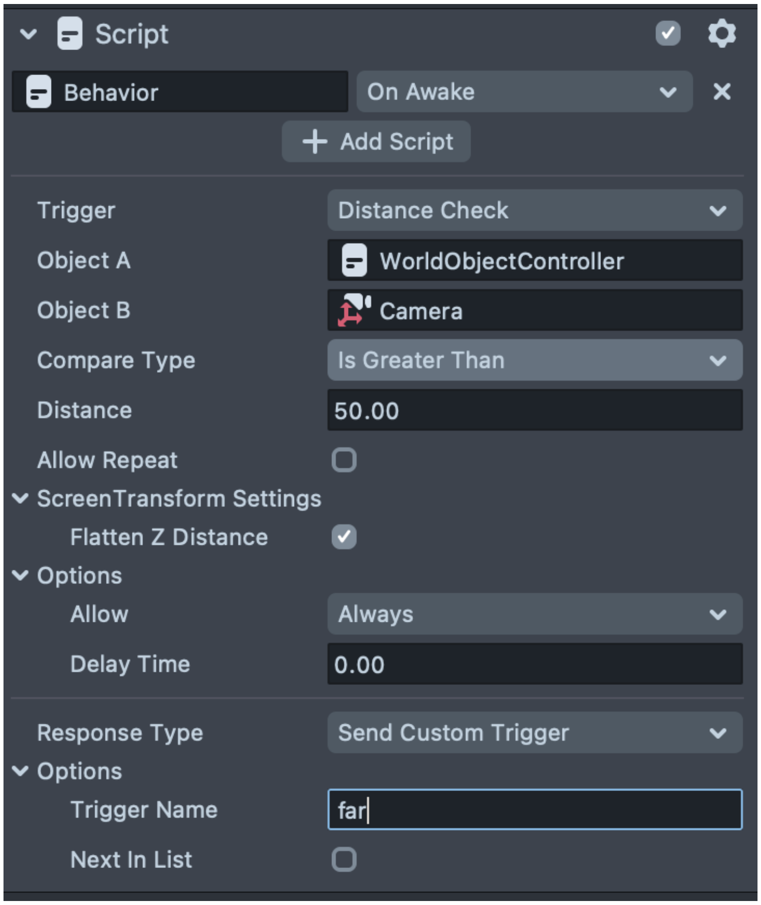
Trigger Name: close

Next In List: □

Then right click on the *Behavior* script component and copy the script.



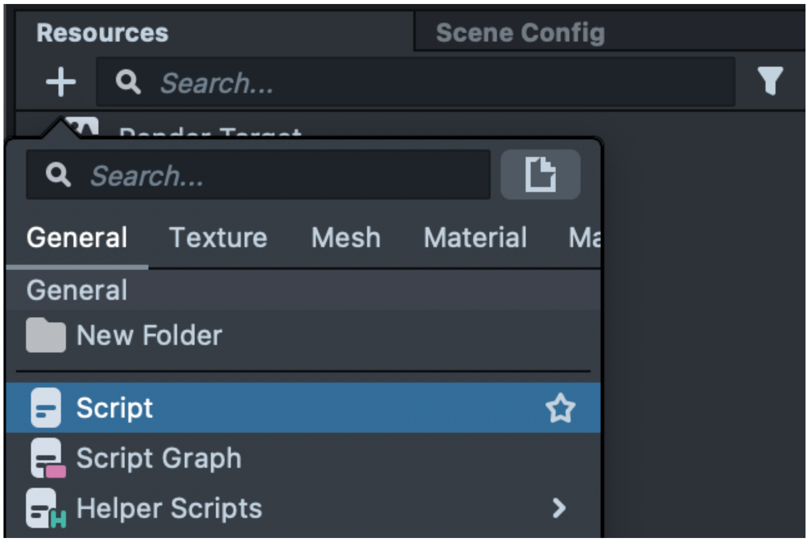
Paste the copied *Behavior* script below and set the Compare Type equal to *Is Greater Than* and rename the Trigger Name to *“far”*.



Script ☑

Behavior	On Awake
+ Add Script	
Trigger	Distance Check
Object A	WorldObjectController
Object B	Camera
Compare Type	Is Greater Than
Distance	50.00
Allow Repeat	☐
ScreenTransform Settings	
Flatten Z Distance	☑
Options	
Allow	Always
Delay Time	0.00
Response Type	Send Custom Trigger
Options	
Trigger Name	far
Next In List	☐

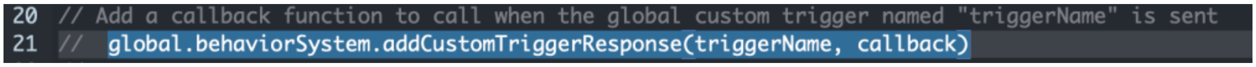
Now create a new *Script* in the Objects Panel and attach it to the *Behavior Script*, just below where our Distance Check *Behavior Scripts* are located.



Double click the newly created Script in the Resources window to open the Script Editor. Start by adding a new component input with the following code. This will allow you to drag in the 3D Text Scene Object to be changed within our script.

```
//-----JS CODE-----
//@input Component.text3D words
```

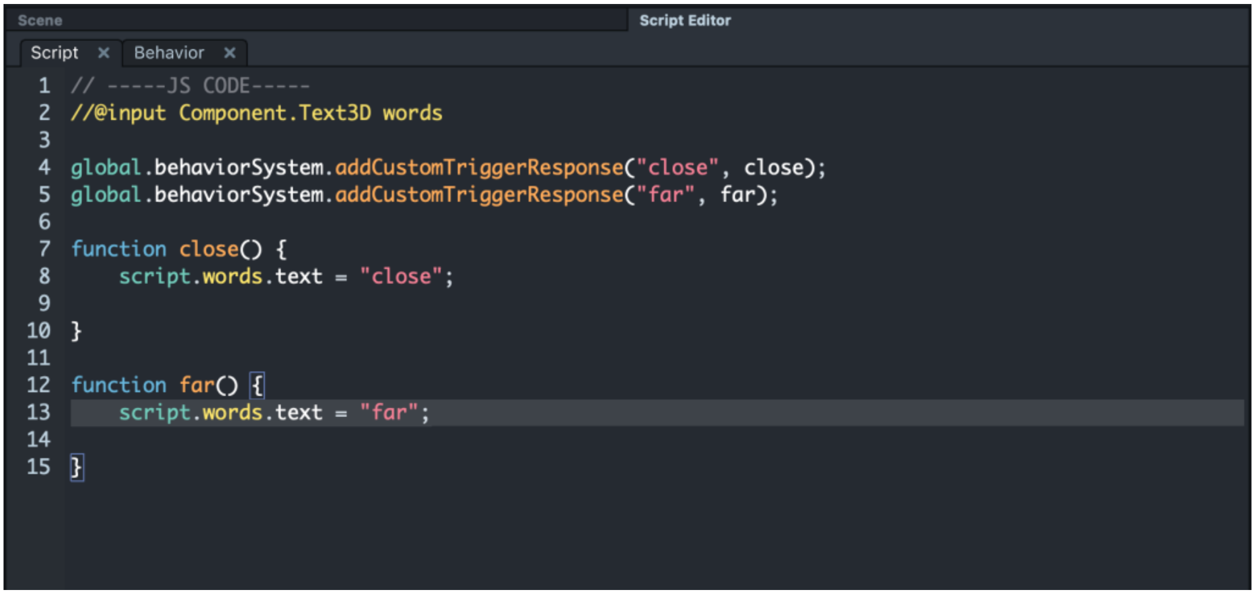
The method for calling custom triggers from the behavior script is found in the *Behavior Script*.



```
// Add a callback function to call when the global custom trigger named "triggerName" is sent
//  global.behaviorSystem.addCustomTriggerResponse(triggerName, callback)
```

Let’s import this into the script with the 3D Text component so we can make changes when either of the distance check conditions are triggered. This method looks for the custom trigger with the same name as the “triggerName” and runs the function callback when that trigger is active. As you are bringing in the distance check behavior scripts, make sure to match the triggerName to the trigger name from the *Behavior* scripts. This value is passed in as a “string”.

Then set up your callback functions in the same script. For simplicity, you can name your callback functions the same as your custom trigger names. Because we have the 3D Text component input, we can set the text for the 3D object with either of these functions that are called when the custom trigger is sent.



```
// -----JS CODE-----
//@input Component.Text3D words

global.behaviorSystem.addCustomTriggerResponse("close", close);
global.behaviorSystem.addCustomTriggerResponse("far", far);

function close() {
    script.words.text = "close";

}

function far() {
    script.words.text = "far";

}
```

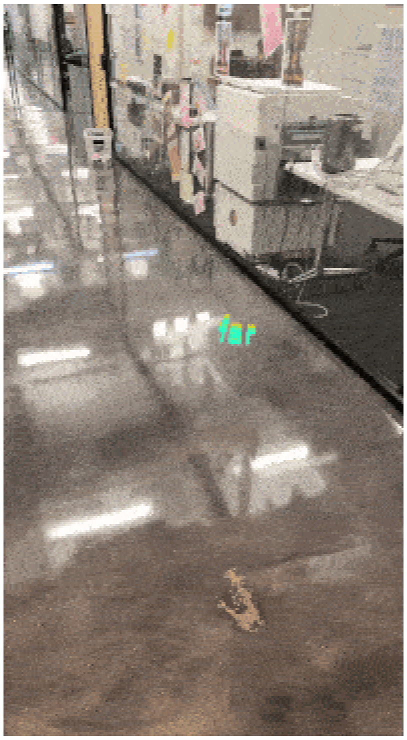
```
//@input Component.Text3D words

global.behaviorSystem.addCustomTriggerResponse("close",
close);

global.behaviorSystem.addCustomTriggerResponse("far",
far);


function close() {
    script.words.text = "close";
}

function far() {
    script.words.text = "far";
    }
```


far