Solar System Simulator

Tutorial *3*

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Project Setup

1. Download the assets (there will be 3 subfolders)
2. Start a new Unity project (name it Solar System Simulation)
3. Import the assets
    a. Edit, import new assets, one asset at time

    b. copy directly to project

Setting the scene

1. Create and positioning "Sun" P(0,0,0), R(0,0,0), S(1,1,1)
2. Create and positioning "Earth", P(2,0,0), R(0,0,0), S(0.5,0.5,0.5)
3. Create and positioning "Moon", P(1.5,0,0), R(0,0,0), S(0.1,0.1,0.1)
4. Camera, P(0,0,-3), R(0,0,0), S(1,1,1)

Adding Behaviors

1. First get our sun moving, attach Rotate around to sun speed 5, earth 10, and moon 15

2. add second rotation to the earth another component around the sun 40

3. make the moon child of the earth

Materials

1. create new material for the sun
2. duplicate the material for earth and replace it with earth
3. create new material for the moon
4. make the sun emitting light plying with emission set to 0.5
5. set a map for emission using venus map
6. add sky box, create new material space sky box of skybox type, choose shader the six sided sky box, apply space to each side
7. apply using lighting: window→Rendering→Lighting→Scene: replace the default

Lighting

1. change the Environment Lighting → Source → Solid Color
2. change the ambient color → white

3. change the ambient source to solid color (grey to white)
4. add point light as the sun look like bulb, name it sun light and drop it inside the sun
5. play with the sun light component
6. Play with the range the sun light but keep it white light

Audio

1. Add audio source to the sun
2. control the volume to 0.3
3. check loop in the audio
4. add audio source to the earth (dronhum)
5. have doubler effect, make it off
6. set the max and min (cut-off = 10m)
7. If you turn off the audio listener no audio sound

Cameras

1. look at the FOV how change the view
2. play with the clipping plane (far 20m)
3. create another camera (call it minimap camera)
4. Select the main camera and align view to selected
5. Select the mini camera and align to the view
6. turn off the audio listener. unity will through a warning.
7. change the view to orthographic, notice that the size of the object doesn't change
8. make the scene top down view
9. align the minimap camera to the view.
10. change the depth of the camera to show that they are overlaying
11. modify the view rect to 0.25, 0.25
12. modify the color in the minimap camera to solid blue
13. change the size of the minimap camera
14. look at target script attached to the main camera
15. change at target script will reset the view
16. attach the looAtTarget to the main camera
17. Attache ChangLookAtTarget to Sun, Earth, and Moon

Build

1. If you want to backup, you need to save all the folder
2. Temp is closed when closing unity
3. In the build, we need to include scenes, you can drag directly from the project
4. customize the building setting, resolution 800x600 and the template
5. create a Builds folder, then create folder for WebGL and then give name