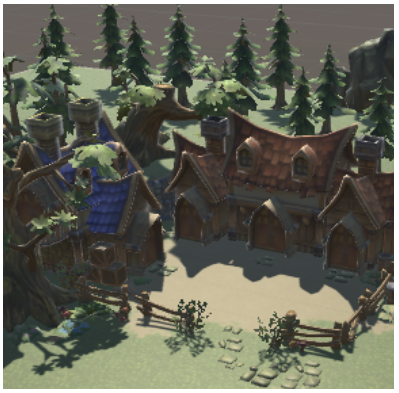
Exercises - Graphics

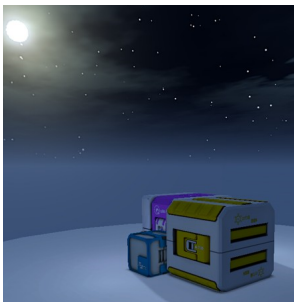
Exercise 1 - Setting up the Environment



Go to the course website and download the .unityasset for the exercises. This package contains the environment which you will be working with for all of the exercises.

Consider:

- *If you have another environment that you want to improve the graphics of instead (for example your project), you are welcome to do so. If you don't have an environment already, you can create one using Probuilder, Polybrush or Terrain.*
- *How do you access the rendering quality settings of your game?*



Exercise 2 - Night-Time!

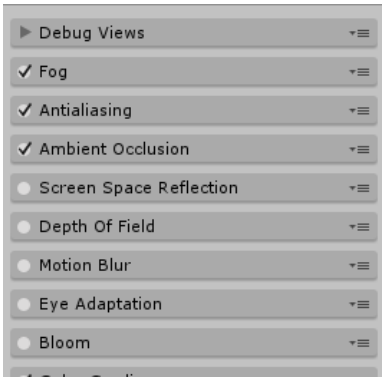
The game is going to take place at night. Find a suitable skybox and set up the ambient light + 1-2 directional lights, to give the scene a good atmosphere.

Also, use your artistic skills to find a good pose for the camera.

Consider:

- *Do you need to configure the materials of the environment? Maybe the smoothness or the Rendering Mode?*
- *Are your lights casting shadows?*

Exercise 3 - Post-Processing



Download the Post-Processing Stack with the Unity Package Manager and tweak the look of your rendered scene.

Consider:

- *What effects do you think contribute the most to your scene?*
- *Can you explain what each effect does?*
- *For a nice looking image, you might want to change from gamma to linear color space in project settings > player > other settings.*

Exercise 4 - Atmospheric Lighting

Set up local spotlights, point lights and emissive materials to add to the atmosphere of the game.

Consider:

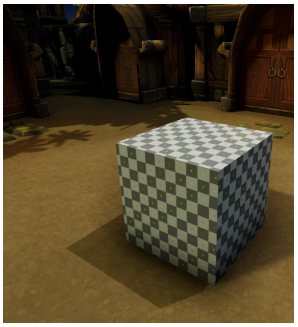
- *Is your scene using real time-, mixed- or baked lighting? What is the difference? How do you configure this?*
- *Can you create a window that emits light like in the picture?*
- *Are you using realtime global illumination? What is it?*
- *Is your environment marked as static? Why is this useful?*
- *What is the light explorer used for?*

Exercise 5 - Smoke From the Chimney!

Use the particle system to create smoke from the chimney, and introduce similar suitable particle effects in the environment (rain, fire, wind, fog, etc...)

Consider:

- *You can use the built-in default particle texture for this! Remember to use the correct type of shader for the material.*



Exercise 6 - Modelling

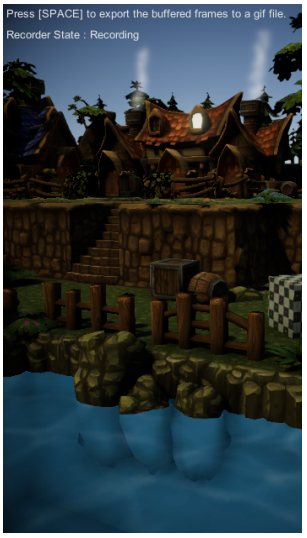
Create a simple 3D model using Probuilder. Get familiar with the workflow of using extrude and inset on the model faces.

Consider:

- *As an alternative, you can create your models in a software like Blender and import it into Unity.*
- *Feel free to import models to your scene from the asset store as well.*
- *Here is a quick overview of Probuilder features: https://unity.com/features/probuilder*

Exercise 7 - Improve and Share!

Use everything you have learned today to further improve the visual sensation of the scene. Take a screenshot or create a GIF of your environment and share it with the world!



Consider:

- *Remember to find a nice pose for the camera*
- *You could also toy around with optimizing the game for mobile (baking light, using mobile friendly shaders, etc.)*