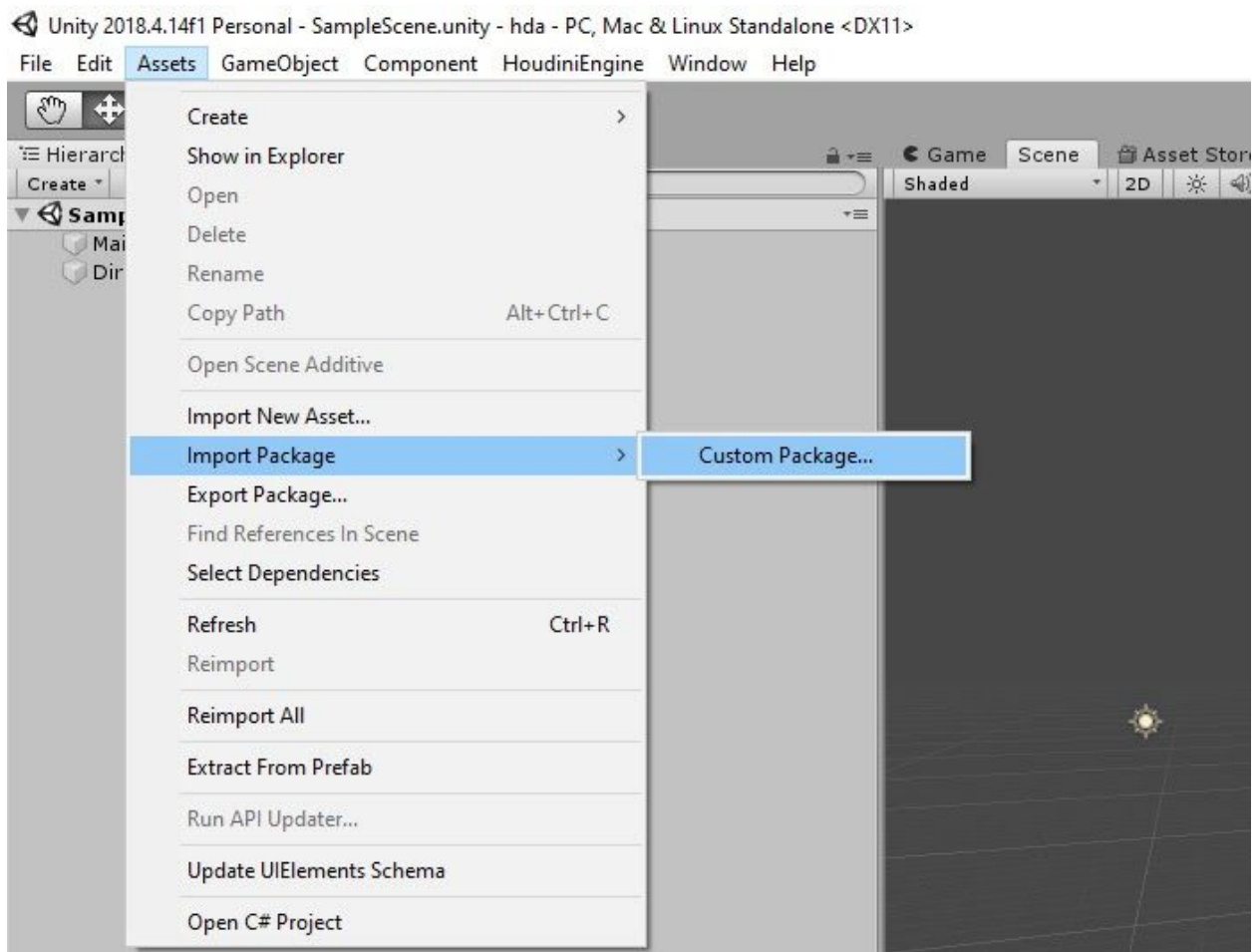# Sci-Fi Level Builder

Overview

Sci-Fi Level Builder is a set of modular models with customizable materials to build sci-fi corridors and rooms besides that this model pack contains houdini digital asset file, which will allow you to create sci-fi corridors and rooms with this pack in semi-automatical manner. The following tutorial will describe the steps required to setup this generator.

For video tutorial please go to: https://youtu.be/2QxMypHkHvU

If you will need additional support, please mail me: middle@mail.ru

Installation

1. This generator requires of Houdini Engine to be installed. You can get **FREE** licence to use Houdini Engine at: https://www.sidefx.com/products/houdini-engine/

2. After you install Houdini Engine you will need to load houdini plugin in your unity project. For this go to **Assets->Import Package->CustomPackage**

and navigate to the houdini installation folder ->engine->unity
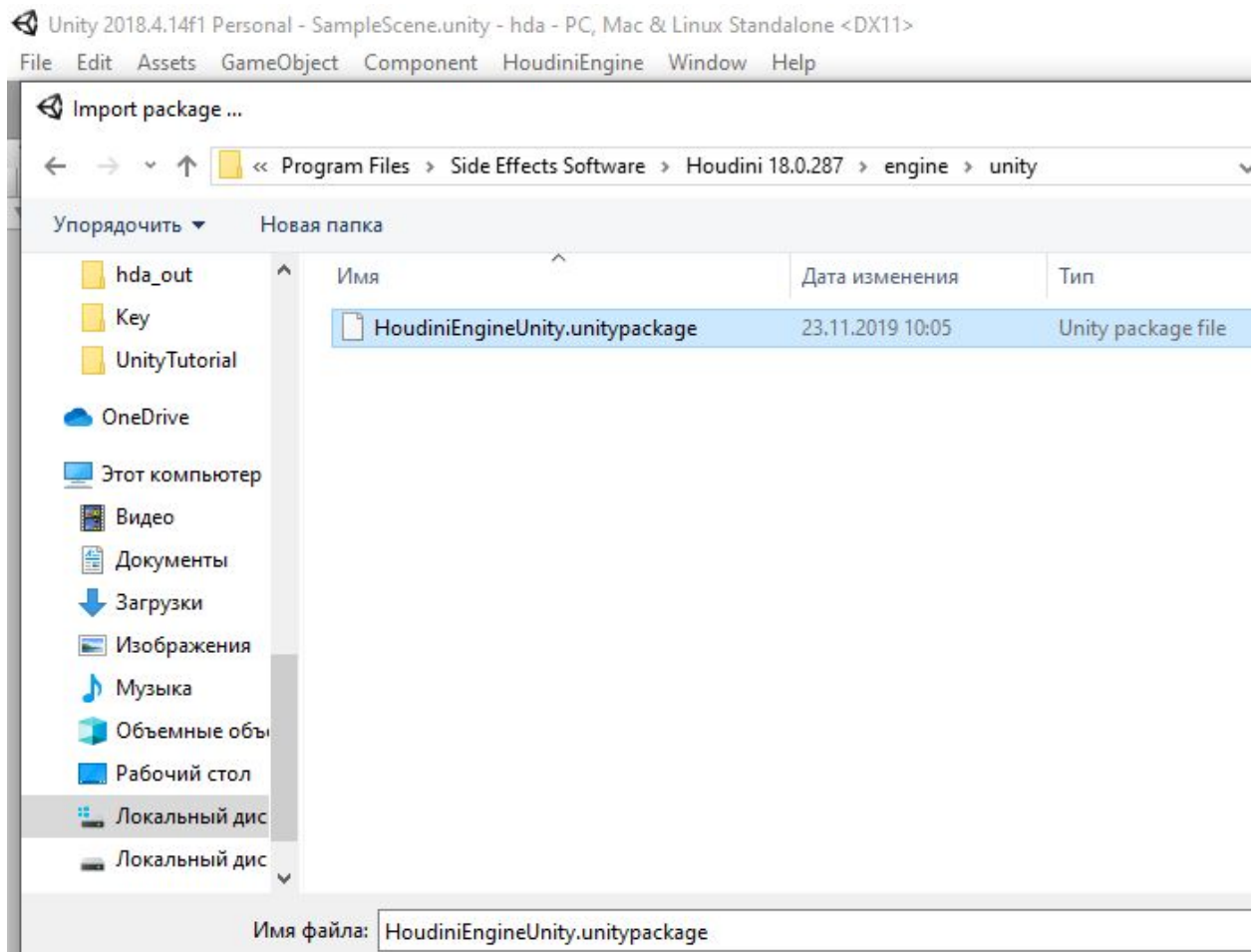
After you install HoudiniEngineUnity.unitypackage got to the **HoudiniEngine->Load HDA File**

And load hda file from
Assets/Sci-fi_Level_Builder/HDA/Mid_unity_corridor_generator.hda

After this you will see corridor generator settings in the inspector's view on the right side of the screen.

1. Creating Basic Shapes

Corridor generator uses curves as input to build level geometry. To create new curve go to **HoudiniEngine -> New Curve Asset** and draw curve inside unity scene view.
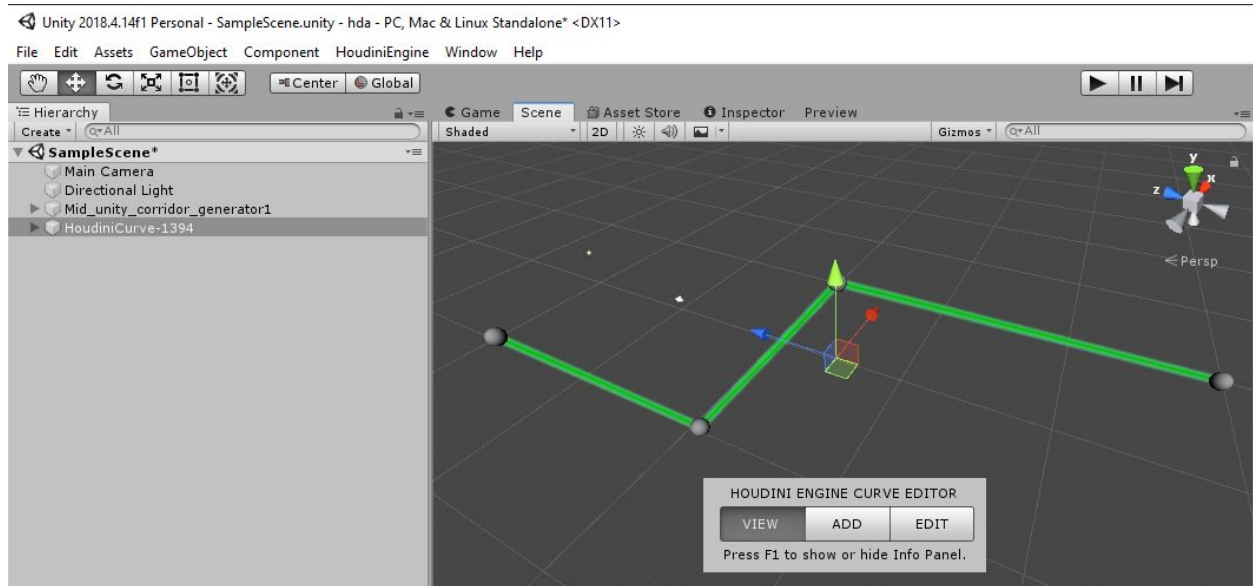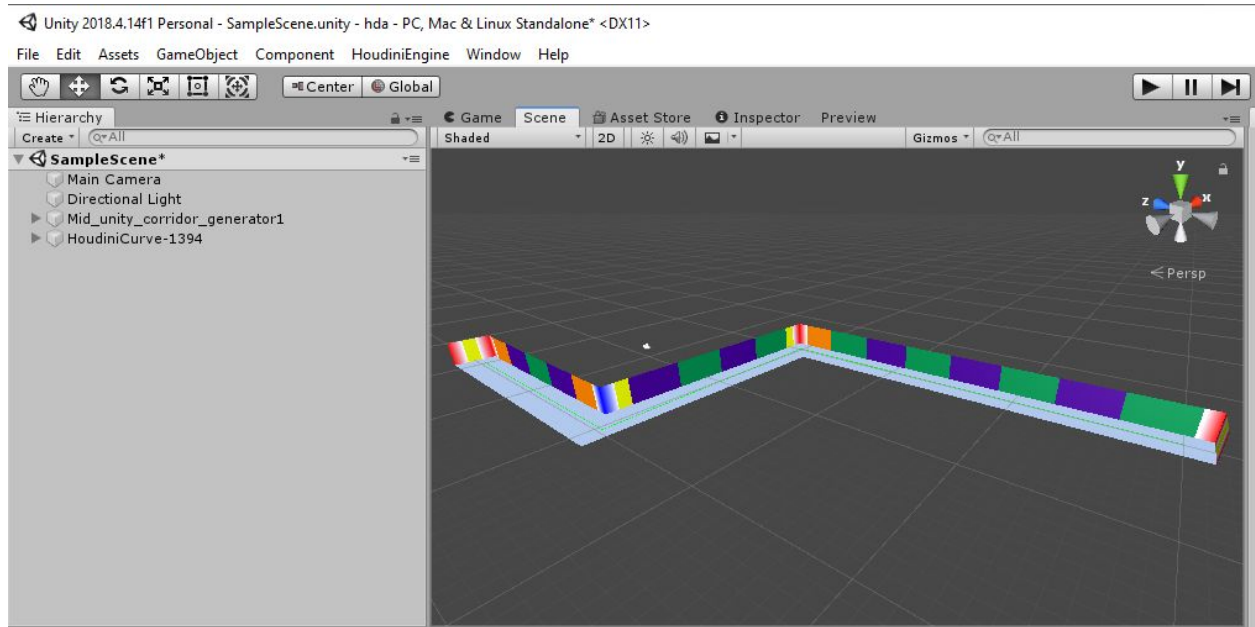

Then select **Mid_unity_corridor_generator** in the **Hierarchy** tab and in the inspector view

1. Change input type from **UNITY_MESH** to **HDA**
2. Press **Add Slot** button
3. Drag and drop curve asset from **Hierarchy** tab to **Input1** slot of corridor generator

4.
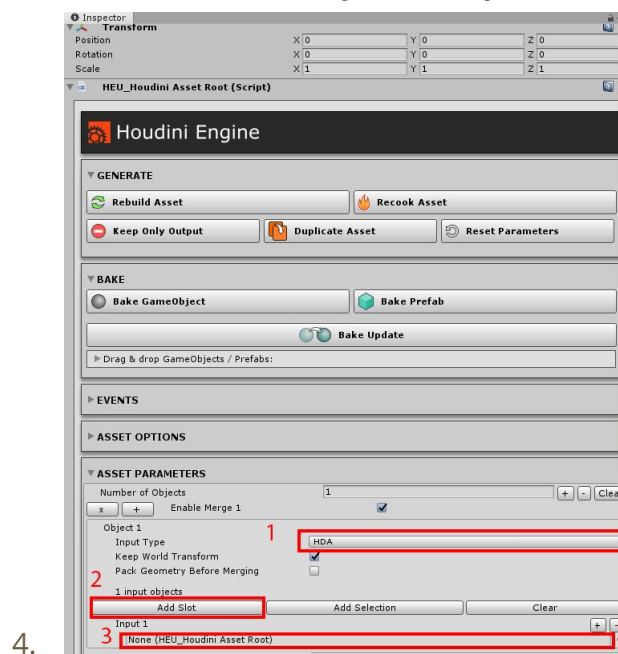
In the scene view you will see basic shapes of the generated corridor.

To create second corridor just create **New Curve Asset** from **HoudiniEngine** tab and place it perpendicular to the end point of the first corridor. Then select **mid_unity_corridor_generator** in the **Hierarchy** and in the **Inspector** tab drag and drop new curve to new slot of corridor generator.
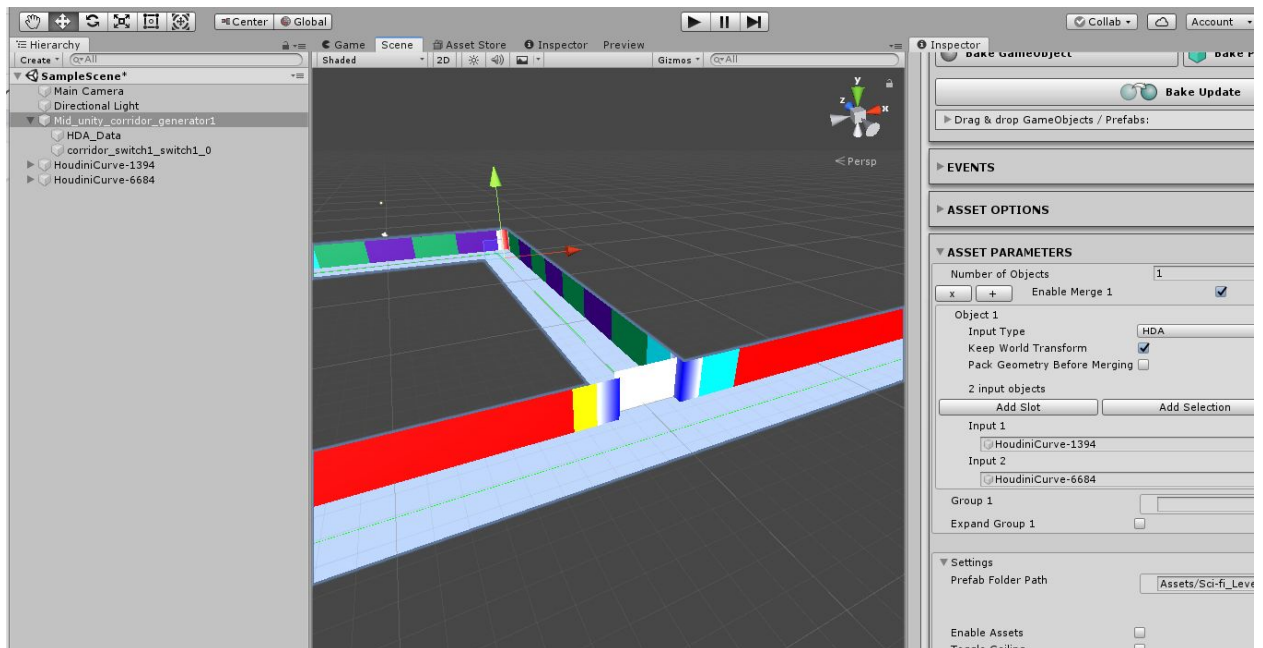
Generator will create door at the intersection point of two curves.

Corridor generator can also create rooms. To create room we will need to draw curve in zig-zag manner.
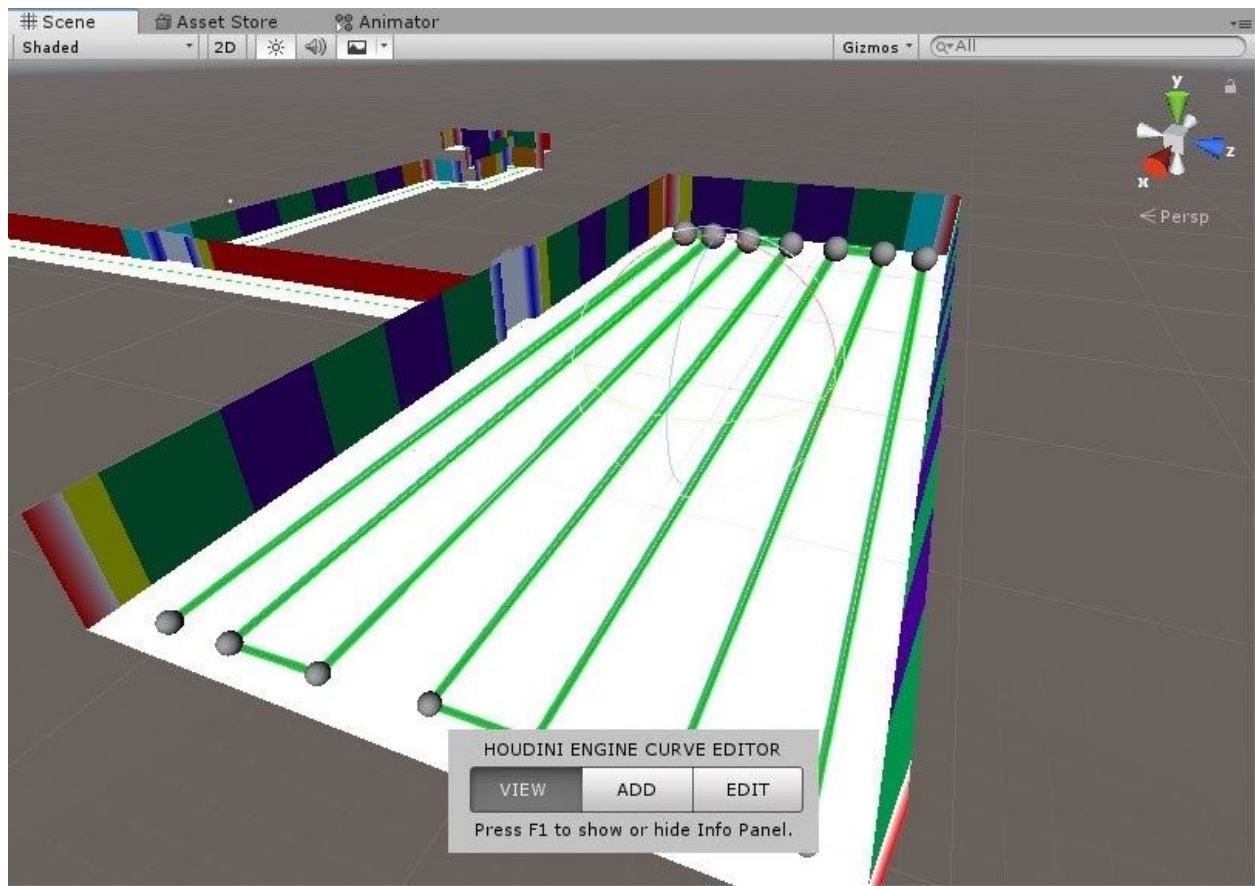
2. Enabling assets

To replace basic shapes with real geometry from this pack we need to go to the **Settings** tab of the generator. The folder path **(1)** is the path that generator will use to find all the prefabs. If the folder structure of your project is differ from this tutorial, just change the path to the prefab folder in section **(1)**.

To enable asset check **Enable Assets** checkbox. **(2)**
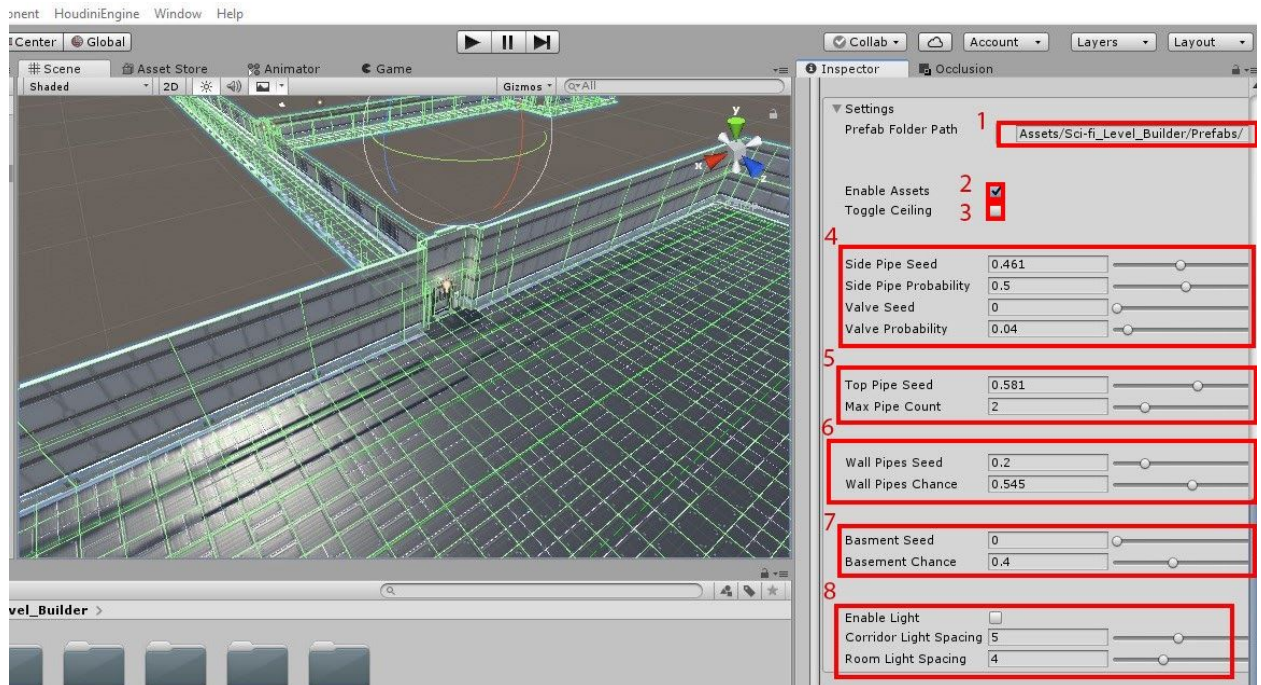
Generator will create instances of wall, floor and door prefabs and place them in proper locations. The ceiling is turned off by default, to simplify level creation process. To enable ceiling assets just enable checkbox **(3)**.

In the settings tab you can also control side ceilings pipes **(4)**, corridor top ceiling pipe chance **(5)**, chance of wall pipe assets **(6)** and chance of creating basement inside room **(7)**.
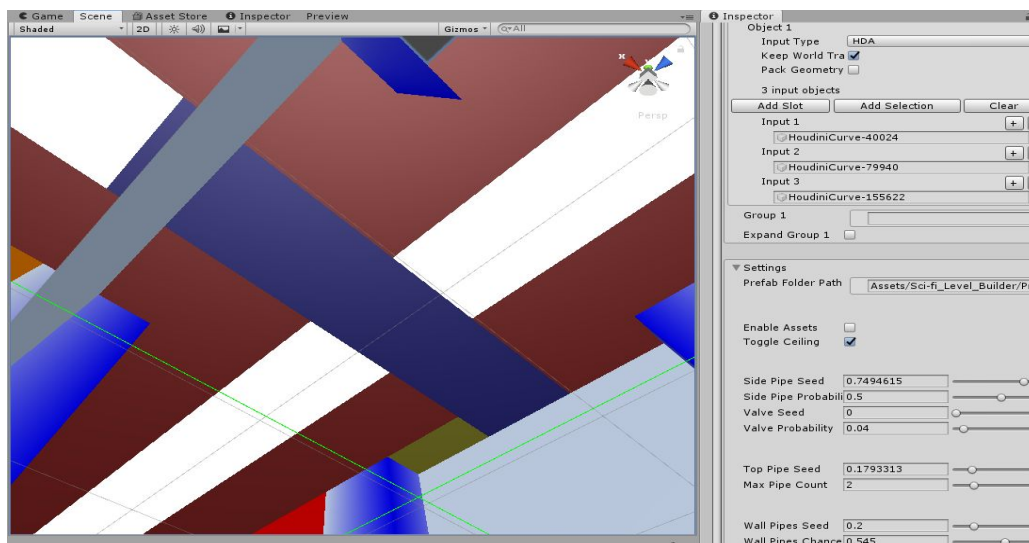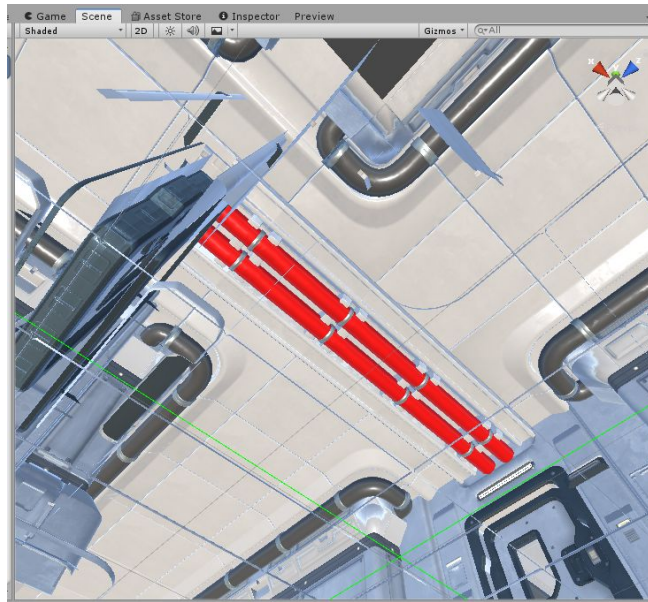
Side ceiling pipes:
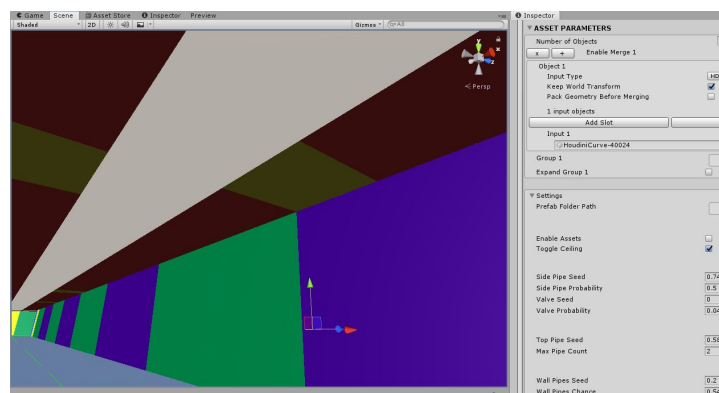
Side ceiling pipes are represented by brownish color on the basic geometry layer of the level. You can control chance of its creation with controls **(4).** Yellowish color represents places, where valves will be placed. If you enable assets **(2)** and switch on the ceiling **(3)** you will see pipes and valves along the walls.
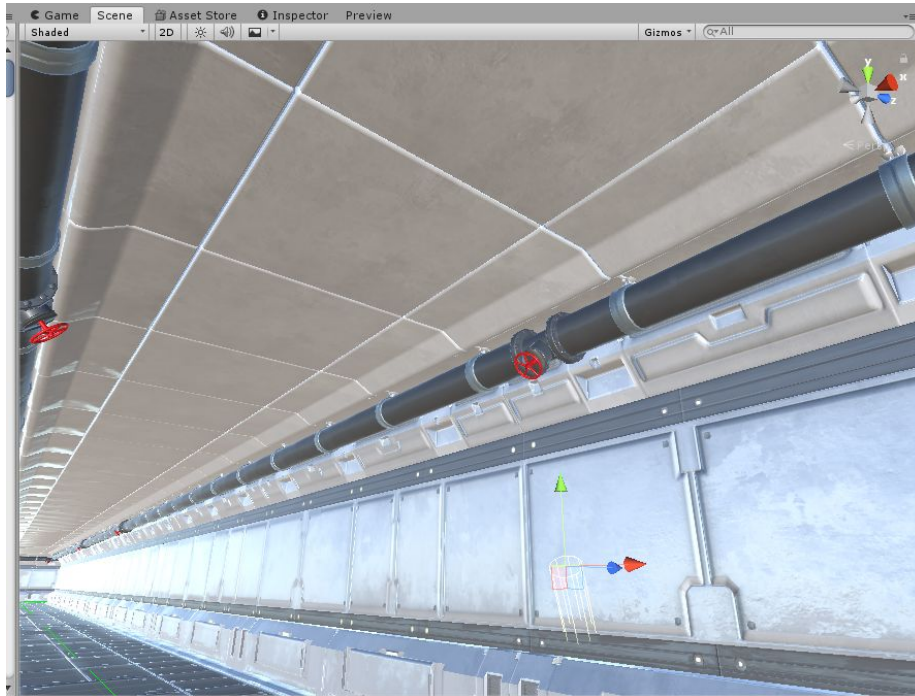
Top ceiling pipes:

Top ceiling pipes are represented by dark-blue color on the basic geometry layer of the level. This type of pipes appears rarely and you can control it's behaviour with controls **(5)**.
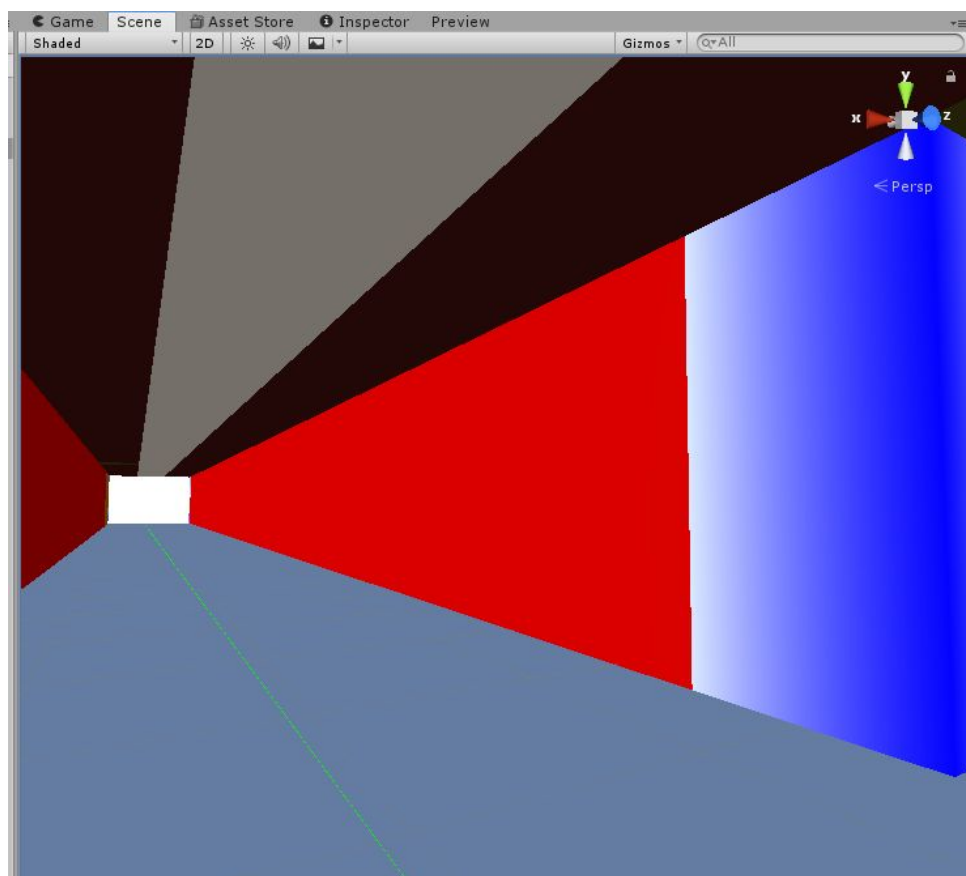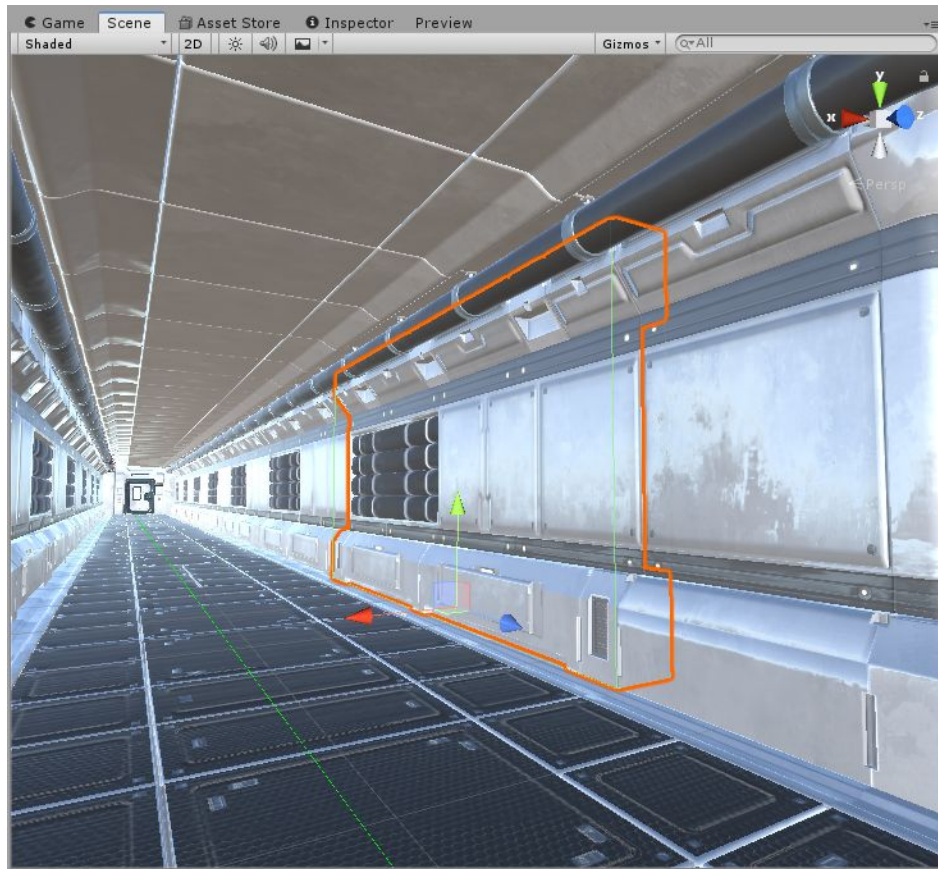
Top ceiling pipes are represented by dark-blue color on the basic geometry layer of the level. This type of pipes appears rarely and you can control it's behaviour with controls **(5)**.
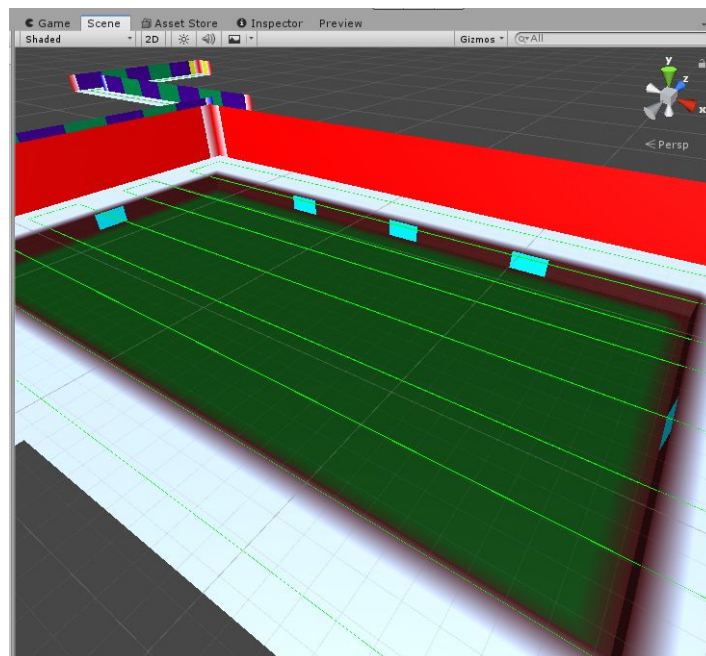
Wall Pipes:

Wall pipes are represented by red color on the basic shapes geometry layer of the level. You can control chance of this asset type with controls **(6).**

Basement:

Basement is represented by dark-green color on the basic geometry layer of the level. This type of geometry appears only in rooms if there enough place to generate such geometry.

You can control chance of basement appearance with controls **(7)** .
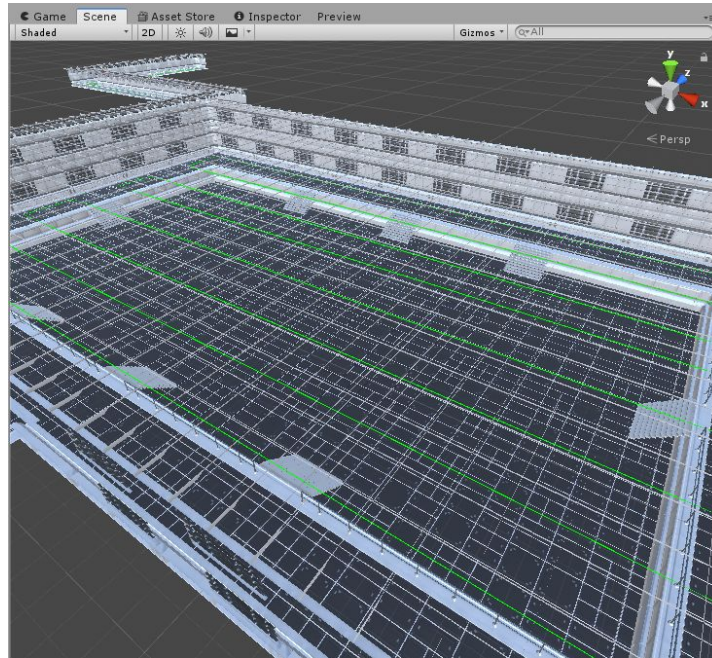
Lighting control:

You can control the lighting of the level with controls **(8).** Light spacing sliders controls how much spacing will be between nearest light sources. The smaller this value than smaller space between light sources will be. Most of the light sources will be **baked** lights and some of them will be **mixed**. Generator will try to distribute them evenly along level to keep quality/performance ratio at a sufficient level.

3. Baking corridor to Game Object

After all setup is done you can bake your level to game object. For this select **mid_uinity_generator** in the **hierarchy** tab and in the **inspector** tab choose **Bake Game Object (1).** Unity will bake all generated instances into new object **(2).**