

INSTITUTO TECNOLÓGICO DE ESTUDIOS SUPERIORES DE MONTERREY

ENDLANDS

OPEN SOURCE PROCEDURALLY GENERATED 2D ENVIRONMENTS

BY

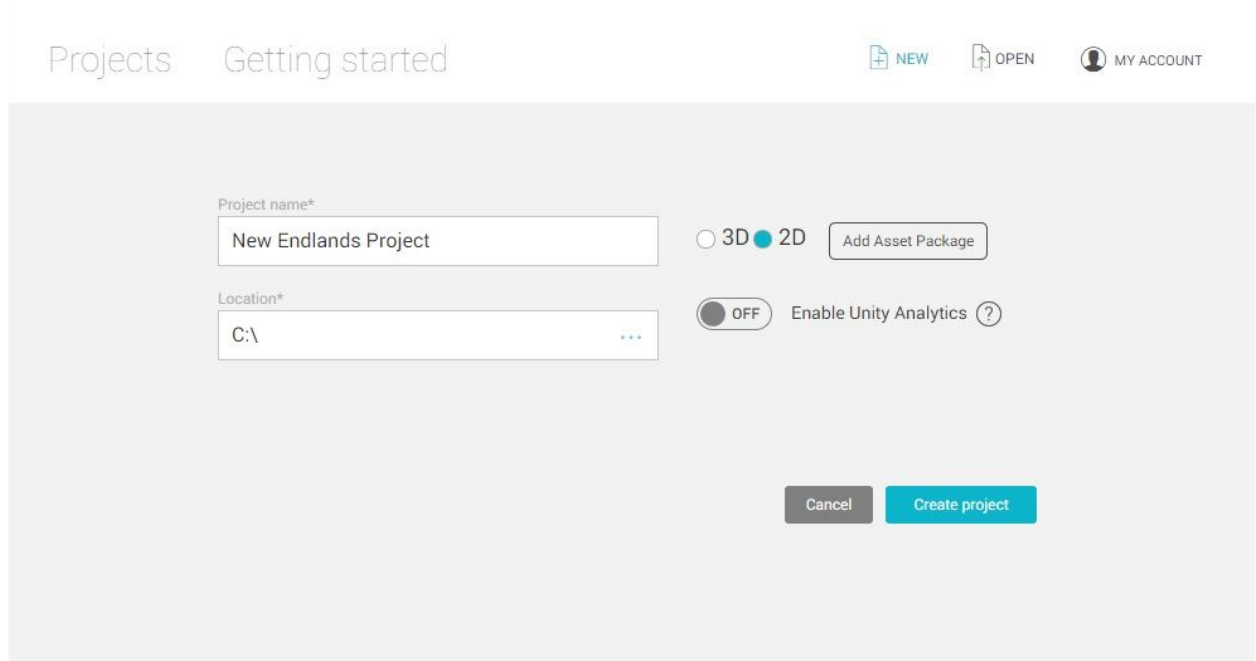
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USER GUIDE

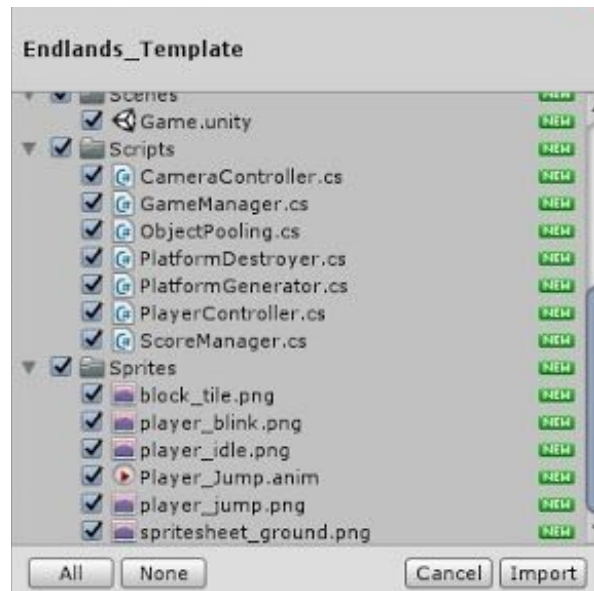
Before we start: For this guide it is assumed that you know your way in Unity engine. It is expected that you know beforehand how to create and handle gameobjects, assign scripts and components to game objects, hierarchy properties and possibilities and that you know how Unity Game Architecture Works. If you do not possess this knowledge yet, I highly recommend you to learn Unity Basics before using EndLands in your project.

Installing EndLands in your Project

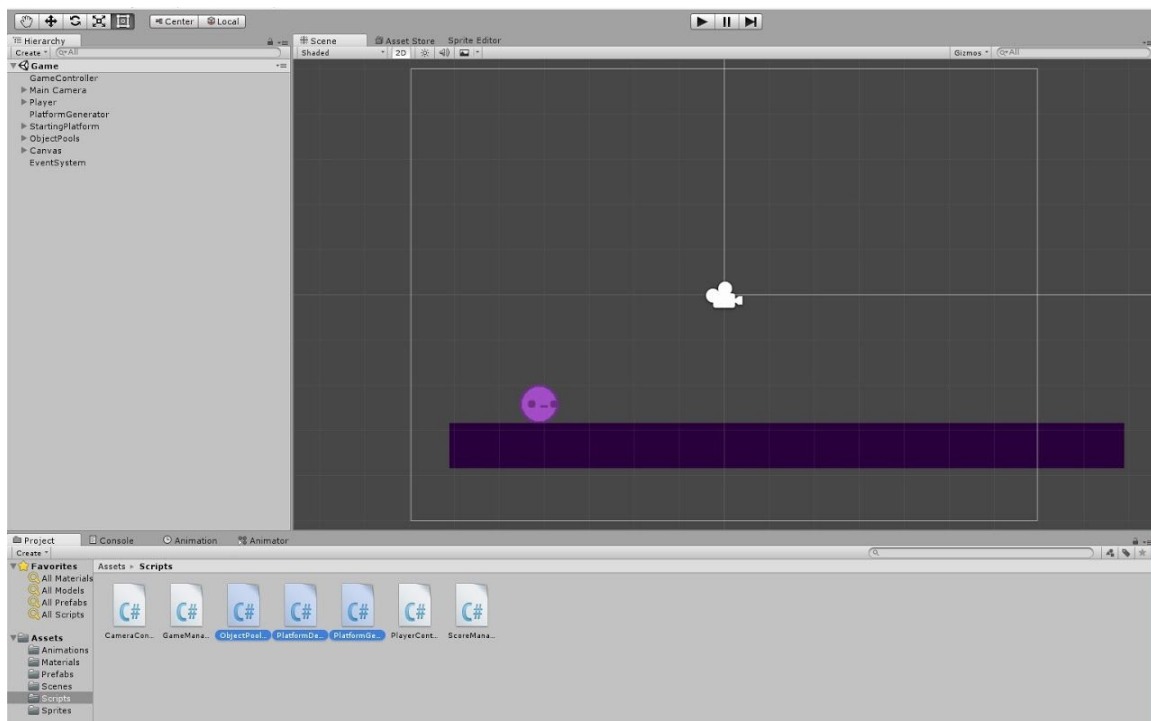
1. Download EndLands from <https://github.com/LordOfVultures/EndLands>
2. Create a new Unity Project.
 - a. Specify 2D libraries.



3. In Unity GUI, search for EndLands template to import.
 - a. Assets > Import Package > Custom Package > [Path to template].
 - b. Make sure all files are checked and click "Import".



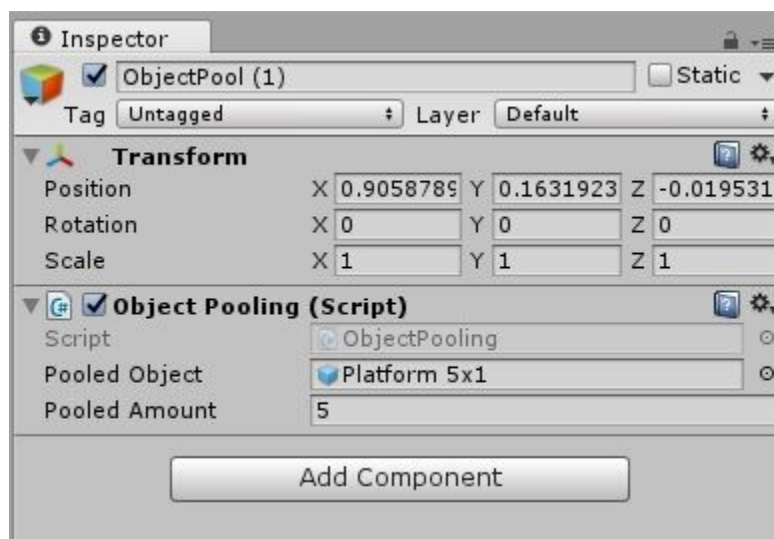
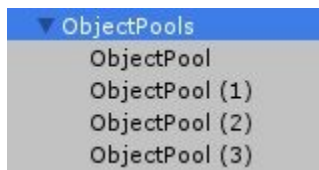
1. Now you have a nice starting point for the usage of endlands infinite game template. Here you are free to change sprites, code your own player controller or create your own platforms. Make your own rules!
 - a. Make sure you do not edit the following files contained in the Scripts folder: ObjectPooling.cs, PlatformGenerator.cs, PlatformDestroyer.cs



1. There are three main GameObjects that handle the logic behind end lands:
 - a. Game Controller: This has attached the game manager script. This script will call the Platform Generator script. It uses the script to identify the

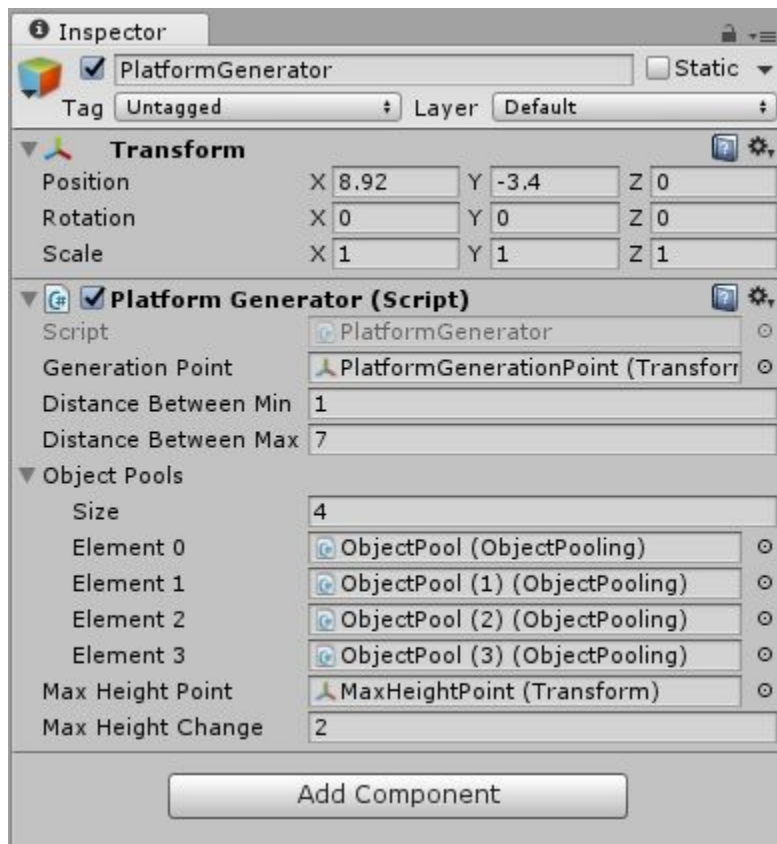
starting position of the other game objects. It handles the start of the level and nothing else. You do not need to modify this file.

- b. Object Pools: This game object contains pools for the game objects you wish to use as platforms. There must be ONE pool for each type of platform you wish to add.
- c. Each object pool has attached an ObjectPooling.cs script. By clicking on the Object Pool you wish to set, you can now specify the prefab the script should pool and the amount objects the pool can handle.



1. PlatformGenerator: This Game Object has attached the Platform Generation Script and has several parameters to setup:
 - a. GenerationPoint: requires a GameObject. This new GameObject called PlatformGenerationPoint (found as a child of the main camera) specifies the exact point where new platforms will be generated.
 - b. Distance Between Min and Max: Specifies the maximum and minimum distance between platforms. This parameters should be adjusted based on the distance your player is able to jump.
 - c. ObjectPools: an array of pools of game objects. This are the platform pools you can find as PlatformPools > PlatformPool in the hierarchy. When you add a new pool to the hierarchy, you must manually set it in the PlatformGeneration Script.

- d. MaxHeightPoint: requires a GameObject. This new GameObject called MaxHeightPoint (found as a child of the main camera) provides the maximum height any platform can reach without getting out of the field of view.
- e. MaxHeightChange: this value specifies the maximum height change the PlatformGenerationPoint game object can have. This ensures that no platform is unreachable for the player. This must be adjusted based on the player's capacity to jump.



And that's all the basics you need to know about endlands endless platform generation script system. Feel free you craft your own game from here.

If you find a bug or wish to expand Endlands possibilities, feel free to collaborate in the public repository found at: <https://github.com/LordOfVultures/EndLands>