Procedural Generation for Games Assignment #1: Basics of Generation

[Due 02/03/2020 before the start of class]

The goal of this assignment is to familiarize (or re-familiarize) you with the absolute basics of generating objects in Unity. To start, download the template project from this address: https://github.com/badtetris/ProcGenAssignment1

Open the project in Unity and complete the following tasks.

1. Open the scene named "Task1". This scene should be empty except for a Main Camera and an empty Game Object named "_Task1Generator" with a script named "Task1Generator.cs" attached to it. Your task is to **modify Task1Generator.cs** to do the following:

a. Spawn a player object (the prefab for the player is in the prefabs folder) somewhere in the scene.
b. Spawn a platform object for the player to land on and walk around on.

Note: Don't add any additional objects to the scene. You should be spawning your objects from code only.

[1 point]

2. Open the scene named "Task2". This scene should have a camera, an object named "_Task2Generator", an object named "Start", and an object name "End". Your task is to **modify Task2Generator.cs** to do the following:

a. Spawn a player object at the position of the object named "Start".
b. Have the Camera follow the player (there is a CameraFollow script attached to the camera already).
c. Spawn a goal object at the position of the object named "End".
d. Spawn a number of platforms allowing the player to move from the start to the end.

Note #1: Don't assume Start and End will always be in the same place (also, don't modify their position to make them more convenient)!
Note #2: You can modify the size of platforms after spawning them. If you do so, I recommend modifying the SpriteRenderer size property as this also affects the collider size.

[1 point]

3. Open the scene named "Task3". This scene should be completely empty. For the final two points, expand or mod the existing game in some way and save your mod to this scene. How you mod it is up to you, but your goal should be to make something neat. Here are some **suggestions**:

a. Add a new type of obstacle or powerup to the game and generate a level featuring this obstacle or powerup.
b. Make a new type of player who moves differently from the existing player (for instance, maybe this player is always falling and you have to press a key to reverse gravity). Generate a level to showcase this new movement style.
c. Randomly generate an *infinite* level for the existing game.

Note: Feel free to create as many new scripts, prefabs, or scenes as you want for this task, just make sure your mod can be *started* from the scene named "Task3" and that your modifications don't break your solutions to tasks 1 and 2.

[2 points]
[Total: 4 points]

Turning it in: To turn in the project, Zip up your Unity project and send it to me via the class Slack. To minimize the size of your zip file, you can delete every file folder in your project folder *except* for the "Assets", "ProjectSettings", and "Packages" folders (namely, folders like "Library" and "Temp" can be deleted).