



Tutorial

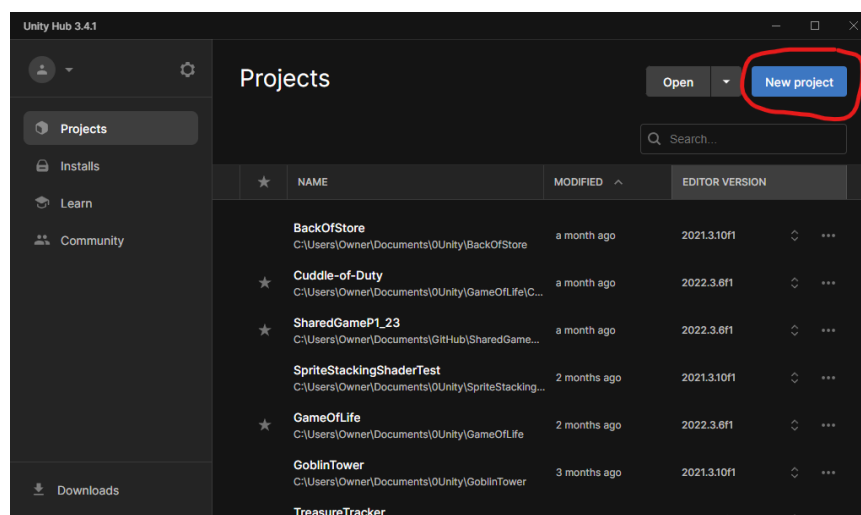
How to set up a tile set in Unity

Intro

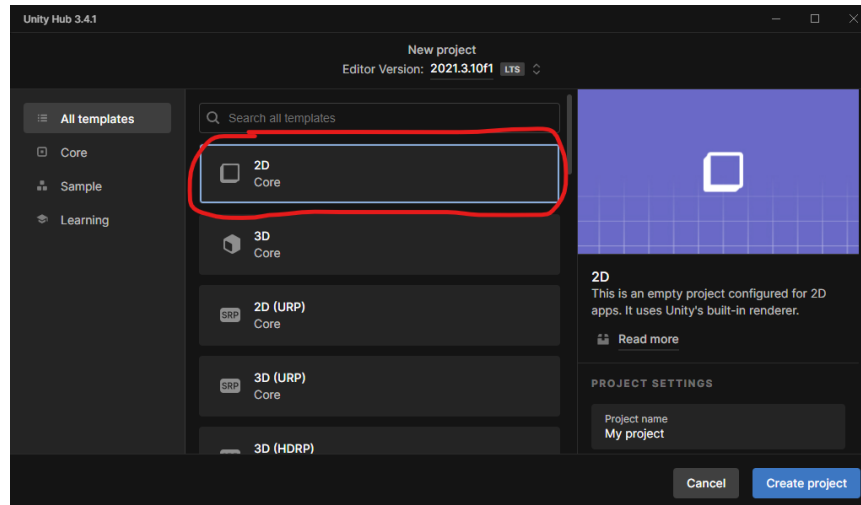
When making a game, drawing an entire level can be a daunting task. Luckily unity has a tile map system that we can use to make our levels using a more modular workflow. In this tutorial I will teach you how to use the Unity tile map system

Steps

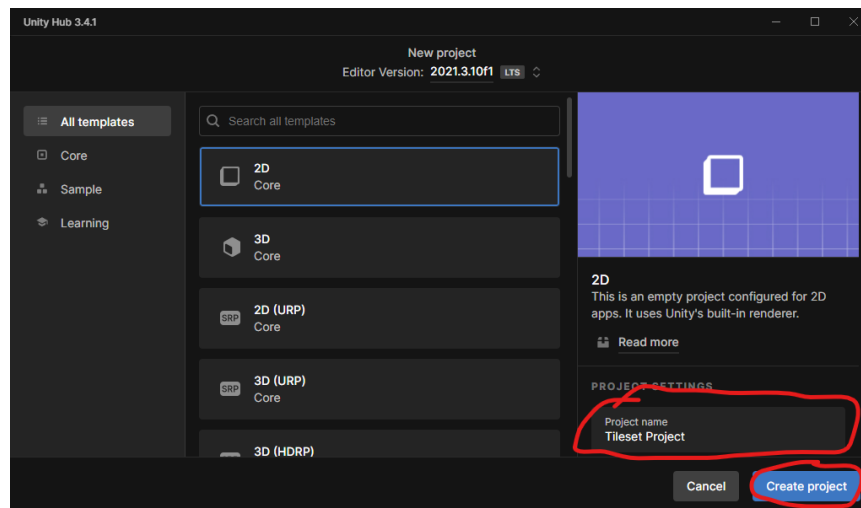
1. Open Unity Hub
2. Click the “New project” button



3. Click on the “2D” preset



4. Name your project and then click on the “Create project” button



5. while your project is being created go to: <https://adamatomic.itch.io/cavernas>

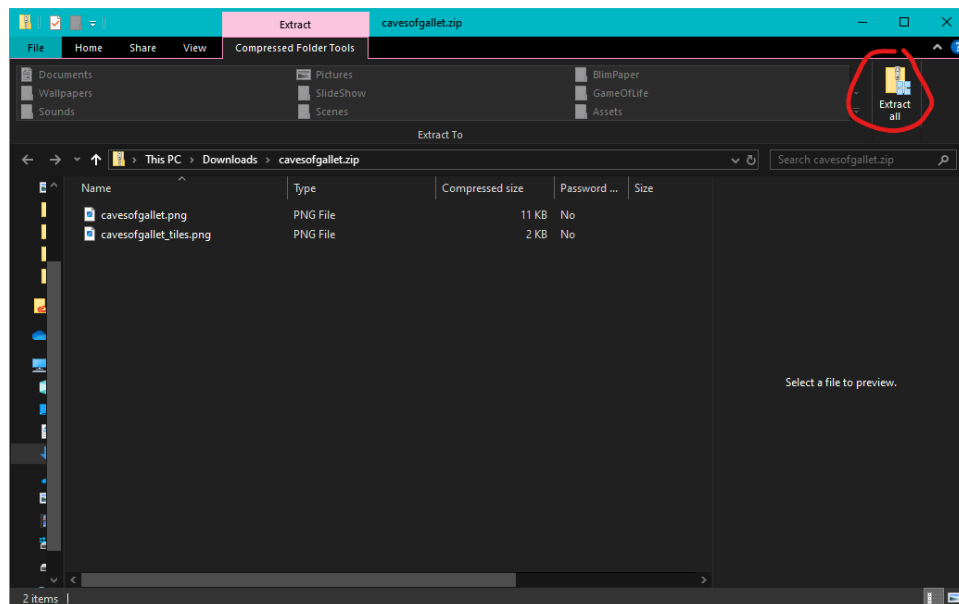
6. Download the zip file



- Open the zip file in your file explorer and extract the files to a known location on your computer

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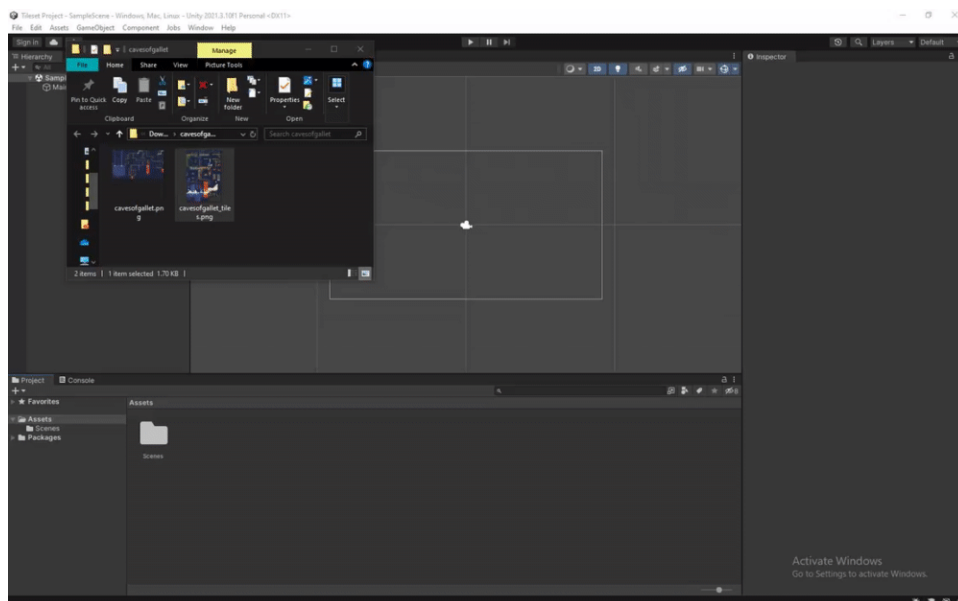
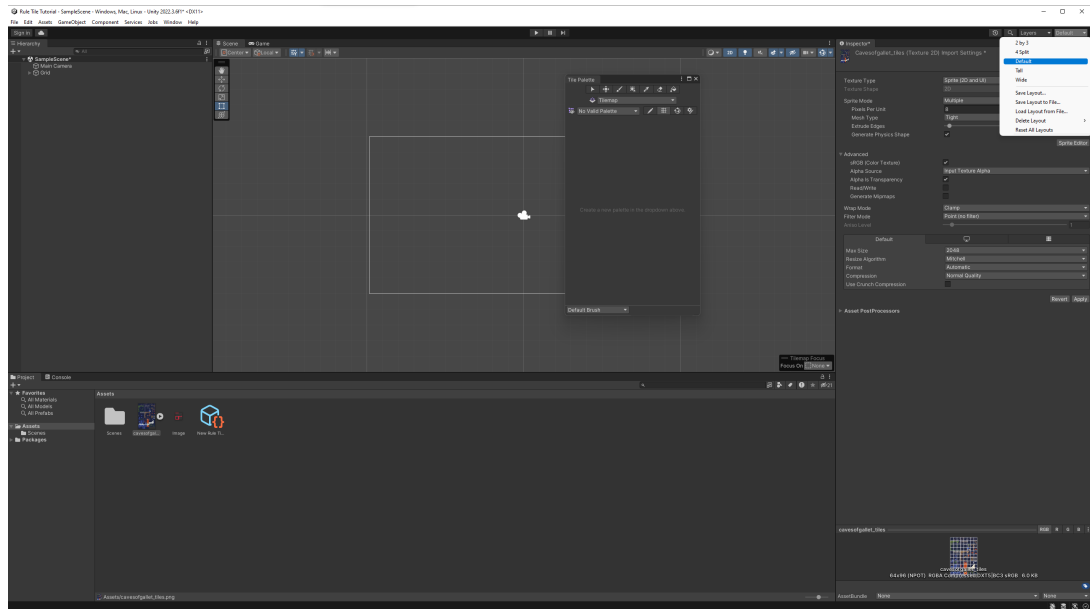
in windows 11 the zip file extraction option is hidden, you can see it by clicking the 3 dots at the right of the toolbar in file explorer.



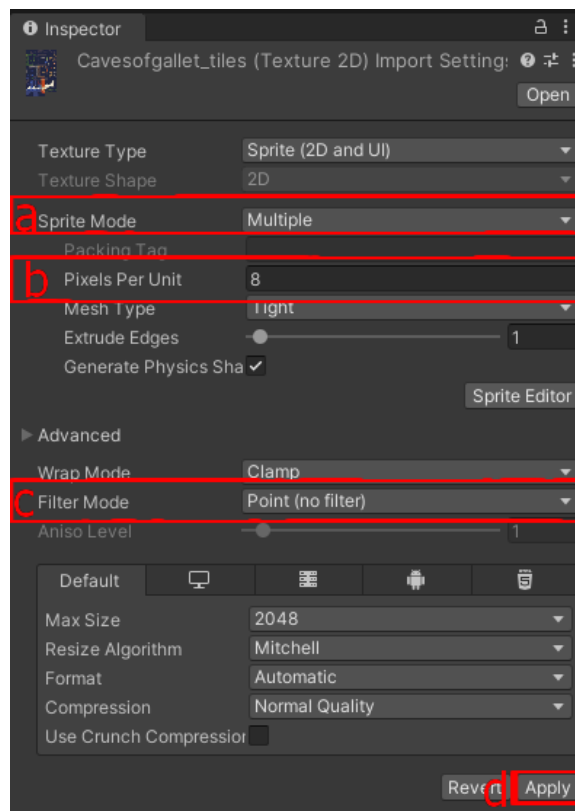
- Once your unity project is open, drag “cavesofgallet_tiles.png” into the unity “Project” panel

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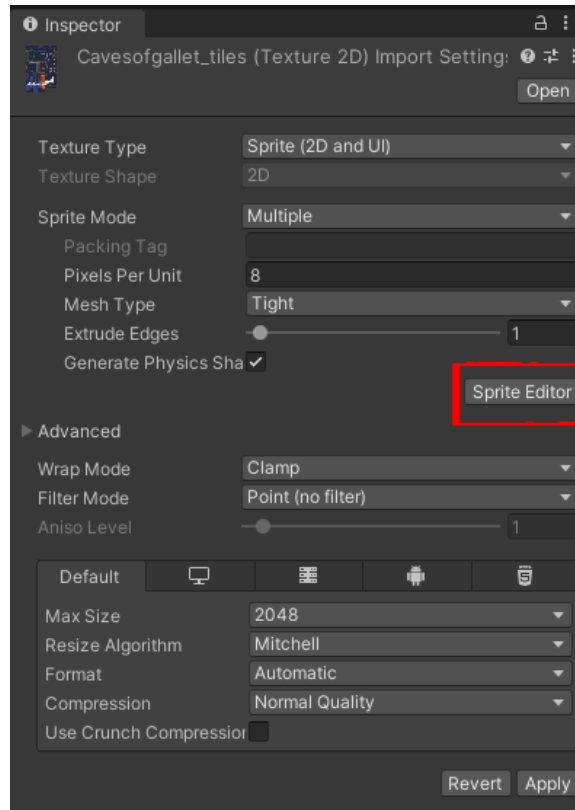
If your unity windows look different than mine, you can get the same layout by hovering over the drop down in the top right corner of the screen and selecting “Default”



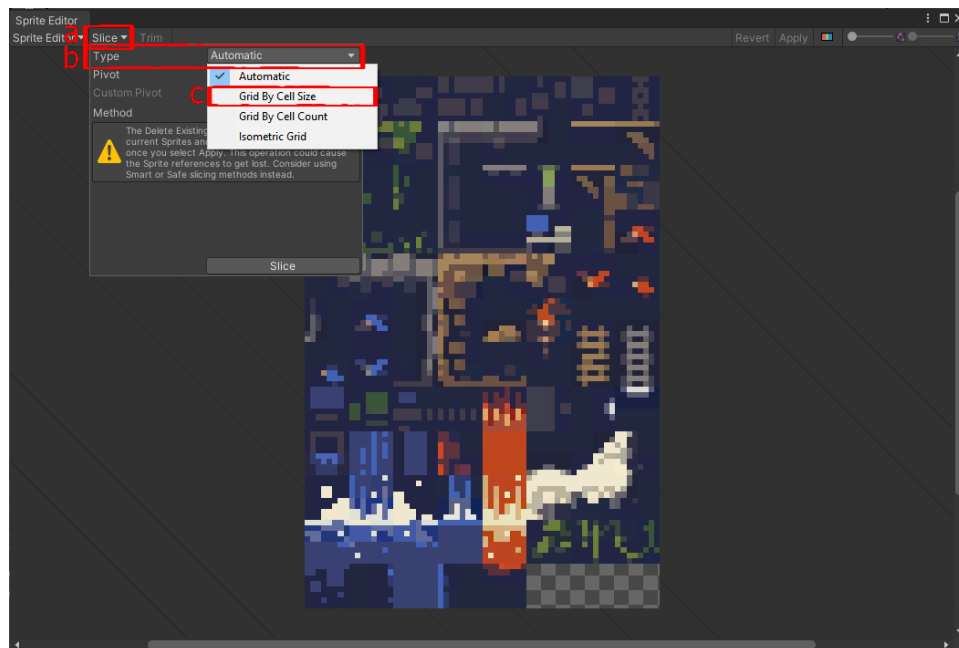
9. Click on the new texture asset in the unity “Project” panel and change the following settings in the “Inspector” panel:
- a. Sprite Mode → Multiple
 - b. Pixels Per Unit → 8
 - c. Filter Mode → Point (no filter)
 - d. Once done click “Apply”



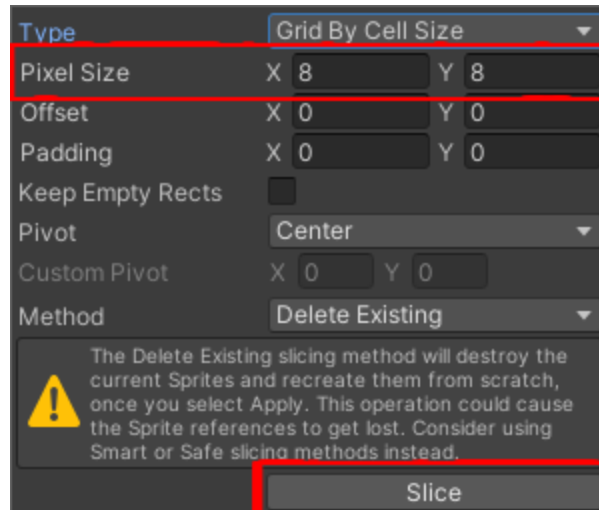
10. Click on the “Sprite Editor” Button to open the sprite editor



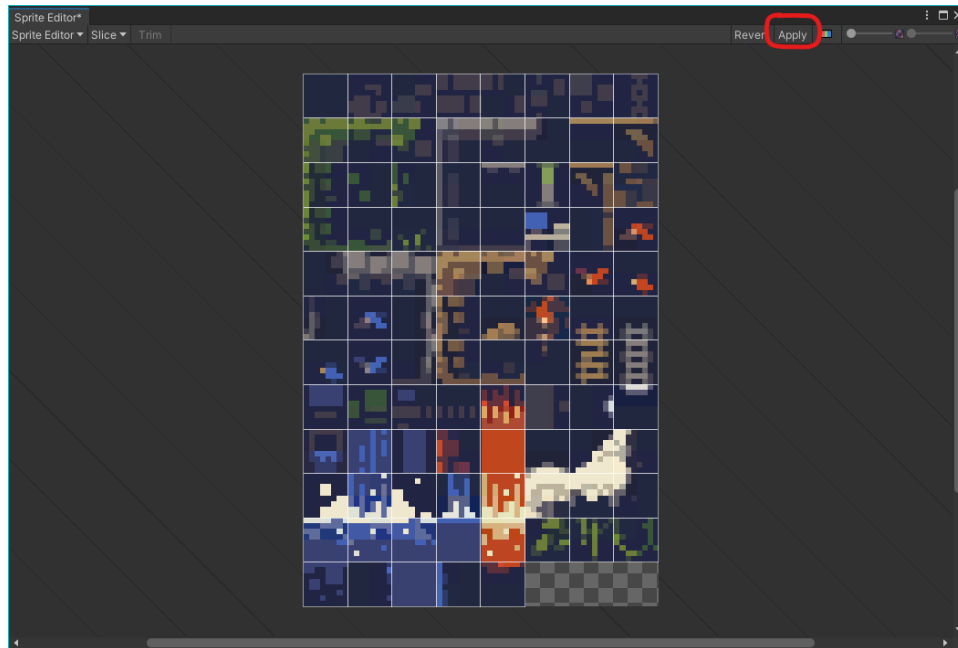
11. Open the “Slice” dropdown, then open the “Type” dropdown, and select “Grid By Cell Size”



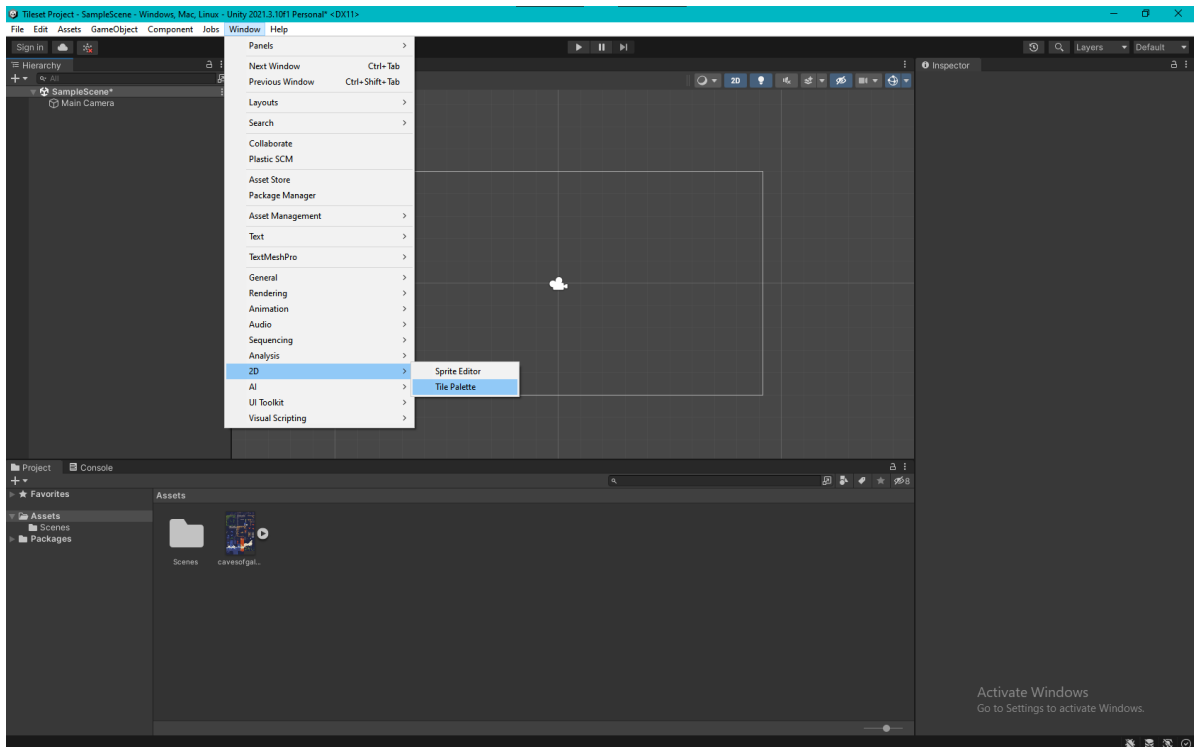
12. In the same “Slice” dropdown, now set the Pixel Size to 8x8 and press slice



13. In the sprite editor window press the “Apply” button, and **close the window**



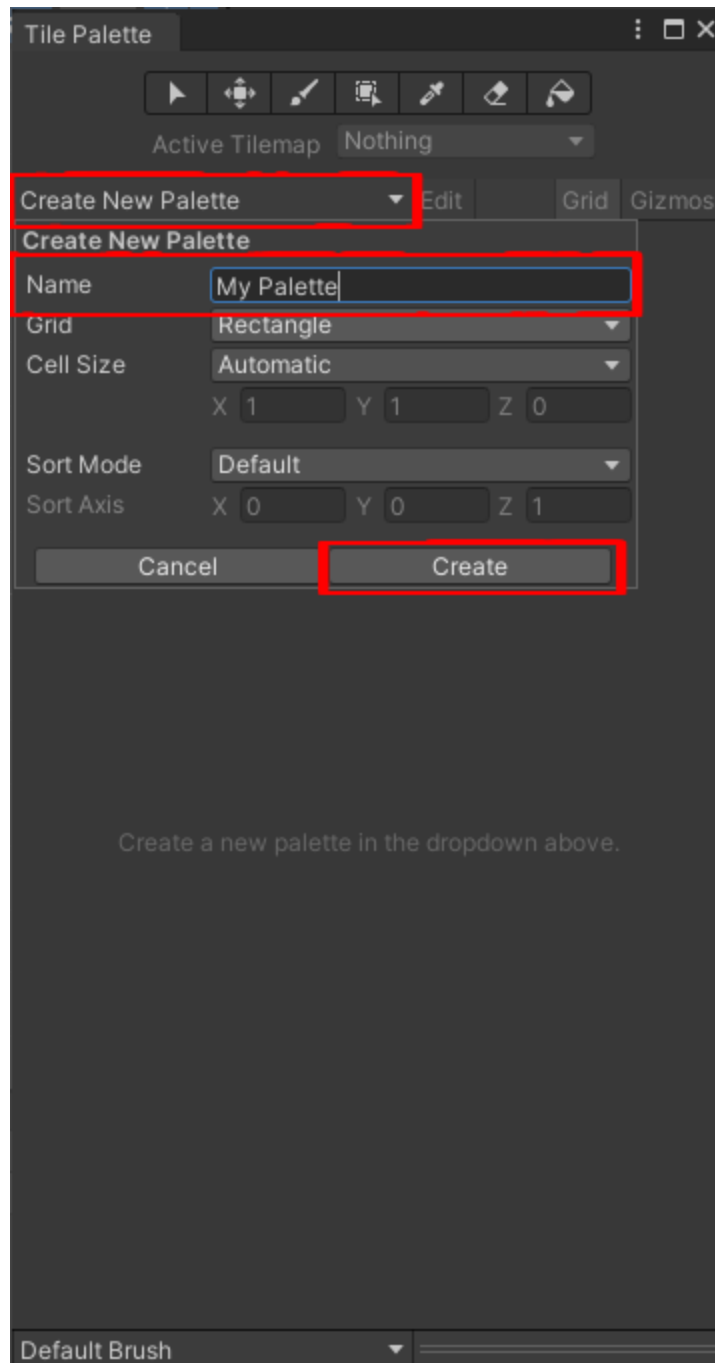
14. Now to open to tile pallet window go to: Window → 2D → Tile Palette.



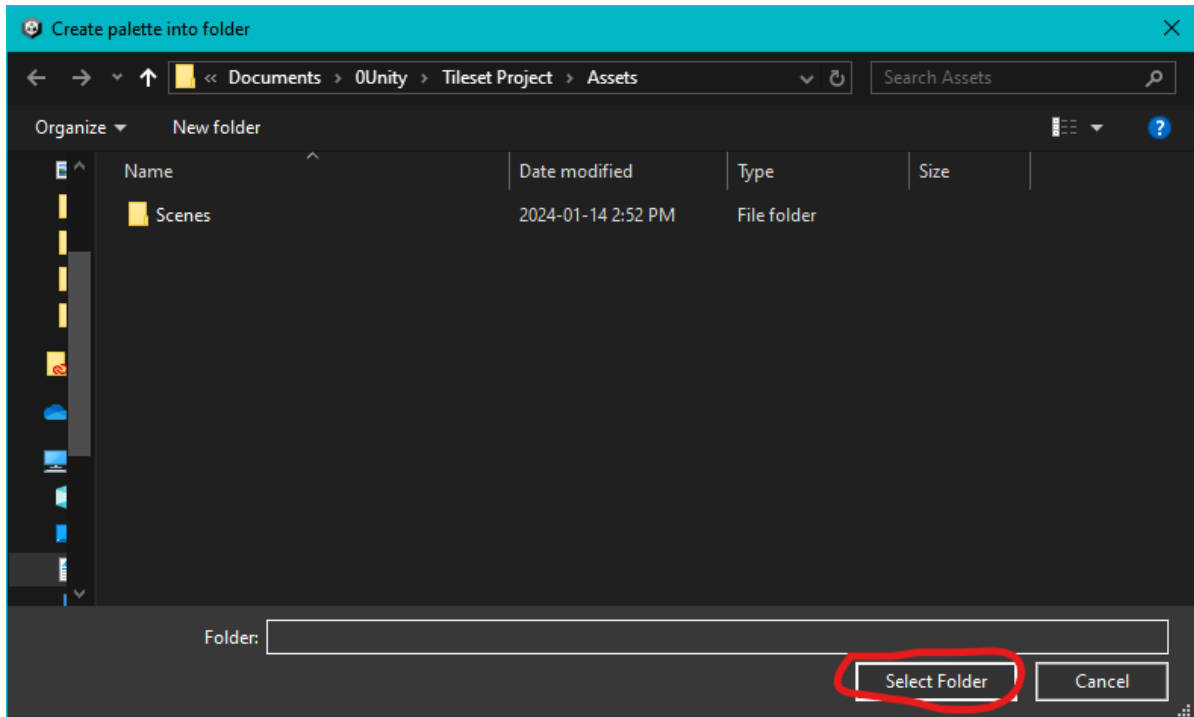
15. In the “Tile Palette” window, click the “Create New Palette” dropdown, name your palette and click create

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In newer versions of unity the option to create a tile pallet is now under a dropdown that says “**No Valid Palette**” instead of “Create New Palette”



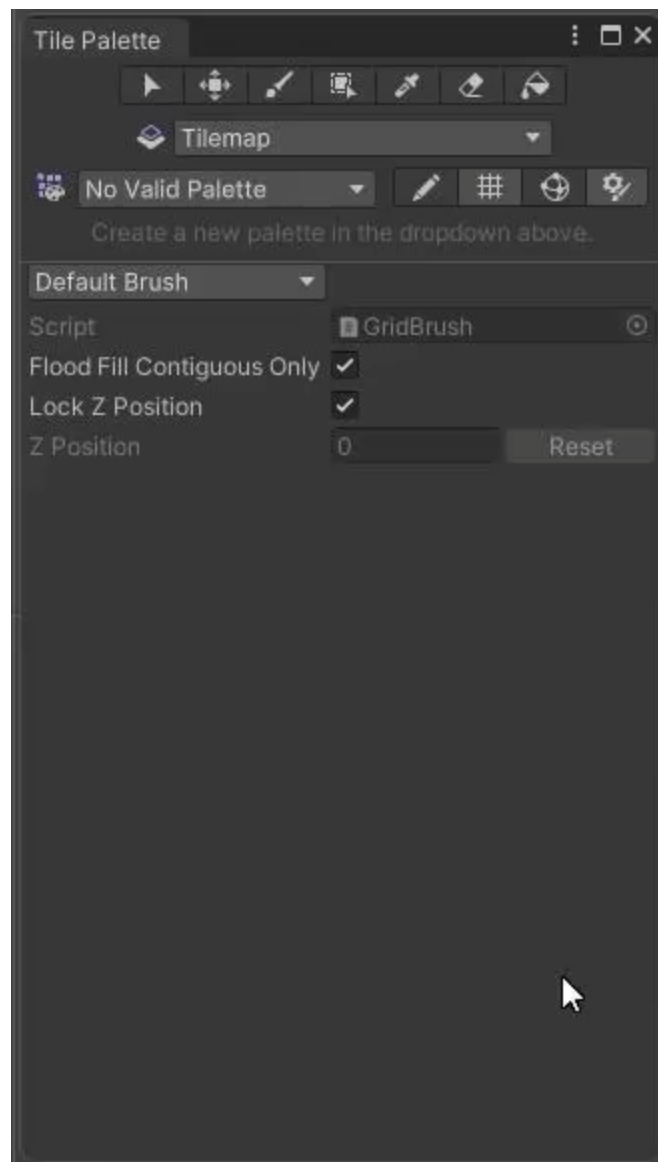
16. This will open a file explorer prompt to save to tile palette file. Click on the “Select Folder” button to save to your assets folder.

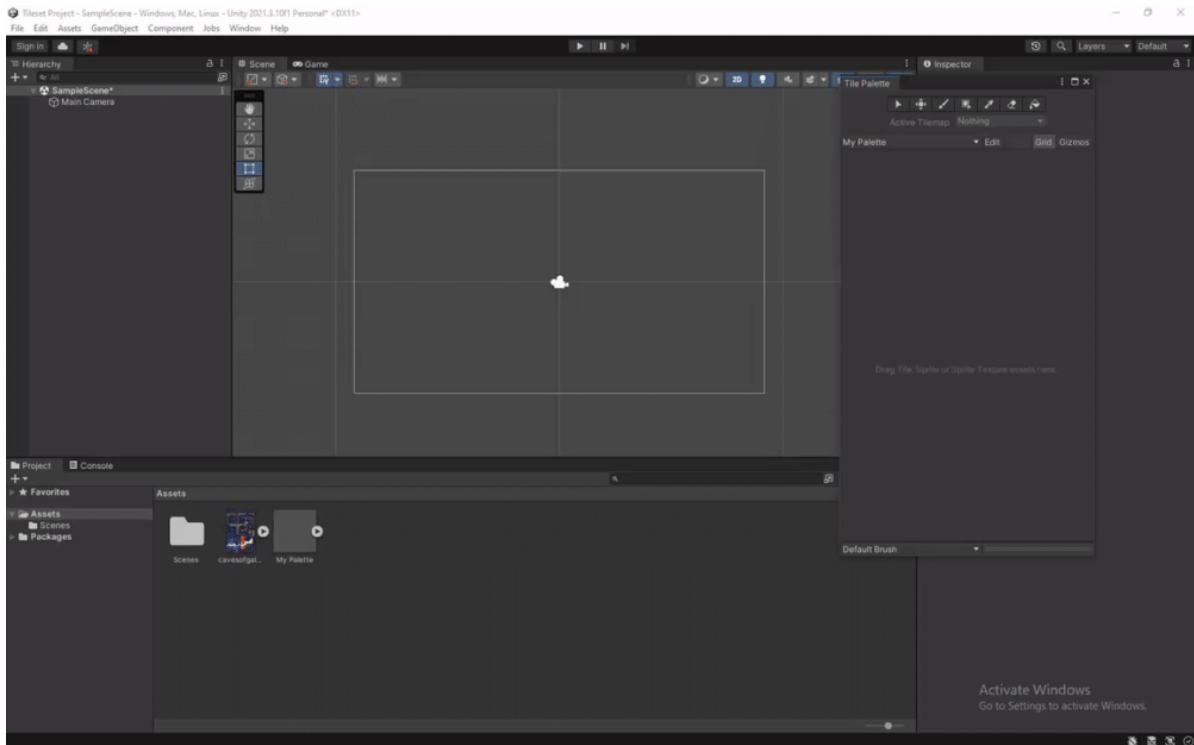


17. Select the texture asset and drag it into the main panel marked “Drag Tile, Sprite or Sprite Texture assets here.” in the “Tile Palette” window. When the file explorer pops up, click “Select Folder” like in the previous step.

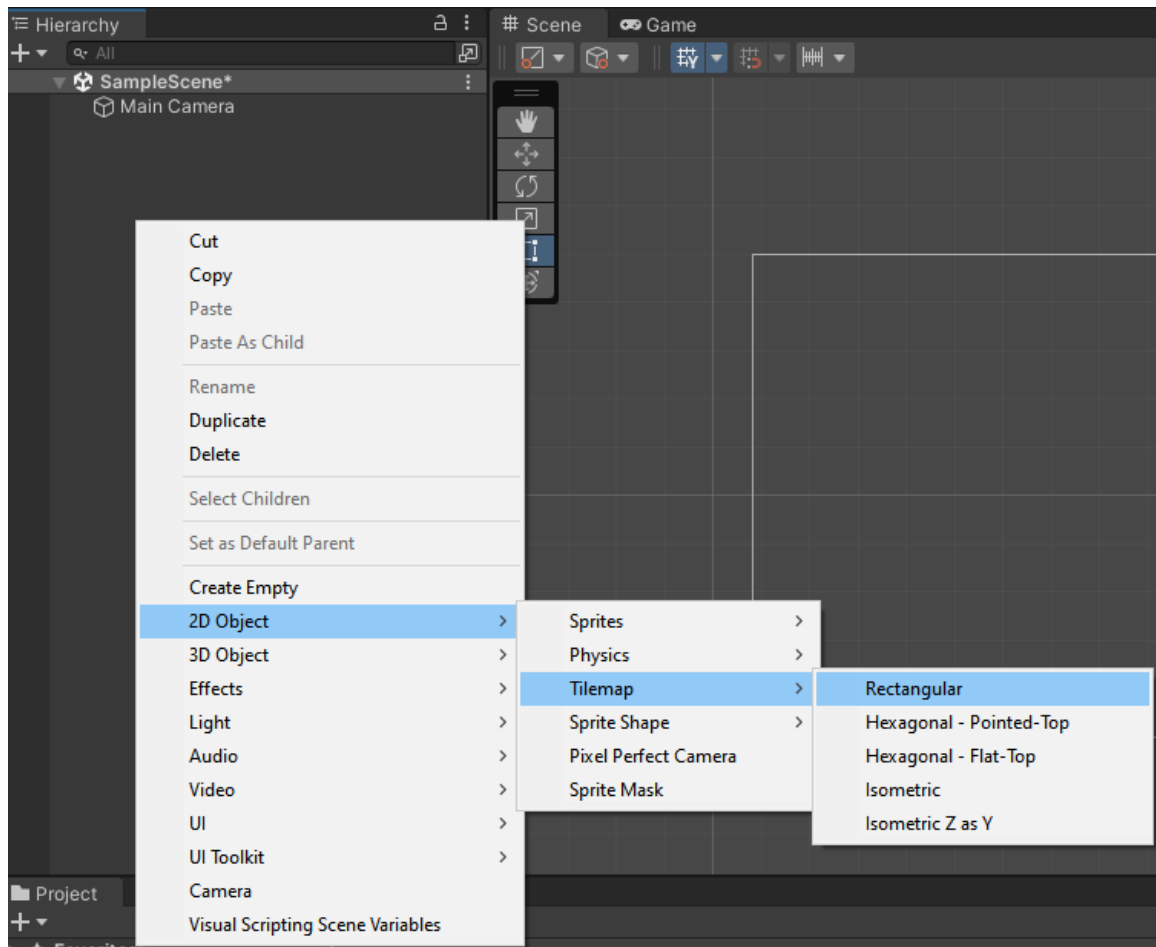
▼ Help

If the main area of the tile pallet window is too small, you can make it larger by dragging down on this line (in white)





18. Right click in the “Hierarchy” panel and go to: 2D Object → Tilemap → Rectangular. Press enter to confirm naming



19. Press 'B' on your keyboard to select the tile brush tool. Now if you select a tile in the "Tile Palette" window, you should be able to paint with it in your scene.

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If you find yourself unable to draw onto the tile map in the scene, make sure you have the scene view selected and not the game view.

Also make sure that the brush tool is highlighted inside the Tile Palette window.



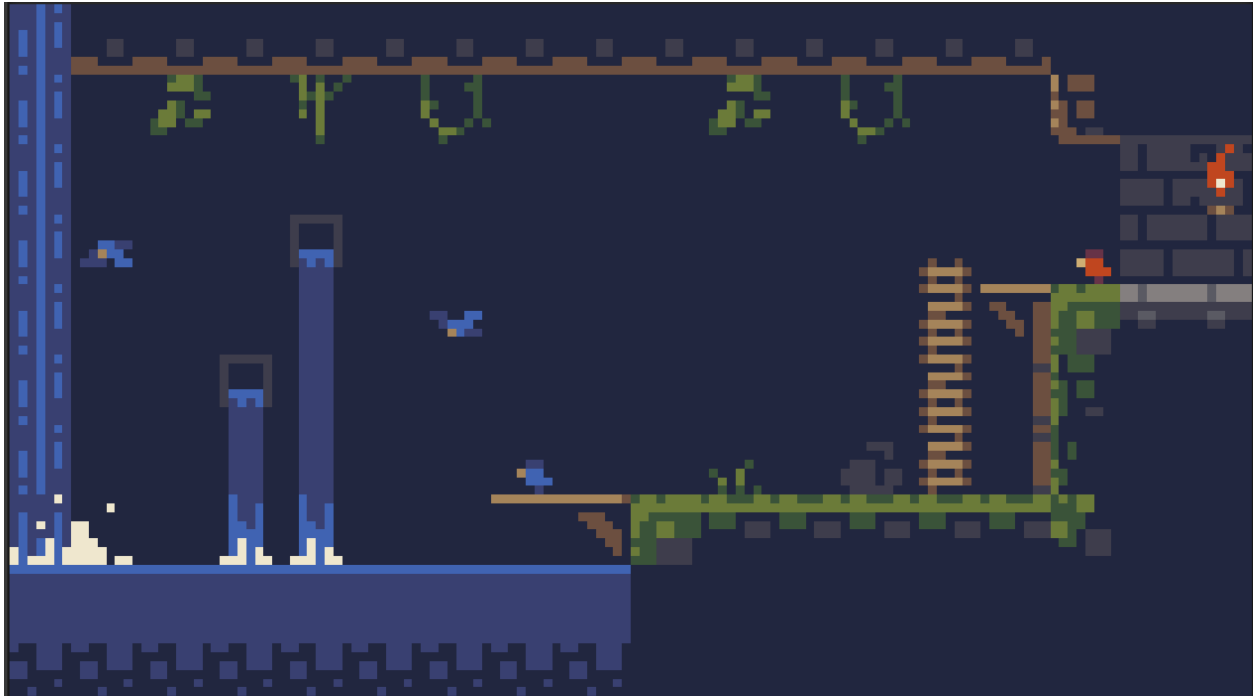
20. Now have fun with it, Select different tiles and paint with them to create your own game level

▼ Help

There are a couple of useful hotkeys to know when painting tile maps:

- Use ']' to rotate a tile counter clockwise

- Use '[' to rotate a tile clockwise
- Use 'Shift + [' to flip on the X axis
- Use 'Shift +]' to flip on the Y axis



What's next?

Now that you know how to paint a tile map, you have a world of possibilities at your finger tips. As a next step you could try having multiple layered tile maps for a more detailed look. If that sounds too easy you could also try adding collisions to the tile map so that a player character could interact with them. I will leave some resources at the bottom of this document to get you going with those.

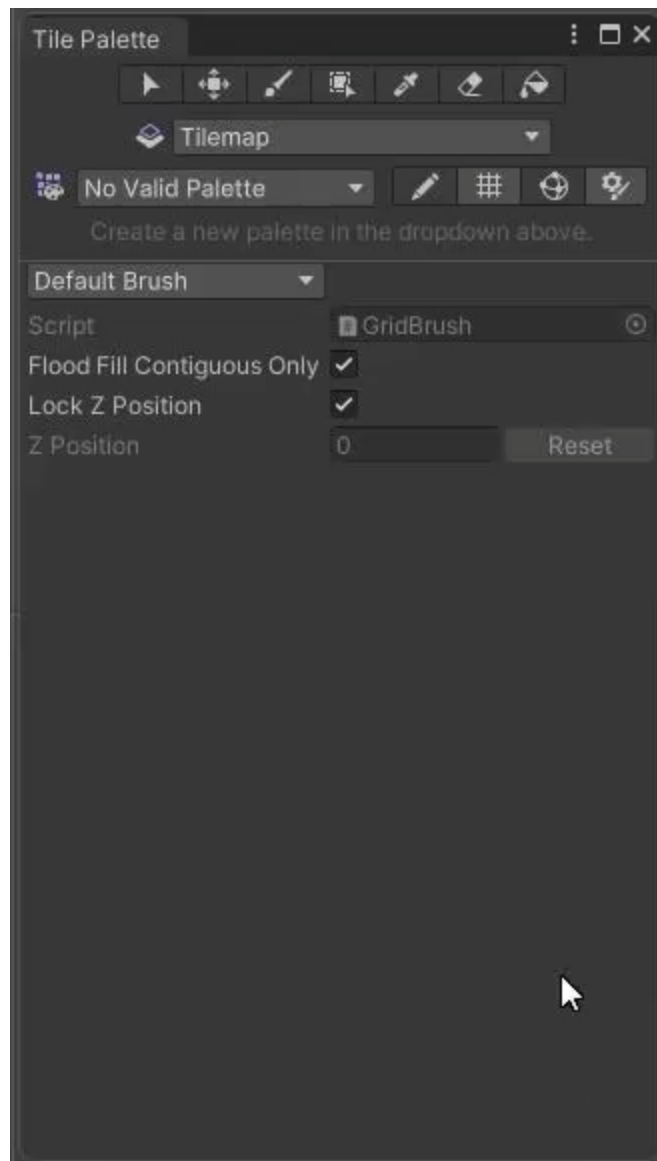
Helpful Tips

All of these tips are contained under the help section of their respective steps.

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Additional Resources

Video Tutorial for adding collisions to tile maps:

<https://www.youtube.com/watch?v=MYwlrne9NWw>

Video Tutorial for layering tile maps:

<https://www.youtube.com/watch?v=fSOYkRU4N9w>

Unity's official learning resource for tile maps:

<https://learn.unity.com/tutorial/introduction-to-tilemaps#>

Blog Post about using tile maps for level design in Unity:

<https://unity.com/how-to/create-art-and-gameplay-2d-tilemaps-unity>