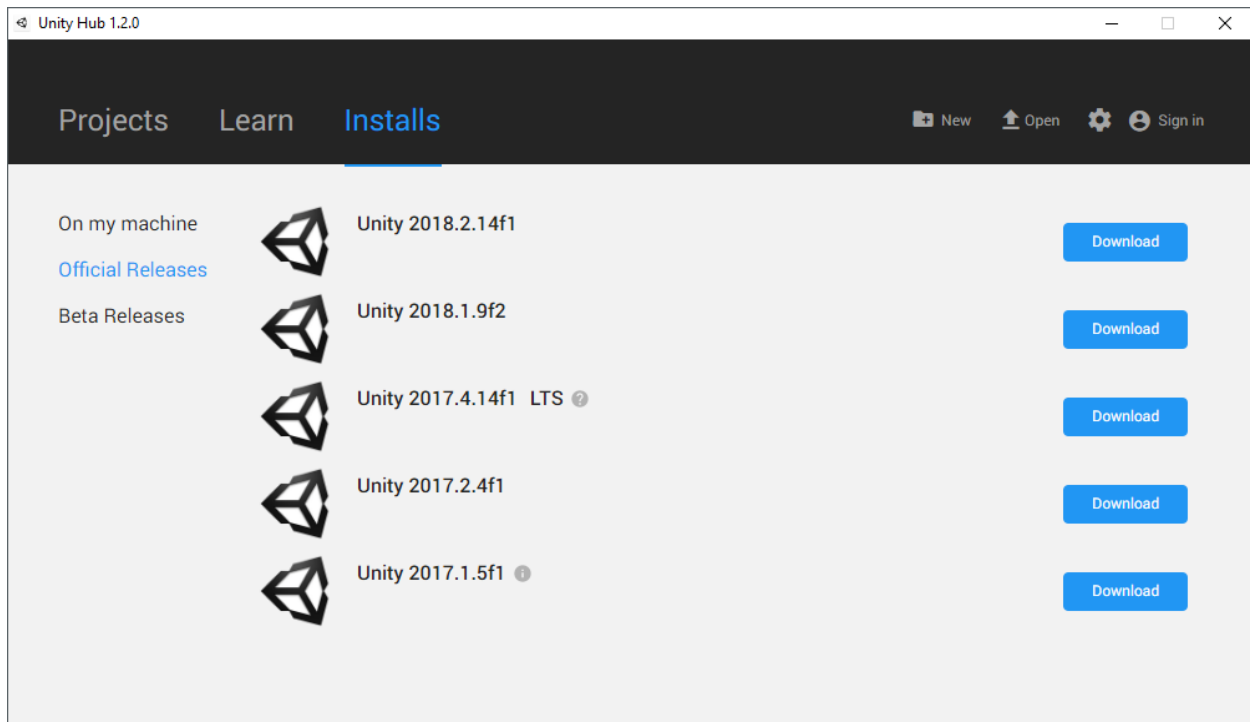# UniteLA 2018 Training Day Mobile game development (2D):

Unity hub (standalone application):

- Project tab: manage projects
- Learn tab: tutorials by Unity
- Install tab:
    - All installed versions
    - Official releases
    - Beta releases

Useful Shortcuts:

- In 2d/3d mode:
    - Middle mouse button: pan
    - Scroll wheel: zoom in and out
    - Alt + right mouse button: zoom in and out
    - Hold V + left click drag: snap a vertex
- In 3d mode:
    - Alt + left mouse button: orbit

Sprite Editor:

Slice sprite sheet into multiple sprites: useful for animations or creating tilemap for painting sprites into scene.
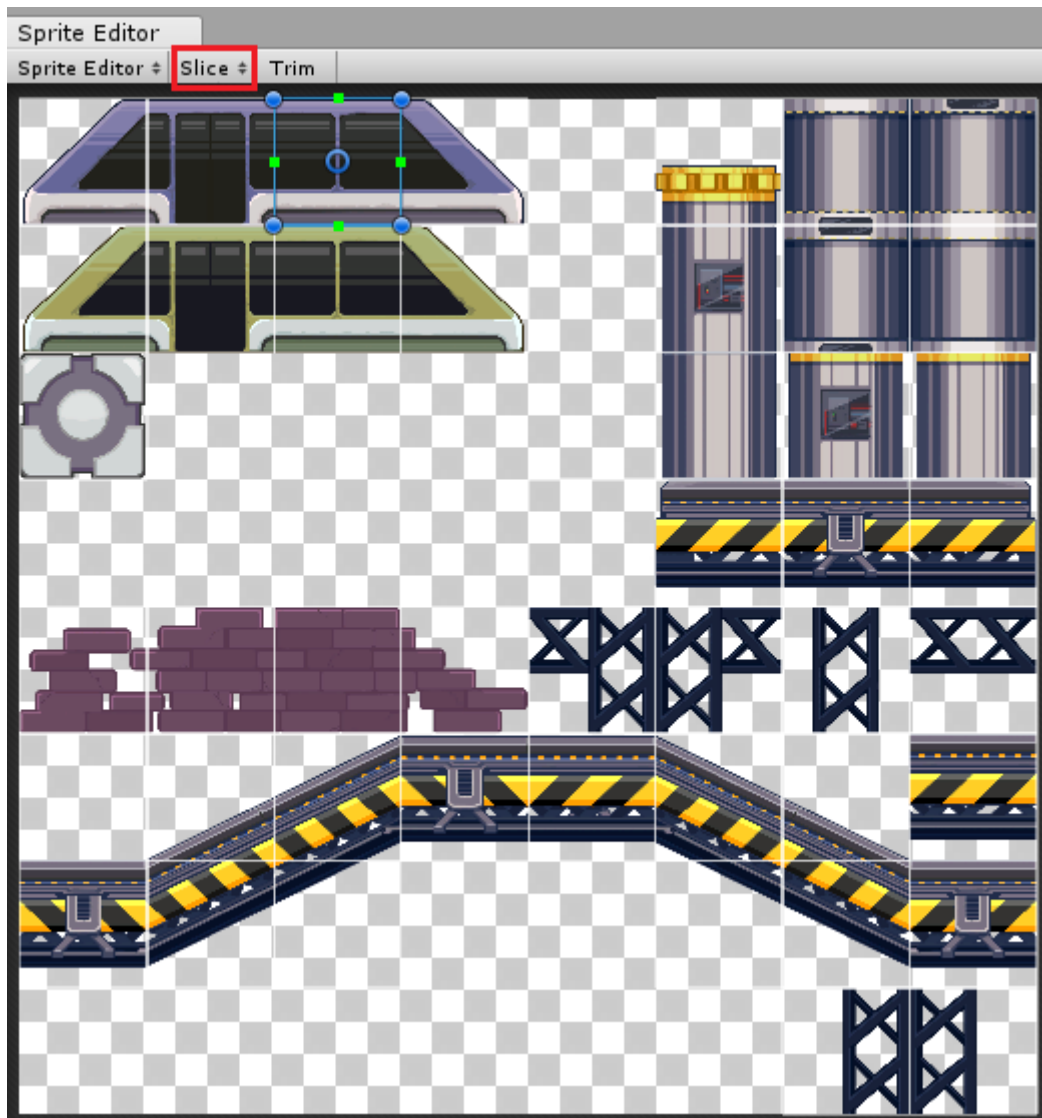
- Automatic slice mode: creates bounding box for each. However, they have different grid sizes. This may result animation wobbling.

- Grid by Cell Count slice mode:
  - o Enter in how many cells to slice sheet into

- Grid by Cell Size slice mode:
    - Use artist's cell size
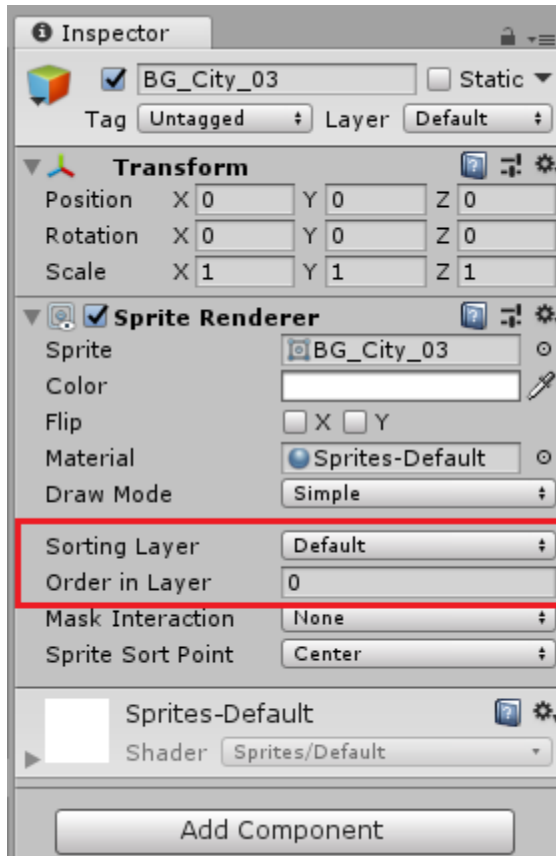   - Useful for expanding objects like long trains.

SpriteRenderer → **Sorting Order**: set which sprite to show on top.
- Top most layer drawn in the back.
- Common workflow: keep default layer at the bottom.

SpriteRenderer → **Order in Layer**:
- When sprites are in the same Sorting Oder, set the Order in Layer number to prevent Z fighting

Tilemap: can be used to paint 2D sprites to scene

1. Hierarchy → create 2d tilemap
2. Inside Grid give an appropriate name to Tilemap layer such as train
3. Open Windows → Tile Palette → drag in sliced spritesheet (Tilemap01)
4. Click Edit and Erase everything that is not train. Then unclick Edit button
5. Select paint brush and start painting train tiles to scene
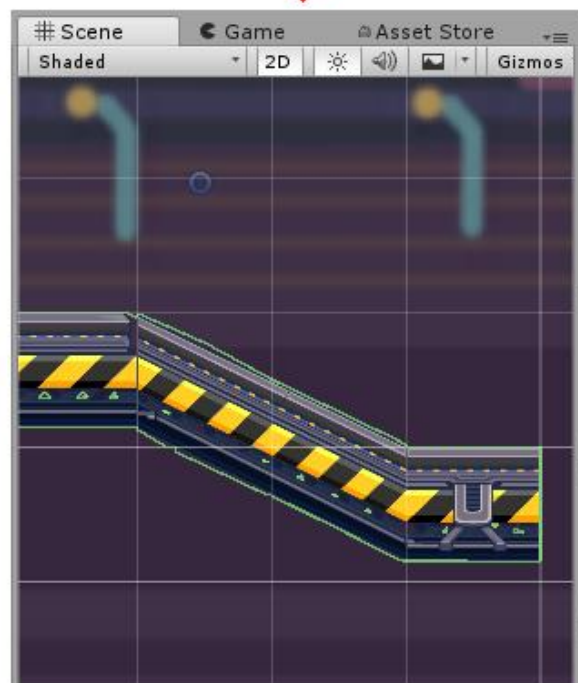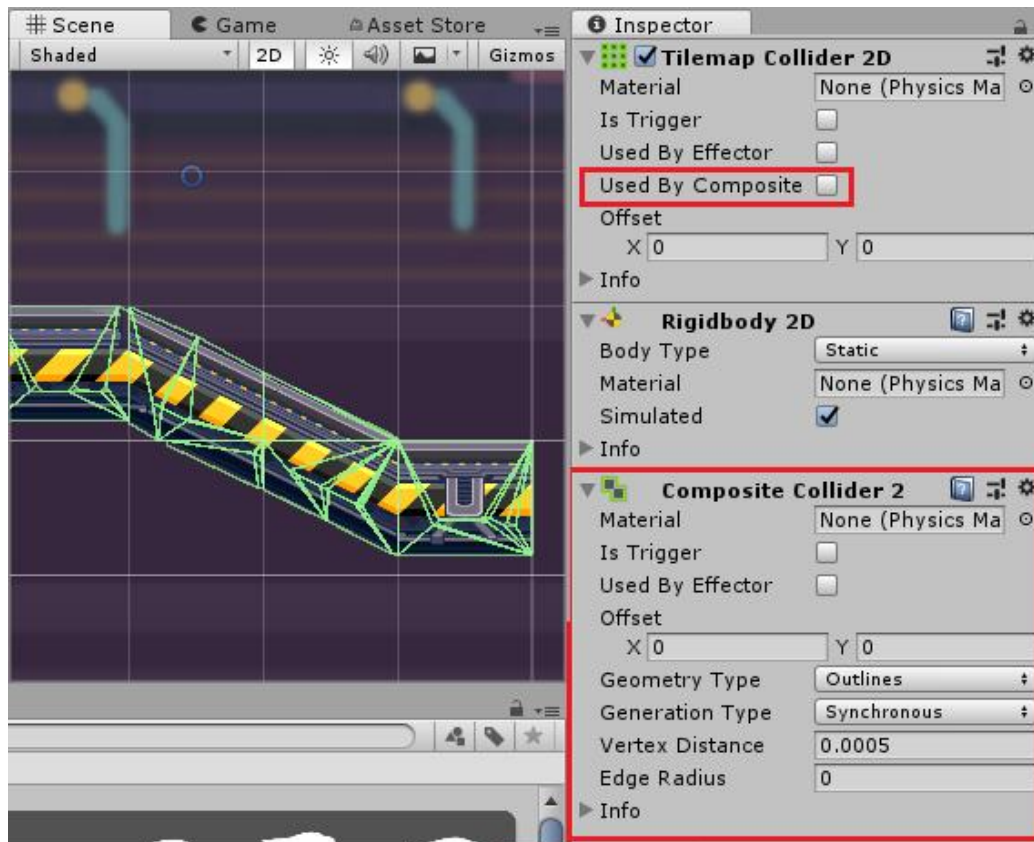6. Create new Tilemap layers inside grid for other layers such as platform and repeat steps 3-5
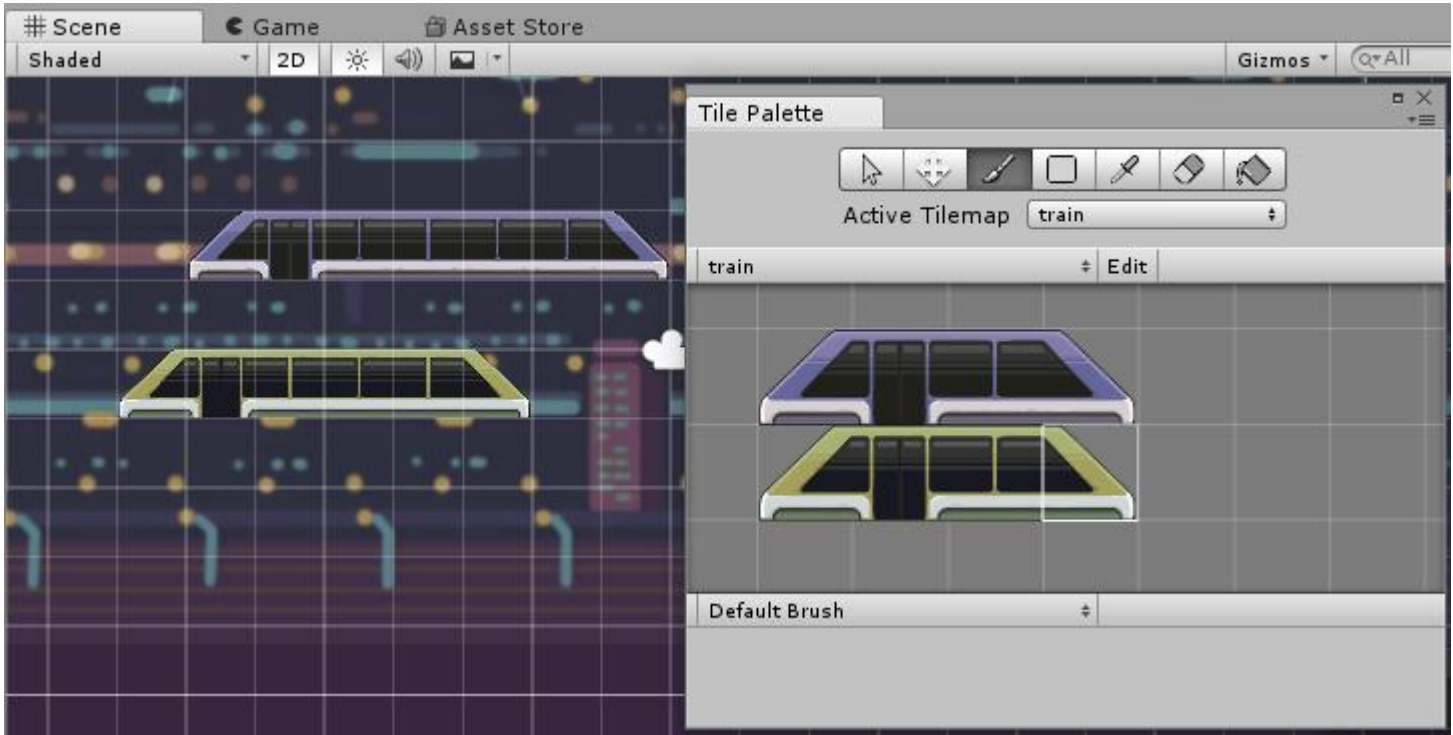
Reduce Overdrawn: delete extra vertices in Sprite editor
- Sprite Editor → select Custom Outline → click Generate → click on each cell and delete extra vertices
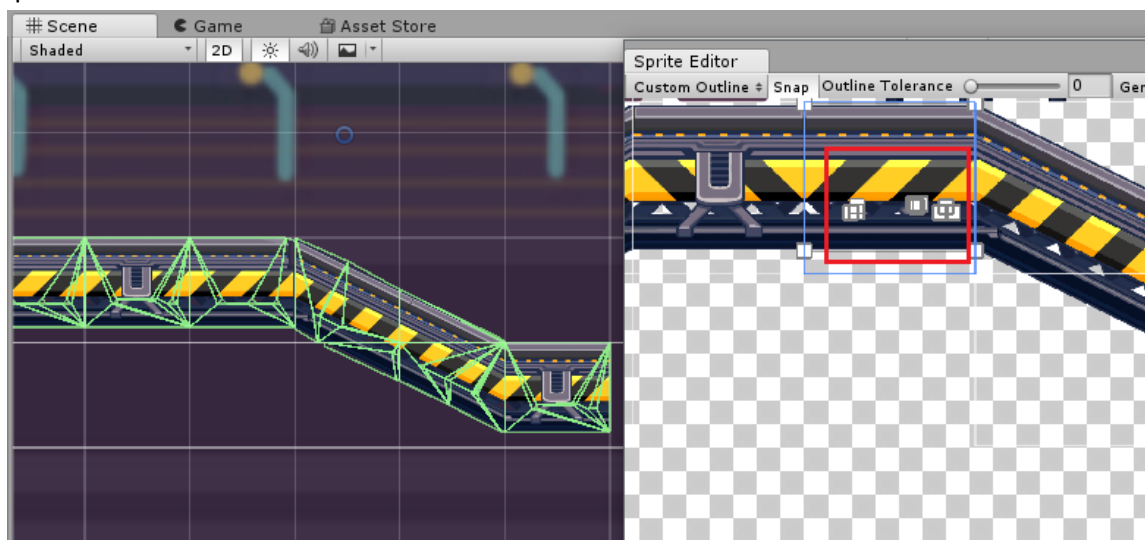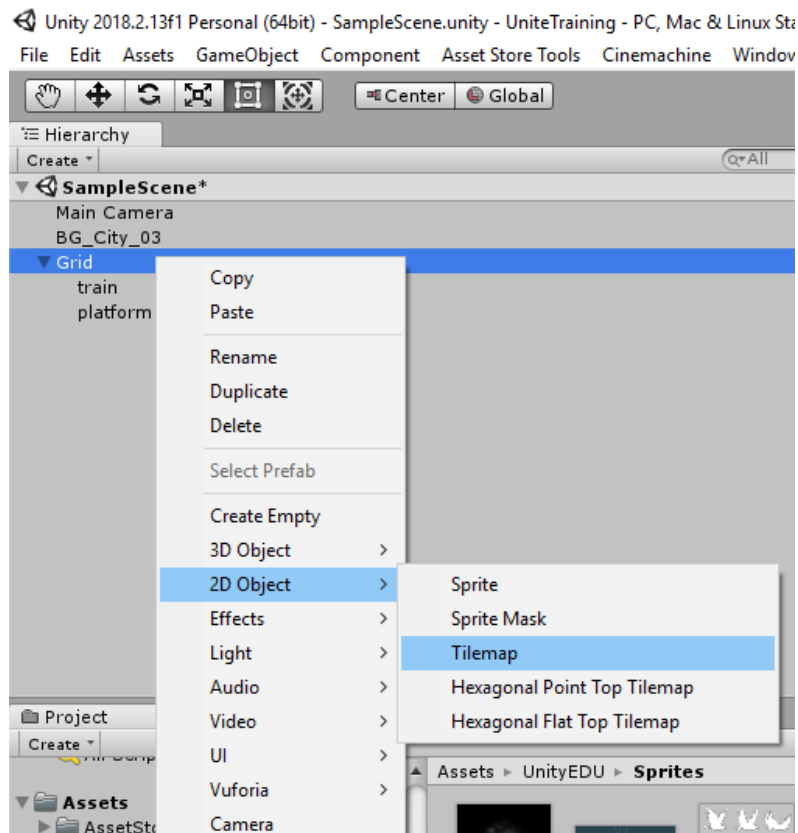
- To combine colliders into 1 big collider:
 - check Used by Composite, then add component Composite Collider

Prefab brush: a new feature that allows painting prefab (similar to painting sprites) instead of duplicating it

- In Grid, create new Tilemap, rename to Collectibles

- In Asset tab → Create →Brushes → Prefab brush. Rename to Coinbrush
- Click on the Coinbrush prefab, resize to 1. Drag in Coin prefab from Project
- Click Window tab → 2D →Tile Palette
- Drag bottom portion of Tile Palette up and look for Coin brush instead of default brush. Select to paint coins to scene
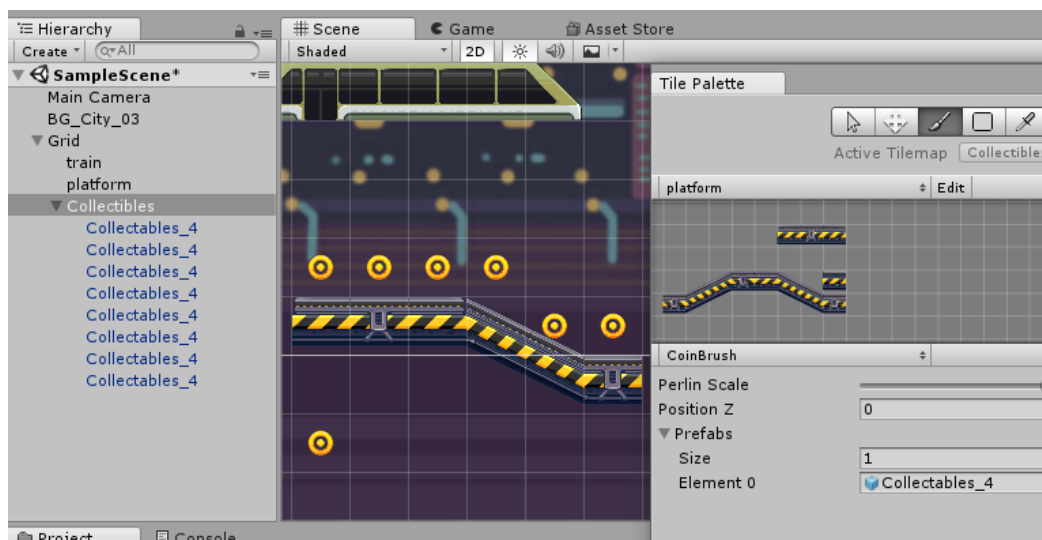
Virtual camera: built in Unity camera that can be used to follow a game object such as a character

- CineMachine tab → Create New Virtual Camera.
- Drag character that needs to be followed to Follow field in the inspector.
- Set Orthographic Size to desired zoom level when following game object

References:

Intro to Mobile Game Development-Start

https://assetstore.unity.com/packages/templates/tutorials/intro-to-mobile-game-development-start-129380