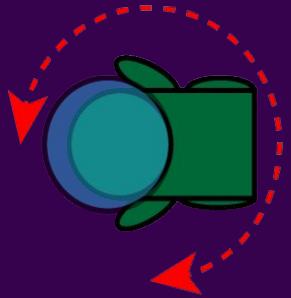
ASTRO FROG

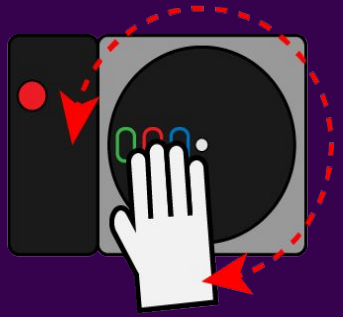
Visual Design Guide

EDG-220-06 | Team 1 | Project 3 | Sprint 3 | Willow O'Hara

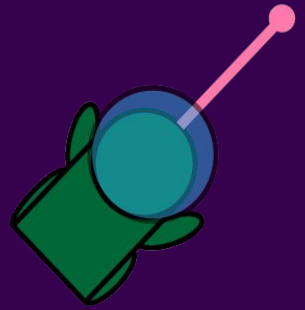
Visual Design Summary

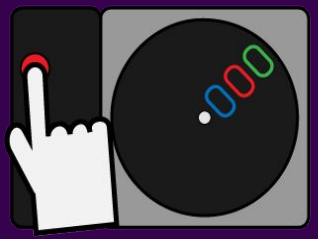
Rotate the turntable
to rotate AstroFrog.



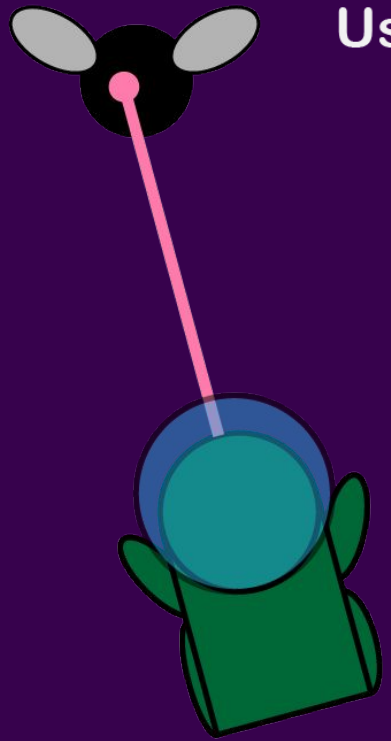


To shoot your **Tongue**,
press the glowing button.

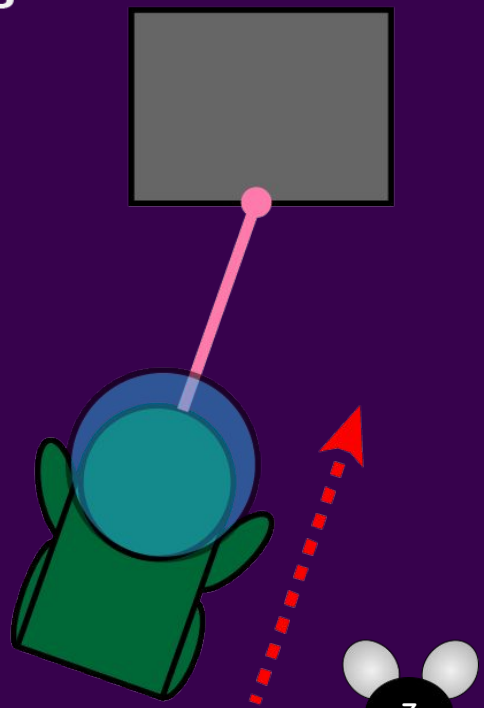




Visual Design Summary (cont.)

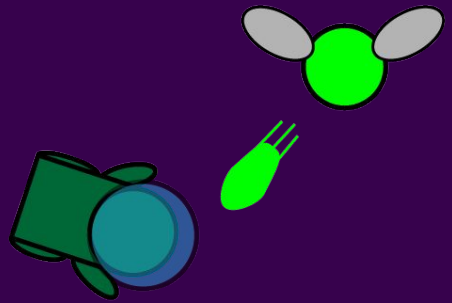


Use your tongue to **Grapple** walls and **Collect** flies.

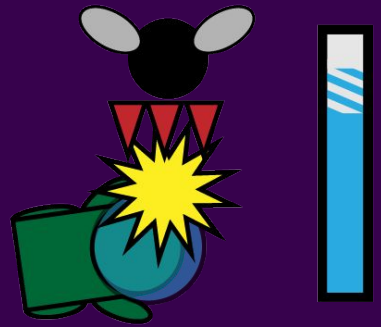


Visual Design Summary (cont.)

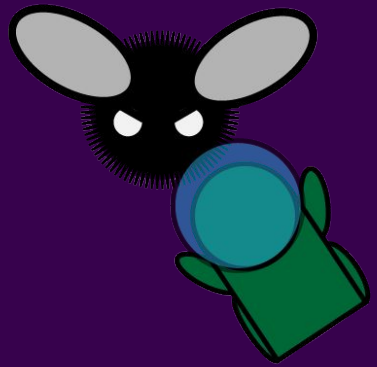
Look out for **Attacks** fom some enemy flies.

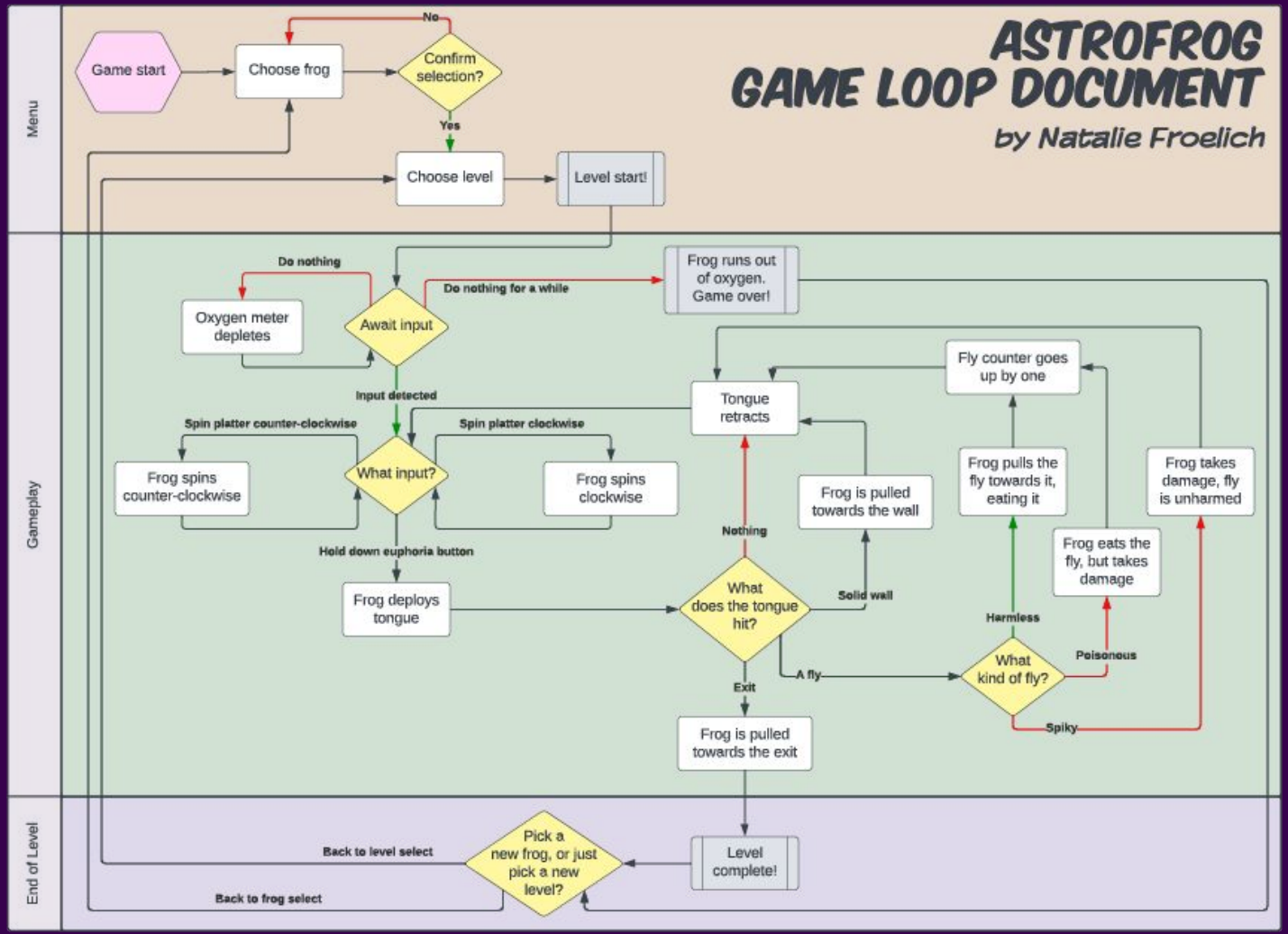


Oxygen is your timer and your health. If you run out, you lose the level.



Catch the **Boss Fly** to win the level.

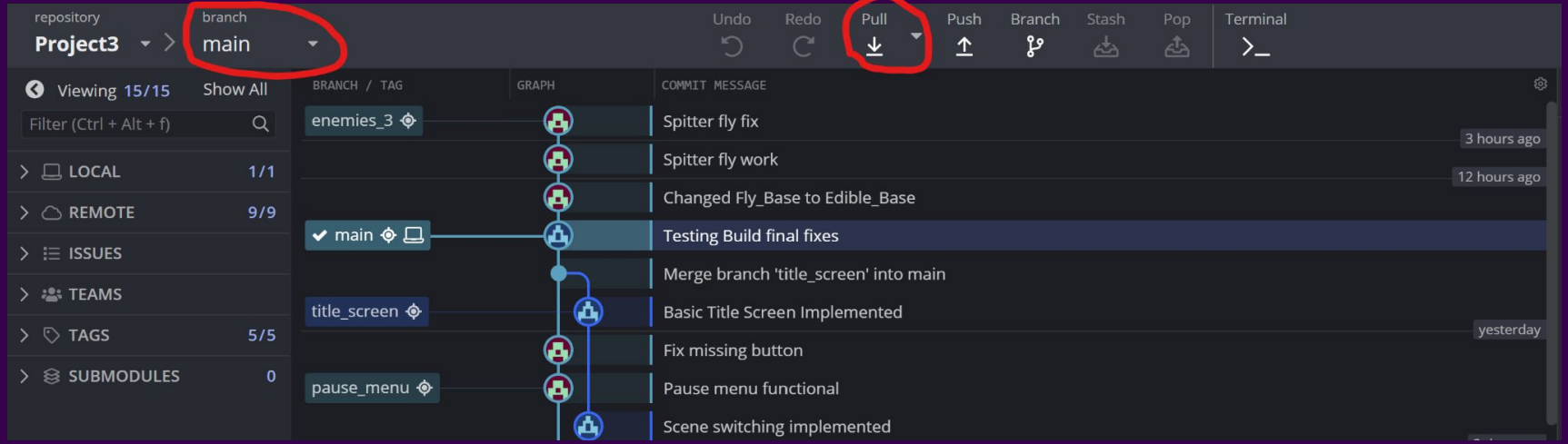



ASTROFROG
GAME LOOP DOCUMENT
by Natalie Froelich
Menu
Gameplay
End of Level
Game start
Choose frog
Confirm selection?
No
Yes
Choose level
Level start!
Do nothing
Do nothing for a while
Oxygen meter depletes
Await input
Frog runs out of oxygen. Game over!
Input detected
Spin platter counter-clockwise
Spin platter clockwise
Frog spins counter-clockwise
What input?
Frog spins clockwise
Hold down euphoria button
Frog deploys tongue
Tongue retracts
Fly counter goes up by one
Frog is pulled towards the wall
Frog pulls the fly towards it, eating it
Frog takes damage, fly is unharmed
Frog eats the fly, but takes damage
Nothing
What does the tongue hit?
Solid wall
Harmless
Poisonous
A fly
What kind of fly?
Exit
Spiky
Frog is pulled towards the exit
Back to level select
Pick a new frog, or just pick a new level?
Level complete!
Back to frog select

Pipeline - General

Step 1:

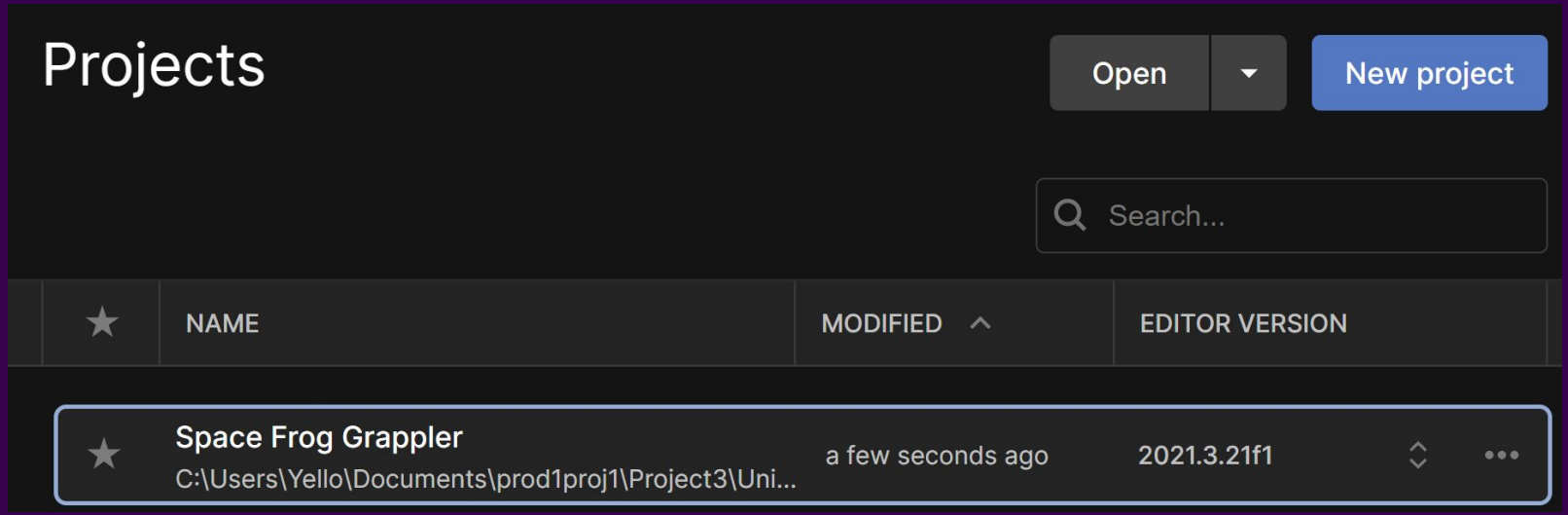
Pull the desired branch from the repository. Usually, this is main.



Pipeline - General

Step 2:

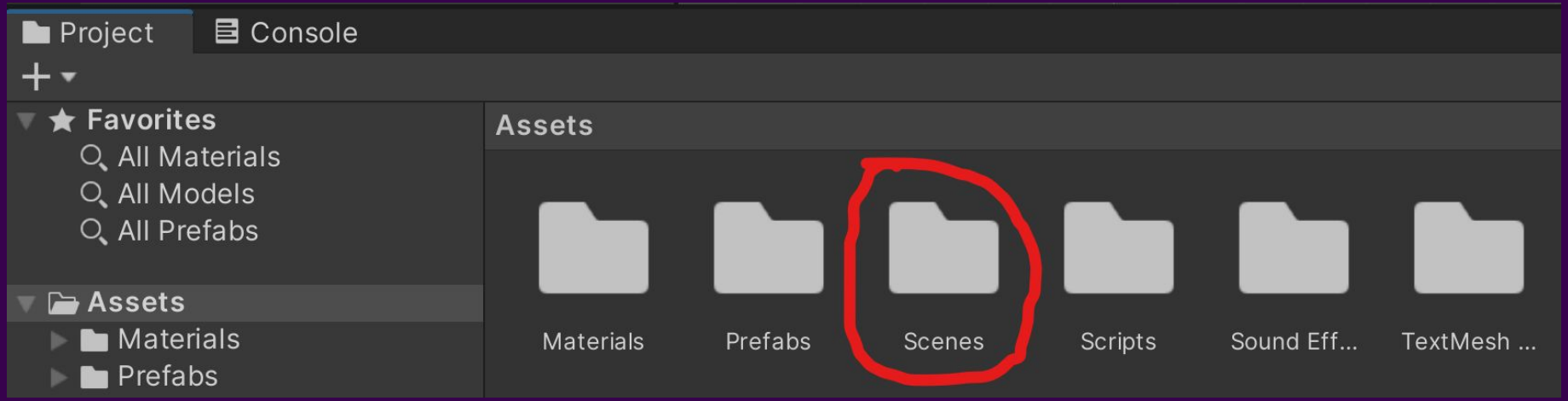
Open the project in Unity version 2021.3.21f1.



Pipeline - General

Step 3:

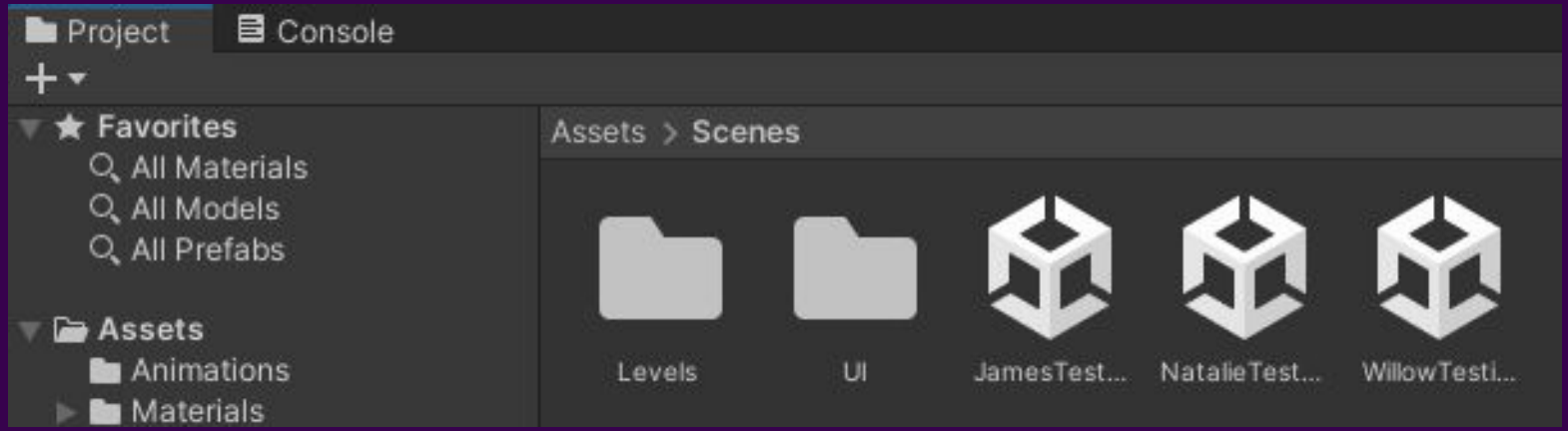
In the Project tab, navigate to Assets > Scenes.



Pipeline - General

Step 4:

If working in your personal sandbox scene, open/create a scene named “[Your Name]Testing”. If working in a level intended for the final product, open the Levels folder and open/create a scene named “Level[Level number]”. If creating a new level, follow the steps in the “New Level” section of this guide.



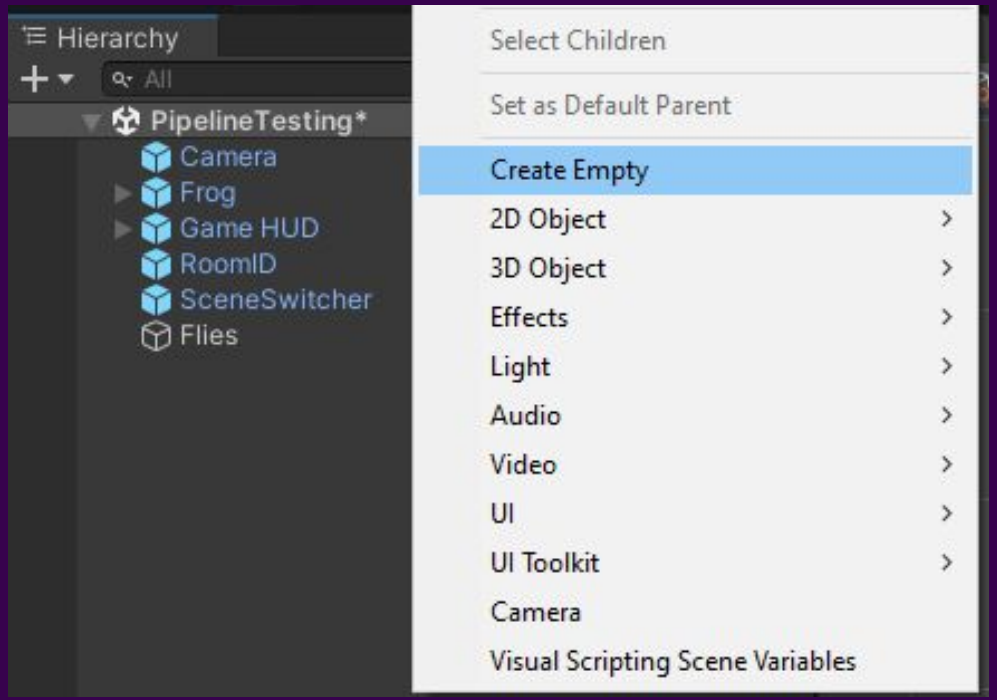
Pipeline - New Level

Step 1:

After creating a new scene, delete the default “Main Camera” object that gets created alongside it, then navigate to Assets > Prefabs and drag the following prefabs into the scene:

- Camera
- Frog (found in “Entities” subfolder)
- Game HUD (found in “UI” subfolder)
- RoomID & SceneSwitcher (found in “Managers” subfolder)

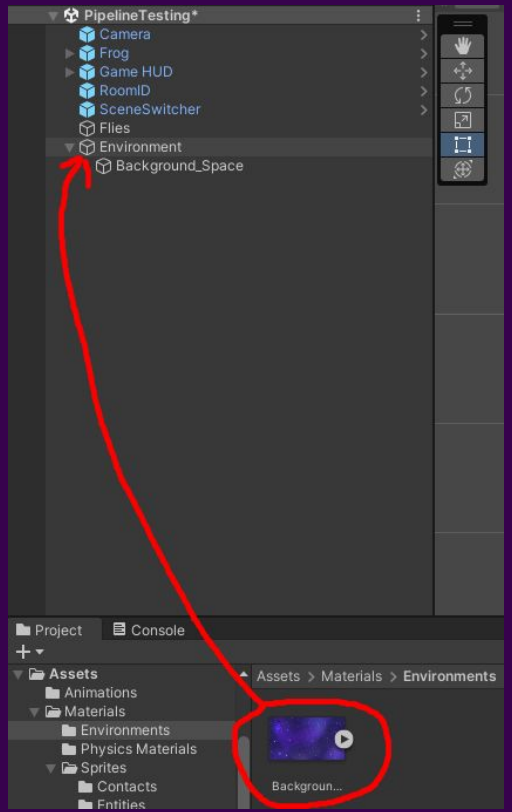
Finally, create two empty objects and name them “Flies” and “Environment”.

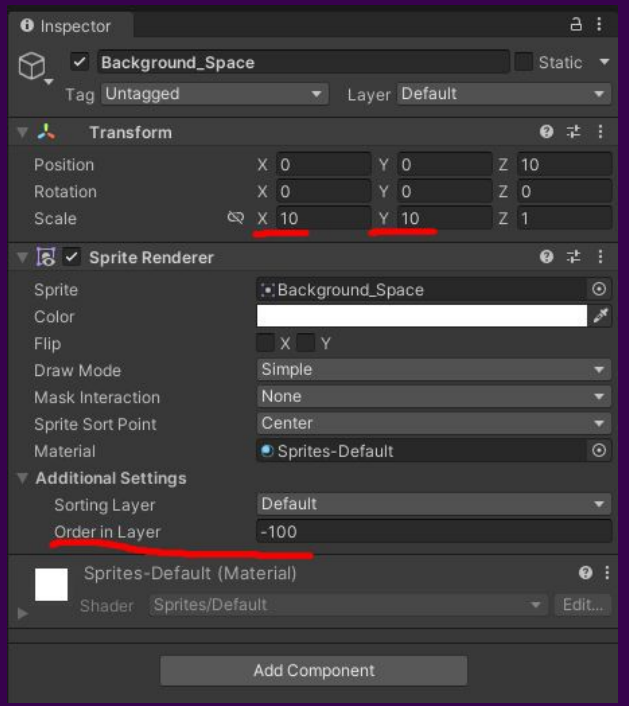


Pipeline - New Level

Step 2:

Navigate to Assets > Materials > Environments and drag Background_Space.png on top of the “Environment” object, making it a child of Environment. Once the background is in the world, select the “Background_Space” object, set its X and Y scales to 10, then set its order in layer to -100.

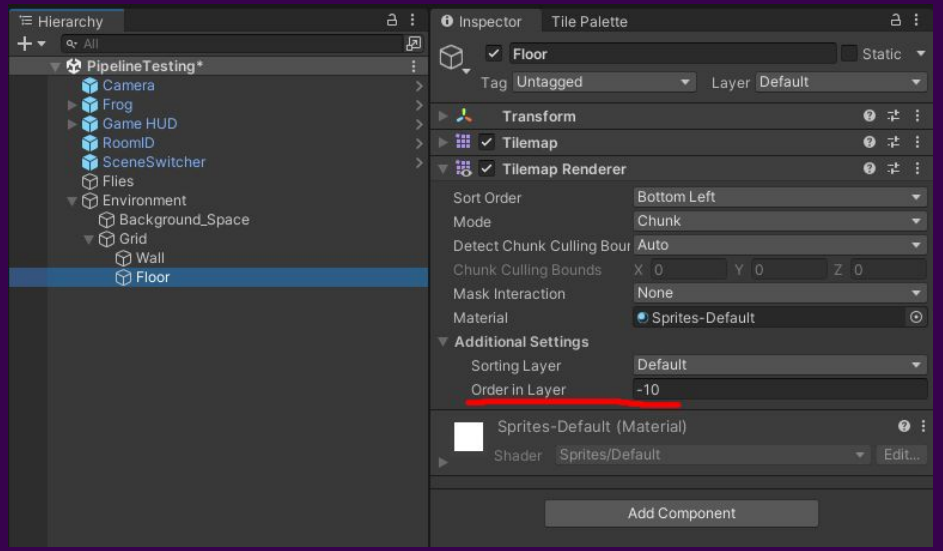


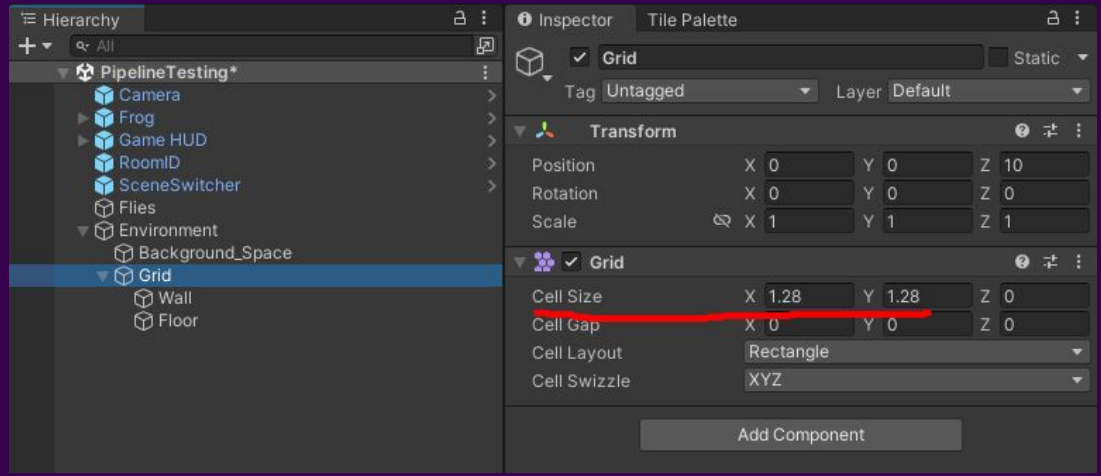


Pipeline - New Level

Step 3:

Create a new rectangular tilemap (2D object > Tilemap > Rectangular), then duplicate it. Name one of the tilemaps “Floor” and set its order in the layer to -10. Drag the Grid object that was automatically created into Environment to make it a child, then set the X and Y Cell Sizes to 1.28.

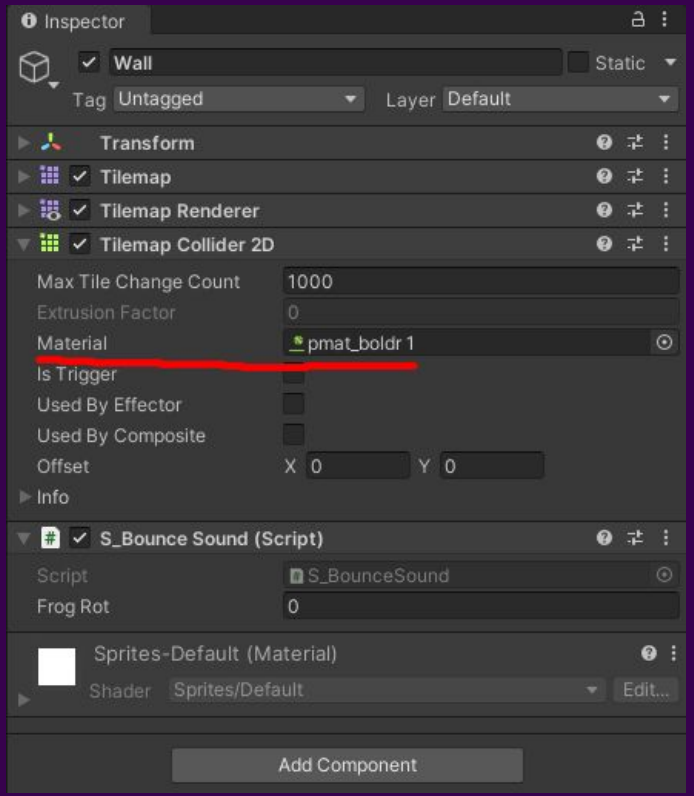




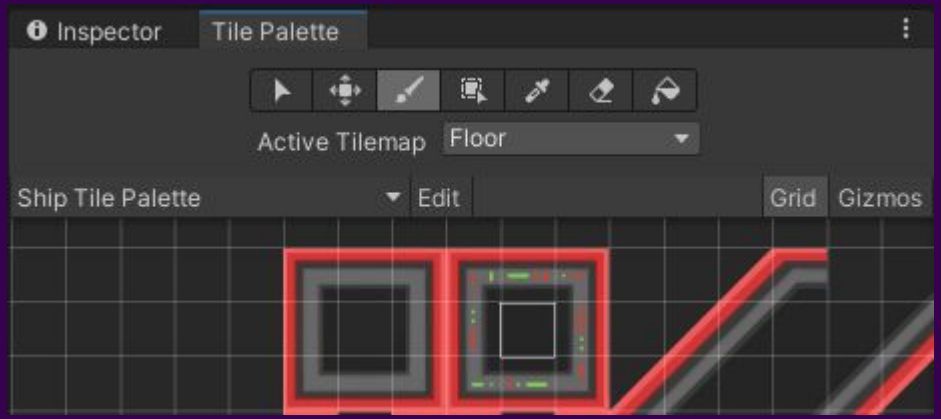
Pipeline - New Level

Step 4:

Name the other tilemap “Wall”, then add the “Tilemap Collider 2D” and “S_Bounce Sound” components. In the tilemap collider, select “pmat_boldr 1” from the list of materials.



Pipeline - Levels



Step 5:

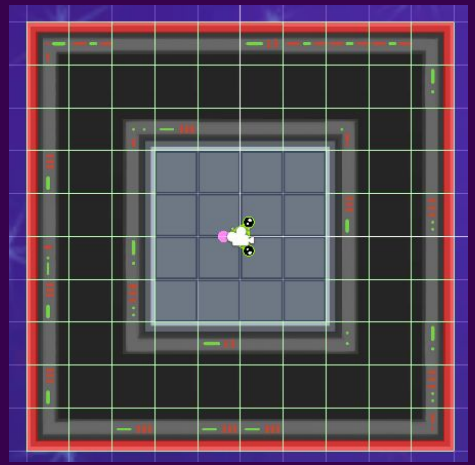
Open the Tile Palette window by going to the top tab and navigating to Window > 2D > Tile Palette.

Step 6:

In the tile palette window, click on a tile to select it, then draw your environment on in the scene editor.

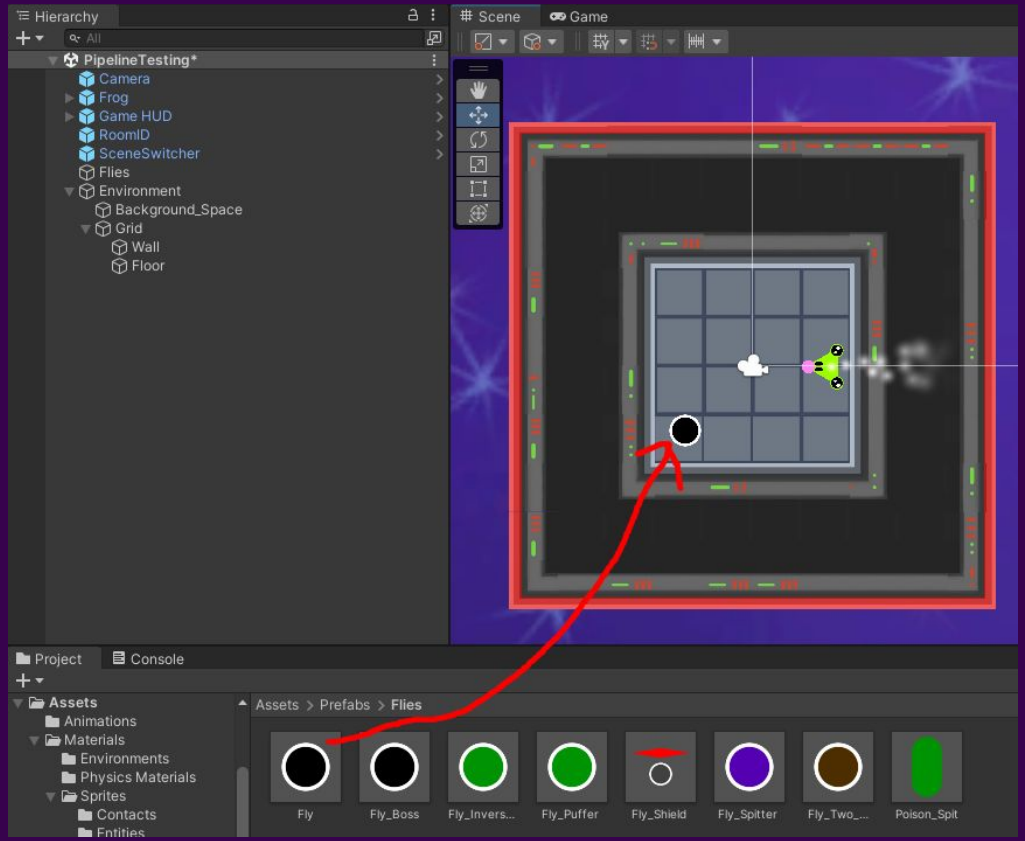
Pay attention to the active tilemap – the tilemap that your tiles will be drawn on – as the Floor tilemap has no collision. If you select Grid or Wall in the inspector, tiles in the wall tilemap will be highlighted in green.

If using the ship tile palette, use the light gray squares and triangles as the floor, the gray walls as the interior walls, and the red walls as the exterior walls, preferably with one tile of dark space between them (select inside the circle of red walls with lights to find the dark space tile).



Pipeline - Flies

There are 6 different varieties of flies, which can be found in Assets > Prefabs > Flies. To add a fly to the level, drag the prefab from the folder into the level. The following slides describe the functionality and editable values of each fly currently implemented.

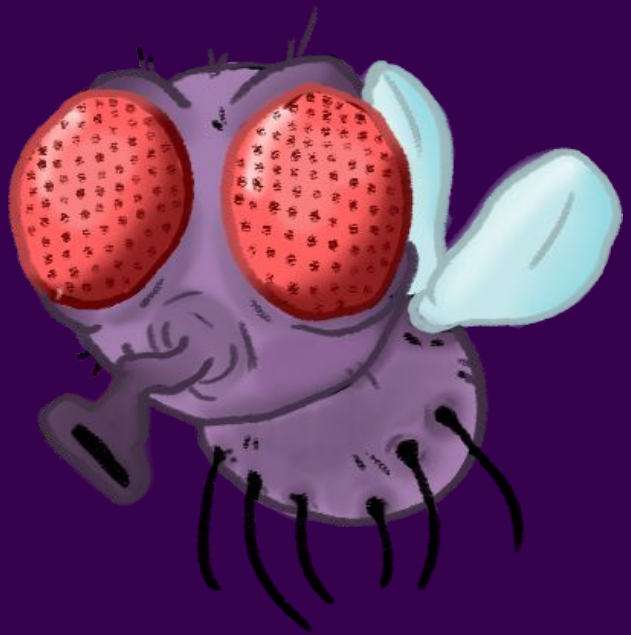


Basic Fly

A harmless fly that stays in one place and does nothing.

Editable Values:

None



Puffer Fly

If AstroFrog is too close, it puffs up and turns green. While puffed, it will damage AstroFrog if they touch it.

Editable Values:
None

Inverse Puffer Fly

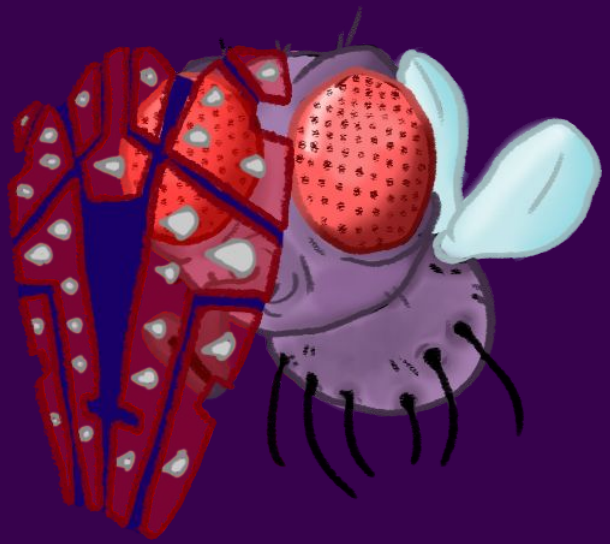
An alternate version of the Puffer Fly is currently in the prefabs folder, which puffs up when AstroFrog is too far rather than too close. We don't want to confuse the player by mixing the regular and inverted puffer flies, so this will likely be removed in a future revision. Do not use it in your levels.

Shield Fly

Carries a shield in front of it that damages AstroFrog if they touch it, forcing AstroFrog to eat it from a different angle.

Editable Values:

None



Spitter Fly

Shoots harmful projectiles at a regular interval.

Editable Values:
Spit Direction: The angle at which the projectiles will be spit towards.

Foreswing: The amount of time to wait before spitting.

Backswing: The amount of time to wait after spitting.

(Currently, foreswing and backswing basically work as just two addends to the time between spits, but backswing time is skipped for the first spit after spawning in.)

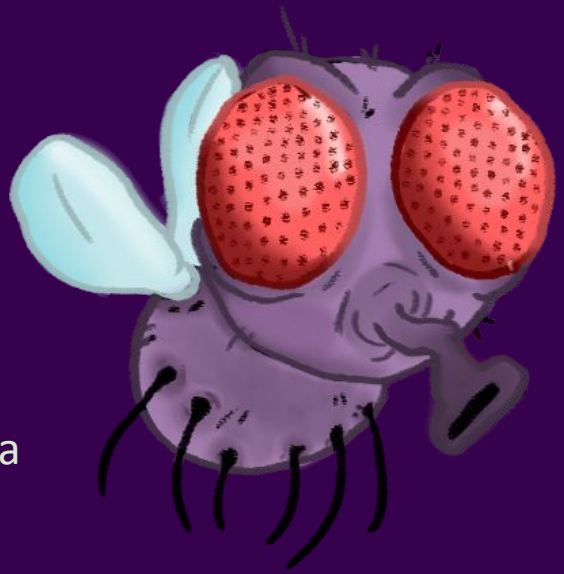
Two Way Fly

Moves in one direction, then begins moving in the opposite direction after hitting a wall.

Editable Values:

Movement Speed: The speed at which the the fly moves.

Movement Angle: The angle that the fly starts moving at (and the opposite of the angle that the fly will move at after hitting a wall).



Boss Fly

The goal for each level. When this fly is collected, the level immediately ends and the player wins the level.

Editable Values:

None