Introduction
○

Git
○
○

A Bigger Game!
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Digital Interactive Experience
Lecture 2

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Introduction
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Git
○
○

A Bigger Game!
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○○○
○○○

Logistics

Course Schedule

Lecture 1: Introduction, Misc., PyGame, Scene I, Character I (Player Basics)

Lecture 2: Git, OOP, Scene II

Lecture 3: Character II (Player, NPC), Interaction, UI, TBA

Lecture 4: Turn-based Combat System, Other Mechanics, TBA

What is GitHub?

GitHub is a web-based platform for version control using Git. It provides a collaborative environment for software development, enabling teams to work on projects together.

Introduction
○

Git
○
●

A Bigger Game!
○○○○○
○○○
○○○

Git Intro Again

Git Intro Again

We will now provide an example repository:

https://github.com/teafrogsf/SI100B_DIE_Repo

NOTE: Please DO NOT use 'git push -f' if you are unsure about the CONSEQUENCES!

Introduction
○

Git
○
○

A Bigger Game!
●○○○○
○○○○
○○○

OOP & Multi Files

Settings

Firstly, for ease of management, you can write all the variables in one file.

Introduction
O

Git
O
O

A Bigger Game!
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OOO
OOO

OOP & Multi Files

Map

Later, we will generate larger and more complex maps. We can write related content in the same file.

Introduction
○

Git
○
○

A Bigger Game!
○○●○○
○○○
○○○

OOP & Multi Files

Scene Manager

To better manage the scenes (maps, cameras, etc.), we can write related content in the same file.

Introduction
○

Git
○
○

A Bigger Game!
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OOP & Multi Files

Player

Similar to Map.py, we can also write player-related content in the same file.

Since our game only has one character - the player, we don't have a "Character Manager" for now.

Introduction
○

Git
○
○

A Bigger Game!
○○○○○●
○○○
○○○

OOP & Multi Files

Main

Finally, we keep the most basic logic framework for the game running in one file.

Introduction
○

Git
○
○

A Bigger Game!
○○○○○
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Tilemap

Tiles

You may have noticed that in pixel games, the map is often composed of individual small "tiles". We refer to this type of map as a *tilemap*.

pygame.sprite

In Pygame, a sprite is a 2D image or animation that can be manipulated independently of the background or other sprites. The pygame.sprite.Sprite class serves as a base class for creating sprite objects. It includes features to manage the position, movement, and drawing of sprites.

Introduction
○

Git
○
○

A Bigger Game!
○○○○○
○○●○○
○○○

Tilemap

Customize Your Map

From now on, you can try customizing your map on your own!

Introduction
○

Git
○
○

A Bigger Game!
○○○○○
○○○
●○○

A Larger and More Complex Scene

Create A Bigger Scene

Sometimes, you may feel that your map should be larger than your window. This is quite common because the size of the window is always limited.

Introduction
O

Git
O
O

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A Larger and More Complex Scene

Camera Following

However, if the map is larger than the window, it means that if the map doesn't move, your character will walk outside the window. We need to make the camera follow it, in other words, "make the map move".

Introduction
○

Git
○
○

A Bigger Game!
○○○○○
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A Larger and More Complex Scene

Obstacles

There might be some impassable areas on the map. We need to ensure that the player cannot move through these areas.