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Digital Interactive Experience
Lecture 2

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ShanghaiTech University

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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.

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!

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OOP & Multi Files

Settings

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

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OOP & Multi Files

Map

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

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OOP & Multi Files

Scene Manager

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

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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.

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OOP & Multi Files

Main

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

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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*.

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pygame.sprite

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Tilemap

Customize Your Map

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

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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.

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".

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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.