Digital Interactive Experience
Lecture 3

Yuhan Cao

ShanghaiTech University

December 26, 2023

Course Schedule

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

Lecture 2: Git, OOP, Scene II

Lecture 3: Scene II (cont'd), Character II (Player, NPC), UI I

Lecture 4: Game Development, Art

Introduction
○

A Bigger Game!
●○○

More About Characters
○
○○
○○○

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".

Introduction
O

A Bigger Game!
○○●

More About Characters
○
○○
○○○

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.

Animations

We don't want our protagonist to be just a static image. Therefore, we need to consider making it move.

Introduction
○

A Bigger Game!
○○○

More About Characters
○
●○
○○○

NPCs

Another Character

There shouldn't be only one character in the game. We need other characters as well, even though we can't control them. The player should be able to interact with them.

Introduction

A Bigger Game!
○○○

More About Characters
○
●○
○○○

NPCs

Another Character

There shouldn't be only one character in the game. We need other characters as well, even though we can't control them. The player should be able to interact with them.

Of course, first, we have to create them.

Introduction
○

A Bigger Game!
○○○

More About Characters
○
○●
○○○

NPCs

Patrolling

Since we cannot control NPCs, they must have their own behavioral
logic. Here, we only demonstrate one type of behavior, namely "patrolling".

Introduction

A Bigger Game!
○○○

More About Characters
○○
●○○

Interaction

Triggers

Firstly, the initiation of an interaction should meet certain conditions. Here, what we are demonstrating is that when the player approaches the NPC, the interaction will automatically trigger.

Introduction
○

A Bigger Game!
○○○

More About Characters
○
○○
○●○

Interaction

A Simple Dialog Box

What kind of interaction should we have between players and NPCs?
The simplest way is "Dialogue".

A Simple Dialog Box

What kind of interaction should we have between players and NPCs? The simplest way is "Dialogue".

However, as a game, we need to display what NPCs say in the form of text. We need a dialog box.

Layers

After implementing obstacles and the dialog box, you may find that the rendering order is important. We can observe that all items in the game imply a concept of "layers".

Layers

After implementing obstacles and the dialog box, you may find that the rendering order is important. We can observe that all items in the game imply a concept of "layers".

For example, the tilemap is the bottom layer, players, NPCs, and obstacles are the middle layer, and the dialogue box is the top layer. Currently, our game involves only these three layers.