

Python Multiplayer Adventures

Difficulty: This course assumes no coding experience in Python but moves quickly to engage older students ages 12+.

Objective: To teach students how to create their own programs in python. Students will learn to code python in its native environment using IDLE. Students will code in python 2.7 and later use a popular library kivy to create user interfaces and code a multiplayer space fighter game.

Assessments: There are quizzes at the end of each lesson consisting of 5 random questions. There are two timed tests.

Uploads: Students will upload four separate projects. Choose your own adventure game, Multiplayer Dungeon Escape, Paint program and Multiplayer Space Adventure.

Length: This course is designed to be one semester worth of content assuming around 2 - 3 hours / week engagement.

Lesson Plan:

Lesson 1: Python 2.7 Unpacking and setup. Getting your python environment setup.

Lesson 2: Choose your own adventure game, creating player, money, monsters and weapons.

Lesson 3: Complete choose your own adventure game, adding random events and customizing.

Lesson 4: Kivy UI for Multiplayer Space Adventure game controlling locations and lag time.

Lesson 5: Background, players spaceship and having multiple objects on the screen.

Lesson 6: Controlling all objects, updating positions, centering screen and removing. Playing the game in a multi player environment!

Lesson 7: Multiplayer Dungeon Escape: Coding the server and passing messages.

Lesson 8: Logging users, creating real commands, multiuser store, portal display.

Lesson 9: Dungeon map with rooms and moving throughout the dungeon.

Lesson 10: Dungeon items, winning and broadcasting messages.

Lesson 11: Creating and saving dungeon into JSON files, customizing, making it live.