

Into to Java

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

Objective: To teach students how to create their own programs in Java. Students will learn to code java in its native environment using Eclipse a free open source IDE. Students will code multiple programs, games and exercises to learn Java. The final projects will be using Swing to create a UI to play Tic Tac Toe and create a image shuffler puzzle.

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

Uploads: Students will upload projects at the end of each lesson.

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

Lesson Plan:

Lesson 1: Workspace setup for Java and Eclipse learning Classes and how to Print

Lesson 2: Data Types – going over all the primitive data types

Lesson 3: Using Print statements and variables to create a crazy mad lib

Lesson 4: Using If Statements and logic to play Paper Rock Scissors plus modulus with FizzBuzz

Lesson 5: Do while and while loops to create a Guess My Number Game

Lesson 6: If statements and random numbers to play a stick game against the computer

Lesson 7: Learning Arrays and more Modulus to create logic to randomly shuffle and deal a deck of cards

Lesson 8: Using Double Arrays to create a grid for your Battleship Game

Lesson 9: UI window creation with Swing – creating a Tic Tac Toe game

Lesson 10: UI creation with Swing – creating an image slicer picture puzzler