Course goal:

Students will learn the basics of Object-Oriented Programming (OOP) with Java. Students will learn the fundamentals such as variables, methods, control structures, data types, and file execution. Students will create, test, and deploy a game modification for Minecraft: Java Edition.

This course will use a project-education setup, each week containing one project and one educational topic.

Prerequisites:

* Understanding of what a mouse, keyboard, computer, monitor, and speakers are
* Understanding of how to navigate Windows file systems
* Understanding of file endings (.txt, .java, .exe, etc.)
* Basic understanding of what Minecraft is and how code executes

Master Plan:

Education: Project:

1. Environment set up Hello World
   1. Optional, if necessary, crash course on Programming and computer basics
   2. If necessary, GitHub integration and basics can be taught here
2. Data Types & control structure Chatbot
3. Inheritance, Objects, and classes Custom Item
4. Switch, if, for, and while Custom Command
5. Arrays, ArrayLists, and iteration Inventory Manipulation
6. Polymorphism Custom Armor & Tools
7. How to create a project, proper planning Final Project

Students are expected to complete each project in a timely manner and understand the concepts discussed in class.

Each week, the class will meet 2 times for 1 hour each. Students may need to work outside this time to complete the project and learn the vocabulary. Tutoring is available upon request.

The first class will be for the lecture, the second for the project. If the lecture concludes early, students may begin their projects during the first class. The last 10 minutes of the second class will be devoted to a weekly quiz over the topics taught in the lecture. Students will then submit their projects for evaluation.

What this covers:

* Client-side modifications, including items, blocks, and mobs

What this does NOT cover:

* Texture packs
* Data packs
* Server-side modifications such as plugins