

# AI Coding (11-15 y/o)

## AI005 - In-depth with Java Programming

Java programming is a course designed to give an in-depth understanding to future software developers. This course is 4 sessions, all of which are tailored toward students who are a bit older and wish to understand all of what the field of programming has to offer. In this course, we dive into some of the more technical concepts that most students wouldn't see until college, and we introduce them to the students in easily digestible chunks.

### Contents

#### Part I: Introduction to Java programming

- **Session 1** : Introductory Topics, Data Types, System Output and Input
  - Project Lab 1 - Mini market
  - Project Lab 2 - Rock paper scissors game
- **Session 2** : Decision Structures and Boolean, Loops, Exceptions, Arrays
  - Final Project - Mini market revisited: using arrays and loops

#### Part II: Advanced Java

- **Session 3** : Base Systems, Math Operators, Object-Oriented Programming
  - Project Lab 1 - Create a calculator
  - Project Lab 2 - Create your own objects that solve a math problem
- **Session 4** : Threads, Advanced Exceptions, ArrayLists, New Additions
  - Final Project - Create your own objects expanded, Use everything you learned to create anything you want

Syllabus: <https://school.thinkland.ai/syllabus/>

Curriculum: <https://school.thinkland.ai/curriculum.pdf>

### Skills to develop

Preparation for AP Java

### Teachers

- AI005 teacher Sadia S. : <https://school.thinkland.ai/teachers/1113>

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