

# Java Programming Summer Course

Learn fundamental Java programming skills and prepare for AP Computer Science or college-level programming. Beginners will become advanced coders through our fast-moving curriculum and project-based approach to learning.

Group classes in NYC and onsite training is available for this course. For more information, email [hello@nextgenbootcamp.com](mailto:hello@nextgenbootcamp.com) or visit: [nobledesktop.com/nextgen/classes/java-summer-course](https://nobledesktop.com/nextgen/classes/java-summer-course)



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## Course Outline

### Section 1

#### Coding Overview

- Lexical & Syntax Analysis
- Working with the Terminal
- Computer Systems
- First Program

#### Variables, Data Types, and Operators

- Basic Variable Usage
- Data Types
- Operators
- Proper Programming Practices

### Section 2

#### Control Flow

- Conditional Statements
- Truth Tables
- For Loops
- While Loops

#### Functions

- Declarations
- Overloading
- Return Values

## Section 3

### Arrays, Strings, and Dictionaries

- Array Processing
- Multi-dimensional Arrays
- String Methods
- String Manipulation
- Operations in Dictionaries

## Section 4

### Input/Output Files

- Streams and Files
- String Formatting
- Redirecting Output

## Section 5

### Object Oriented Programming

- Encapsulation
- Classes
- Inheritance
- Polymorphisim
- Abstraction

## Section 6

### Recursion

- Recursive Functions
- Recurrence Relation
- Base Case Analysis
- Motivation Behind Recursion