

Module 1

Java Fundamentals

5 Weeks

- 1 **Week 1 - Intro to Java and important installations:** Understand how to read input in Java.

Classes:

- Java - What | Why | How , Java internals JVM | JRE | JDK
- Installation
- Java - Printing(Output), variable , data types
- Java i/o - reading inputs in Java

- 2 **Week 2 - Get coding!:** Get started on coding by writing simple code that will perform beginner operations on Java. Close out the week with your first problem solving classes to build the right thought process when dealing with coding challenges.

Classes:

- Number system - Introduction to decimal and binary and their interconversion
- Java operators and their precedence and associativity.
- Java conditionals if /else/ switch
- Java loops for/while/do-while

- 3 **Week 3 - Building basic capability in Java:** Continue your coding journey in this week - covering more problem solving and more concepts.

Classes:

- Problems on Java loops - 1
- Problems on Java loops - 2
- Java - Object and Class Introduction
- Java - Methods
- Pass by Value, Pass by ref, scope of variables

Test

- 4 **Week 4 - Arrays Week:** Go deep into Arrays, a critical concept that most beginners struggle with. Understand Arrays and typical interview questions that are asked in these concepts by top product companies.

Classes:

- Arrays - 1 (basics)
- Arrays - 2 (basics)
- Patterns of questions asked in Array - 1
- Patterns of questions asked in Array - 2

- 5 **Week 5 - Arrays Week 2:** Finish Arrays by covering problem solving in 2D Arrays.

Classes:

- Patterns of questions asked in 2D Arrays - 1
- Patterns of questions asked in 2D Arrays - 2
- Patterns of questions asked in 2D Arrays - 3
- ArrayList in Java Collection Framework

Test