Java Programming

Month 1: Introduction to Java Basics

Week 1: Introduction to Programming and Java

- Overview of programming concepts
- Installing Java and an IDE
- First Java program

Week 2-3: Java Basics

- Variables, data types, and operators
- Control flow (if statements, loops)
- Functions and basic input/output

Week 4-5: Object-Oriented Programming (OOP) in Java

- Introduction to classes and objects
- Encapsulation, inheritance, and polymorphism

Week 6: Java Collections Framework

- Introduction to collections (lists, sets, maps)
- Working with ArrayLists and HashMaps

Month 2: Advanced Java Concepts and Project Work

Week 1-2: Exception Handling and File I/O

- Handling exceptions in Java
- Reading and writing to files

Week 3-4: Java GUI (Graphical User Interface) Programming

- Basics of JavaFX for building GUI applications
- Event handling and UI components

Week 5-6: Final Project and Web Development with Java (Optional)

- Guided final project work
- Introduction to web development with Java (e.g., Servlets and JSP)