Introduction to Java programming concepts, focusing on the fundamentals required for understanding data structures and algorithms. Topics include:

- Java basics: variables, data types, loops, and conditionals.
- Object-oriented programming (OOP): classes, objects, inheritance, polymorphism, and interfaces.
- Working with arrays, lists, and strings.
- Exception handling.
- Basic input/output (I/O) operations.

Q1. Write a Java program that accepts a number from the user and prints whether the number is prime.

Q2. Implement a simple class Shape with a method area().
Extend Shape with two subclasses Circle and Rectangle, overriding the area() method in each subclass.
Demonstrate the use of polymorphism by writing a program that calculates the area of different shapes.

Q3. Write a Java program that takes array from user.

Q4. Write a program that reads from a text file and counts the number of words. Handle potential I/O exceptions.