

## Slip 30

### 10 Marks:

```
java
Copy code
import java.util.Scanner;

class PrimeNumber {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a number: ");
        int number = sc.nextInt();
        boolean isPrime = true;

        for (int i = 2; i <= Math.sqrt(number); i++) {
            if (number % i == 0) {
                isPrime = false;
                break;
            }
        }

        if (isPrime && number > 1) {
            System.out.println(number + " is a prime number.");
        } else {
            System.out.println(number + " is not a prime number.");
        }
    }
}
```

### 20 Marks:

```
java
Copy code
import java.util.Scanner;

class Student {
    private int rollNo;
    private String name;
    private double[] marks;
    private int numberOfSubjects;

    public Student(int rollNo, String name, int numberOfSubjects) {
        this.rollNo = rollNo;
        this.name = name;
        this.numberOfSubjects = numberOfSubjects;
        this.marks = new double[numberOfSubjects];
    }

    public void inputMarks() {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter marks for " + name + ": ");
        for (int i = 0; i < numberOfSubjects; i++) {
            System.out.print("Subject " + (i + 1) + ": ");
            marks[i] = sc.nextDouble();
        }
    }
}
```

```

    }
}

public double calculateAverage() {
    double total = 0;
    for (double mark : marks) {
        total += mark;
    }
    return total / numberOfSubjects;
}

public void display() {
    System.out.println("Roll No: " + rollNo + ", Name: " + name + ",
Average Marks: " + calculateAverage());
}
}

public class Main {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter number of students: ");
        int n = sc.nextInt();
        Student[] students = new Student[n];

        for (int i = 0; i < n; i++) {
            System.out.print("Enter Roll No: ");
            int rollNo = sc.nextInt();
            sc.nextLine(); // Consume newline
            System.out.print("Enter Name: ");
            String name = sc.nextLine();
            System.out.print("Enter number of subjects: ");
            int numberOfSubjects = sc.nextInt();
            students[i] = new Student(rollNo, name, numberOfSubjects);
            students[i].inputMarks();
        }

        System.out.println("Student Details:");
        for (Student student : students) {
            student.display();
        }
    }
}

```