Lab: Object Oriented Programming using Java

Date: 25/02/2026

Assignment -5

Q.1.   A number array contains values from 1 to 20, but one number is missing and another number is repeated. Write a program to find both the missing number and the duplicate number.

Q.2.   A library records the number of books issued each day for 15 days. Write a program to determine which day had the highest issues, which day had the lowest, and whether there exists a sequence of at least 3 days where the number of books issued kept decreasing continuously.

Q.3.   A university stores marks of 100 students in 3 internal tests in a 2-D array. Write a program in Java to perform following:
   a. Calculate best test (highest average marks)
   b. Find topper of each test
   c. Count number of students improving consistently (Test1 < Test2 < Test3)
   d. Display sorted final averages

Q.4.   Write a program in Java to create a class Student with attributes name and age. Create one object, assign values, and print them.

Q.5.   Write a program in Java to create a class Car with color and model. Create 2 objects and display their details.

Q.6.   Write a program to create a class Circle with data member radius and methods calculateArea() and calculateCircumference() to compute and display the area and circumference of the circle.

Q.7.   Write a program to create a class Student with data members name, rollNo, and marks. Create a method to display student details and another method to calculate grade based on marks.

Q.8.   Write a program to create a class BankAccount with data members accountNumber and balance. Write methods deposit() and withdraw() to update and display balance.