Subject: OOP

Semester: 3 CSE-1 (Batch A & B)

Problem Statement:

Design a Java application that models an employee badge system using class and constructor fundamentals, and applies string manipulation for pattern analysis. The system should:

- Capture key details of an employee, including identity and departmental association.
- Evaluate the assigned badge code for its structural integrity, where a badge is only considered valid if:
- It contains exactly 10 characters, and
- Includes at least two special (non-alphanumeric) characters.
- Provide a readable output indicating whether the badge meets the required standards and how many special characters it contains.

Input Format

Employee information (per object):

ID (integer)

Name (string)

Department (string)

Badge Code (10-character string)

Output Format

Employee e1 = new Employee(101, "Riya", "IT", "AB@#45FG$Z");

Test Case 1

Input:

Employee e1 = new Employee(101, "Riya", "IT", "AB@#45FG$Z");

Output:

ID: 101, Name: Riya, Dept: IT, Badge: AB@#45FG$Z

Special Characters: 4

Test Case 2

Input:

Employee e2 = new Employee(102, "Arjun", "HR", "A1B2C3D4E5");

Output:

ID: 102, Name: Arjun, Dept: HR, Badge: A1B2C3D4E5

Special Characters: -1