Student Record Management System

Problem Statement

Create a Student Record Management System that allows users to input, display, and calculate grades for students. The system uses Object-Oriented Programming in Java to manage student data such as roll number, name, course, marks, and grade.

Objectives

- Implement OOP concepts such as classes, objects, and methods

- Use constructors, control structures, arrays/ArrayList, and input/output

- Apply conditional statements and loops

- Calculate grades based on marks

Learning Outcomes

1. Understand fundamentals of object-oriented programming

2. Implement constructors and methods in Java

3. Work with arrays and strings

4. Use loops and conditions to control program flow

Class Hierarchy

Person (Base Class)

- name (String)

Student (Derived from Person)

Fields:

- rollNo (int)

- name (String)

- course (String)

- marks (double)

- grade (char)

Methods:

- inputDetails()

- displayDetails()

- calculateGrade()

Data Types Used

- String

- int

- double

- char

Program Operations

1. Add Student

2. Display All Students

3. Exit

Grade Calculation Rule

- A : 90–100

- B : 75–89

- C : 60–74

- D : Below 60

How to Run

Compile:

javac StudentRecordApp.java

Run:

java StudentRecordApp