

Student Grade Management System

Submitted By: Prashasti Mathur
Reg.number: 24BSA10170
Course / Subject: Programming in Java
Slot: B11+B12+B13+E11+E12
Faculty: Baseera A

Objective:

The objective of this project is to develop a Java program to manage student marks. The program calculates total marks, percentage, and grade for 5 subjects and displays a student report using a menu-driven system

Technologies Used

Java (JDK 17+)

IntelliJ IDEA

Class Design

Student.java

1) Variables:

name, rollNo, maths, science, english, computer, social, total, percentage, grade

2) Methods:

calculateTotal() → sums all subject marks

calculatePercentage() → calculates percentage

calculateGrade() → assigns grade based on percentage

displayDetails() → prints student details

3)Main.java

Menu-driven program with options:

1. Add Student
2. Display All Students
3. Exit

4)Algorithm / Program Flow

1. Start program
2. Display menu: Add Student / Display All Students / Exit
3. Take user input
4. If user selects **Add Student**:
 - i) Enter Name, Roll No, Marks for 5 subjects
 - ii) Call calculateTotal(), calculatePercentage(), calculateGrade()
 - iii) Add student to list
5. If user selects **Display All Students**:
 - i) Display Name, Roll No, Marks, Total, Percentage, and Grade
6. Repeat menu until Exit

5) Testing / Sample Data

Sample Students:

Name	Roll No	Maths	Science	English	Computer	Social	Total	Percentage	Grade
Asha	1	95	88	76	92	85	436	87.2%	B
Rohan	2	78	82	69	85	80	394	78.8%	C
Priya	3	55	62	58	60	59	294	58.8%	F

```
STUDENTGRADESYSTEM VERSION CONTROL

MAIN.JAVA STUDENT.JAVA

public class Student { NO USAGES
    char grade; 6 USAGES

    public void calculateTotal() { NO USAGES
        total = maths + science + english + computer + social;
    }

    public void calculatePercentage() { NO USAGES
        percentage = total / 5.0;
    }

    public void calculateGrade() { NO USAGES
        if (percentage >= 90) grade = 'A';
        else if (percentage >= 80) grade = 'B';
        else if (percentage >= 70) grade = 'C';
        else if (percentage >= 60) grade = 'D';
        else grade = 'F';
    }

    public void displayDetails() { NO USAGES
        System.out.println("Name: " + name);
        System.out.println("Roll No: " + rollNo);
        System.out.println("Marks -> Maths: " + maths + ", Science: " + science +
                           ", English: " + english + ", Computer: " + computer +
                           ", Social: " + social);
        System.out.println("Total: " + total);
        System.out.println("Percentage: " + percentage);
        System.out.println("Grade: " + grade);
        System.out.println("-----");
    }
}
```

program_code

```
"C:\Program Files\Java\jdk-22\bin\java.exe" "-javaagent:Enter Science Marks: 62
1. Add Student
2. Display All Students
3. Exit
Enter your choice: 1
Enter Name: Asha
Enter Roll No: 1
Enter Maths Marks: 95
Enter Science Marks: 88
Enter English Marks: 76
Enter Computer Marks: 92
Enter Social Marks: 85
Student added successfully!
1. Add Student
2. Display All Students
3. Exit
Enter your choice: 2
Name: Asha
Roll No: 1
Marks > Maths: 95, Science: 88, English: 76, Computer: 92, Social: 85
Total: 436
Percentage: 87.2
Grade: B
-----
Name: Rohan
Roll No: 2
Marks > Maths: 78, Science: 82, English: 69, Computer: 85, Social: 80
Total: 394
Percentage: 78.8
Grade: C
-----
Name: Priya
Roll No: 3
Marks > Maths: 55, Science: 62, English: 58, Computer: 60, Social: 59
Total: 294
Percentage: 58.8
Grade: F
-----
1. Add Student
2. Display All Students
3. Exit
Enter your choice: 3
Exiting...
Process finished with exit code 0
```

output

6)Conclusion

This project helped me understand object-oriented programming concepts in Java, such as classes, objects, methods, and ArrayList. It demonstrates a practical application of managing student grades in a simple, organized, and user-friendly way.