

TASK 3: Control Flow Based Student Result System

What is the purpose of this task?

The main purpose of this task is to check your understanding of Java control flow statements such as:

- if–else
- switch
- loops
- break and continue
- methods (functions)
- input validation

This task simulates a real-life student result processing system where:

- A student enters marks
- The system checks validity
- Calculates percentage
- Assigns grades

- Shows final results

code:-

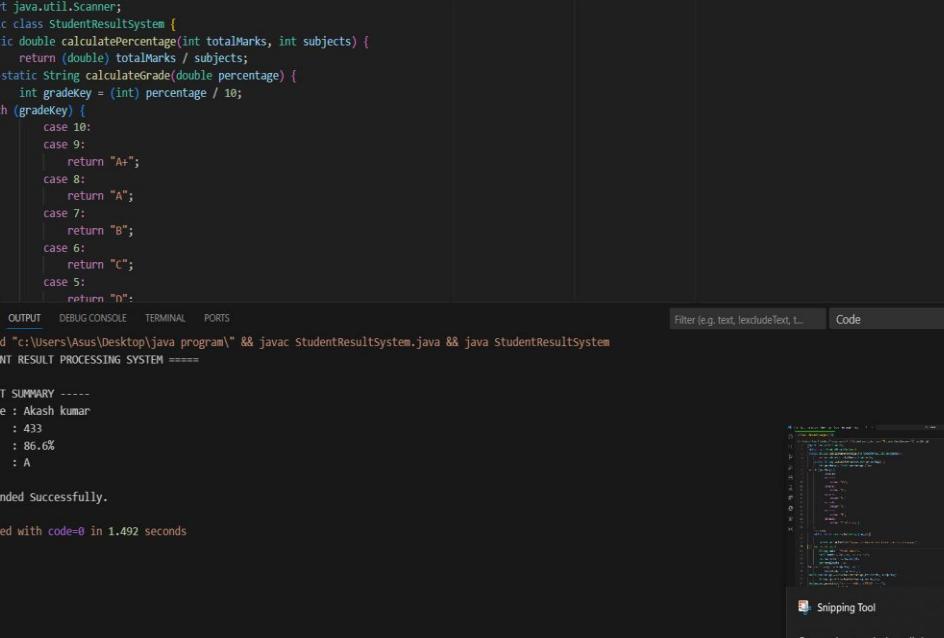
The screenshot shows a Java code editor with the following code:

```
File Edit Selection View Go Run Terminal Help ⌘ Search
J StudentResultSystem.java x
C:\Users\Asus\Desktop\java program > J StudentResultSystem.java > StudentResultSystem > main(String[])
1 import java.util.Scanner;
2 public class StudentResultSystem {
3     static double calculatePercentage(int totalMarks, int subjects) {
4         return (double) totalMarks / subjects;
5     }
6     static String calculateGrade(double percentage) {
7         int gradeKey = (int) percentage / 10;
8         switch (gradeKey) {
9             case 10:
10             case 9:
11                 return "A+";
12             case 8:
13                 return "A";
14             case 7:
15                 return "B";
16             case 6:
17                 return "C";
18             case 5:
19                 return "D";
20             default:
21                 return "F (Fail)";
22         }
23     }
24     public static void main(String[] args) {
25         System.out.println("===== STUDENT RESULT PROCESSING SYSTEM =====");
26         // Hard-coded input
27         String name = "Akash kumar";
28         int[] marks = {85, 90, 78, 88, 92};
29         int subjects = marks.length;
30         int totalMarks = 0;
31         for (int i = 0; i < subjects; i++) {
32             totalMarks += marks[i];
33         }
34         double percentage = calculatePercentage(totalMarks, subjects);
35         String grade = calculateGrade(percentage);
36         System.out.println("----- RESULT SUMMARY -----");
37         System.out.println("Student Name : " + name);
38         System.out.println("Total Marks : " + totalMarks);
39         System.out.println("Percentage : " + percentage + "%");
40         System.out.println("Grade : " + grade);
41     }
}
```

The code defines a `StudentResultSystem` class with a `main` method. It includes methods to calculate the percentage and grade based on the total marks and number of subjects. The `main` method hard-codes the student's name as "Akash kumar" and provides sample marks for five subjects. It then calculates the total marks, percentage, and grade, and prints them out.

Ln 25, Col 1 Spaces:4 UTF-8 LF {} Java ⓘ Go Live

OUTPUT:-



File Edit Selection View Go Run Terminal Help ← → Q Search

C:\> Users > Asus > Desktop > java program > J StudentResultSystem.java > StudentResultSystem > main(String[])

```
1 import java.util.Scanner;
2 public class StudentResultSystem {
3     static double calculatePercentage(int totalMarks, int subjects) {
4         return (double) totalMarks / subjects;
5     }
6     static String calculateGrade(double percentage) {
7         int gradeKey = (int) percentage / 10;
8         switch (gradeKey) {
9             case 10:
10             case 9:
11                 return "A+";
12             case 8:
13                 return "A";
14             case 7:
15                 return "B";
16             case 6:
17                 return "C";
18             case 5:
19                 return "D";
20         }
21     }
22 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Filter (e.g. text, excludeText, t... Code

[Running] cd "c:\Users\Asus\Desktop\java program" && javac StudentResultSystem.java && java StudentResultSystem

===== STUDENT RESULT PROCESSING SYSTEM =====

----- RESULT SUMMARY -----
Student Name : Akash kumar
Total Marks : 433
Percentage : 86.6%
Grade : A

? Program Ended Successfully.

[Done] exited with code=0 in 1.492 seconds

Main purpose of this task:-

Calculate the result