## **(2)** Task: Student Grade Analyzer

### Objective:

Write a Java program that reads a list of student names and their grades, then performs the following operations:

### 1. Input:

- Ask the user to enter the number of students.
- For each student, enter their name and grade (as a String and an integer).

### 2. Processing:

- Store the data in two arrays: String[] names and int[] grades.
- Use StringBuilder to build a formatted output string.
- o Compute:
  - The average grade.
  - The highest and lowest grades.
  - The number of students who passed (grade  $\geq$  60).

## 3. Output:

- Print the following using System.out.println and String.format:
  - A table of all students and their grades.
  - The average, max, and min grades.
  - The number of students who passed.

# Requirements (to ensure you use built-in methods):

- Use Scanner for input.
- Use StringBuilder to build the output table.
- Use Arrays.sort() to sort the grades (optional, but good practice).
- Use String.format() for aligned output.
- Use a helper method to compute the average.

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## **Example Output:**

```
Enter number of students: 3
Enter name and grade for student 1: Ali 85
Enter name and grade for student 2: Sara 92
Enter name and grade for student 3: Ahmed 55
=== Grade Report ===
Name
      Grade
Ali
      85
Sara
       92
Ahmed 55
Average Grade: 77.33
Highest Grade: 92
Lowest Grade: 55
Passed: 2 students
```

# 🗱 Tips:

- Use Scanner.nextLine() and split(" ") to read name and grade.
- Use Integer.parseInt() to convert the grade string to an integer.
- Use StringBuilder to append each row of the table.
- Use a loop to compute sum, max, and min.

This task should take **30–60 minutes**, covers **Chapters 2–7 and 10**, and uses many built-in methods and concepts like arrays, strings, scanning, formatting, and simple logic. Let me know if you want a starter code snippet or hints!