Expt 9 - Task 1

Aim: Design a structure student_record to contain   name, roll_number, and total marks obtained. Write a program to read 5 students data from the user and then display the topper on the screen

⚙ Algorithm: main() Function

1. **Start**

2. Display program title "*** Topper Finder ***".

3. Set n = 5.

4. Declare an array students[n] of type struct student_record.

5. Call input_student_data(students, n) to get details of all students.

6. Call find_topper(students, n) and store the returned value in topper_index.

7. Display "Topper Details".

8. Print students[topper_index].name, students[topper_index].roll_number, and students[topper_index].total_marks.

9. **Stop**

⚙ Algorithm : input_student_data(students, n)

1. **Start**

2. **Repeat** for each student i from 0 to n - 1
   a. Display "Enter details for student (i + 1)".
   b. Display "Name: "

   - o   Use getchar() to consume any leftover newline from previous input.

   - o   Read the student's name (students[i].name).
     c. Display "Roll Number: "

   - o   Read students[i].roll_number.
     d. Display "Total Marks: "

   - o   Read students[i].total_marks.

3. **End For**

4. **Return**

⚙ Algorithm: find_topper(students, n)

1. **Start**

2. Initialize topper_index = 0 // Assume first student is topper

3. **Repeat** for each student i from 1 to n - 1:
   a. If students[i].total_marks > students[topper_index].total_marks,
   then set topper_index = i.

4. **End For**

5. **Return topper_index**