S.No: 12	Exp. Name: ***Calculate the grade of a student.***	Date:2025-09-18

Aim:

Write a Java program that calculates the grade of a student based on their marks in three subjects: Math, Science, and English. Your program should handle the case where the user enters a non-numeric value for marks and also the program should validate the input to ensure that it is a numeric value between 0 and 100.
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Use the following grading criteria:

- If the average marks are greater than or equal to 90, the grade is 'A'.
- If the average marks are between 80 and 89 (inclusive), the grade is 'B'.
- If the average marks are between 70 and 79 (inclusive), the grade is 'C'.
- If the average mark is less than 70, the grade is 'D'.

Input Format:

The three lines of input are the marks for three subjects i.e. Math, Science and English.

Output Format:

The output is the grade of the student based on the average marks.

Note: Refer to the displayed test cases for the error message.

Source Code:

q28311/GradeCalculator.java

```
package q28311;
import java.util.Scanner;
public class GradeCalculator {
   public static void main(String[] args){
      // write the code..
      Scanner sc = new Scanner(System.in);
        try {
         double math = readValidMarks(sc);
         double science = readValidMarks(sc);
         double english = readValidMarks(sc);
         double av = (math+science+english)/3;
         char grade;
         if(av>=90)
            grade = 'A';
         else if(av>=80)
            grade='B';
         else if(av>=70)
            grade = 'C';
         else
            grade = 'D';
         System.out.println(grade);
        } catch (NumberFormatException e) {
           System.out.println("Invalid input");
        }
      catch(Exception e){
         System.out.println("Marks should be between 0 and 100");
      }
}
private static double readValidMarks(Scanner sc){
```

```
       String in = sc.nextLine().trim();
       if(in.startsWith("(") && in.endsWith(")"))
          in = in.substring(1,in.length()-1);

    try{
       double m =Double.parseDouble(in);
       if(m<0||m>100)
          throw new IllegalArgumentException();
       return m;
    }
    catch(NumberFormatException e){
       throw new NumberFormatException();
    }
 }
 }
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
98.5
92.0
52.6
B

Test Case - 2
User Output
12.t
Invalid input

Test Case - 3
User Output
101.25
Marks should be between 0 and 100