TASK 1

Task: Create a simple Java application that simulates a basic calculator. The calculator should be able to perform addition, subtraction, multiplication, and division operations based on user input.

Program:

```java
import java.util.Scanner;
public class SimpleCalculator {

    public static void main(String[] args) {
        Scanner reader = new Scanner(System.in);
        String continueInput = "yes";
        while (continueInput.equalsIgnoreCase("yes")) {

            System.out.println("Enter first number:");
            double num1 = reader.nextDouble();

            System.out.println("Enter an operator (+, -, *, /):");
            String operator = reader.next();

            if (operator.length() != 1)
            {
                System.out.println("Error! Invalid operator input. Please enter only one operator (+, -, *, /).");
                reader.next();

            }
            System.out.println("Enter second number:");
            double num2 = reader.nextDouble();

            double result;

            char operatorInput = operator.charAt(0);
```

```java
        switch (operatorInput) {

            case '+':

                result = num1 + num2;

                break;

            case '-':

                result = num1 - num2;

                break;

            case '*':

                result = num1 * num2;

                break;

            case '/':


                if (num2 != 0) {

                    result = num1 / num2;

                }

                else {

                System.out.println("Error! Division by zero is not allowed.");

                return;

                }

                break;

            default:

                System.out.println("Invalid operator! Please use +, -, *, or /.");

                return;

            }

        System.out.println("The result is: " + result);

        System.out.print("Do you want to continue? (yes/no): ");

        continueInput = reader.next();


        }

    }

}
```

Output:

```
Windows PowerShell                                                    ─  □  ✕

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\ASUS\OneDrive\Desktop\Tarento\JAVA BACKEND TASK> java SimpleCalculator.java
Enter first number:
10
Enter an operator (+, -, *, /):
++
Error! Invalid operator input. Please enter only one operator (+, -, *, /).
+
Enter second number:
10
The result is: 20.0
Do you want to continue? (yes/no): yes
Enter first number:
12
Enter an operator (+, -, *, /):
/
Enter second number:
0
Error! Division by zero is not allowed.
PS C:\Users\ASUS\OneDrive\Desktop\Tarento\JAVA BACKEND TASK> java SimpleCalculator.java
Enter first number:
12
Enter an operator (+, -, *, /):
-
Enter second number:
2
The result is: 10.0
Do you want to continue? (yes/no): no
PS C:\Users\ASUS\OneDrive\Desktop\Tarento\JAVA BACKEND TASK>
```