import java.util.Scanner;

public class ScientificCalculator {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

double result = 0.0;

System.out.println("Welcome to the Scientific Calculator!");

System.out.print("Enter the first number: ");

double num1 = scanner.nextDouble();

System.out.print("Enter the operation (+, -, \*, /, sqrt, ^, sin, cos, tan): ");

String operation = scanner.next();

if (operation.equals("sqrt")) {

result = Math.sqrt(num1);

} else if (operation.equals("sin")) {

result = Math.sin(Math.toRadians(num1));

} else if (operation.equals("cos")) {

result = Math.cos(Math.toRadians(num1));

} else if (operation.equals("tan")) {

result = Math.tan(Math.toRadians(num1));

} else {

System.out.print("Enter the second number: ");

double num2 = scanner.nextDouble();

switch (operation) {

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;

case "^":

result = Math.pow(num1, num2);

break;

default:

System.out.println("Error: Invalid operation.");

return;

}

}

System.out.println("Result: " + result);

scanner.close();

}

}