```java
import java.io.*;
import java.util.Scanner;

public class Main {
    public static void main(String[] args) throws IOException {
        // Command Line Arguments
        if(args.length > 0) {
            int num = Integer.parseInt(args[0]);
            System.out.println("Factorial (Command Line Argument): " + factorial(num));
        }

        // Scanner Class
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter a number (Scanner): ");
        int num = scanner.nextInt();
        System.out.println("Factorial (Scanner): " + factorial(num));

        // BufferedReader Class
        BufferedReader reader = new BufferedReader(new InputStreamReader(System.in));
        System.out.println("Enter a number (BufferedReader): ");
        num = Integer.parseInt(reader.readLine());
        System.out.println("Factorial (BufferedReader): " + factorial(num));

        // DataInputStream Class
        DataInputStream dis = new DataInputStream(System.in);
        System.out.println("Enter a number (DataInputStream): ");
        num = Integer.parseInt(dis.readLine());
        System.out.println("Factorial (DataInputStream): " + factorial(num));

        // Console Class
        Console console = System.console();
```

```
32          if(console != null) {
33              System.out.println("Enter a number (
   Console): ");
34              num = Integer.parseInt(console.readLine
   ());
35              System.out.println("Factorial (Console
   ): " + factorial(num));
36          }
37      }
38
39      // Function to calculate factorial
40      public static int factorial(int num) {
41          int fact = 1;
42          for(int i = 1; i <= num; i++) {
43              fact *= i;
44          }
45          return fact;
46      }
47  }
48
```

```java
import java.util.*;

class Calculator {
    double add(double a, double b) {
        return a + b;
    }

    double subtract(double a, double b) {
        return a - b;
    }

    double multiply(double a, double b) {
        return a * b;
    }

    double divide(double a, double b) {
        if(b != 0) {
            return a / b;
        } else {
            System.out.println("Error! Dividing by zero is not allowed.");
            return 0;
        }
    }

    double sqrt(double a) {
        return Math.sqrt(a);
    }

    double power(double a, double b) {
        return Math.pow(a, b);
    }

    double mean(List<Double> numbers) {
        double sum = 0;
        for(double num : numbers) {
            sum += num;
        }
        return sum / numbers.size();
    }

```

```
41      double variance(List<Double> numbers) {
42          double mean = mean(numbers);
43          double temp = 0;
44          for(double num : numbers) {
45              temp += (num-mean)*(num-mean);
46          }
47          return temp / numbers.size();
48      }
49  }
50
51  public class Main2 {
52      public static void main(String[] args) {
53          Scanner scanner = new Scanner(System.in);
54          Calculator calculator = new Calculator();
55          List<Double> numbers = new ArrayList<>();
56
57          while(true) {
58              System.out.println("Enter operation (add
    , sub, mul, div, sqrt, pow, mean, variance, end): ");
59              String operation = scanner.nextLine();
60
61              if(operation.equals("end")) {
62                  if(!numbers.isEmpty()) {
63                      System.out.println("Mean: " +
    calculator.mean(numbers));
64                      System.out.println("Variance: "
     + calculator.variance(numbers));
65                  }
66                  break;
67              }
68
69              System.out.println("Enter number(s): ");
70              String[] inputs = scanner.nextLine().
    split(" ");
71              double a = Double.parseDouble(inputs[0]);
72              double b = 0;
73              if(inputs.length > 1) {
74                  b = Double.parseDouble(inputs[1]);
75              }
76
77              switch(operation) {
```

```
78                  case "add":
79                      System.out.println("Result: " +
   calculator.add(a, b));
80                      break;
81                  case "sub":
82                      System.out.println("Result: " +
   calculator.subtract(a, b));
83                      break;
84                  case "mul":
85                      System.out.println("Result: " +
   calculator.multiply(a, b));
86                      break;
87                  case "div":
88                      System.out.println("Result: " +
   calculator.divide(a, b));
89                      break;
90                  case "sqrt":
91                      System.out.println("Result: " +
   calculator.sqrt(a));
92                      break;
93                  case "pow":
94                      System.out.println("Result: " +
   calculator.power(a, b));
95                      break;
96                  case "mean":
97                      System.out.println("Result: " +
   calculator.mean(numbers));
98                      break;
99                  case "variance":
100                     System.out.println("Result: " +
   calculator.variance(numbers));
101                     break;
102                 default:
103                     System.out.println("Invalid
   operation!");
104             }
105         }
106     }
107 }
108
```