

# TASK-1

1.write a java program to display “hello world!” on the console.

Program:

```
public class Main {  
    public static void main(String[] args) {  
        System.out.println("Hello World");  
    }  
}
```

2.Implement a basic calculator that performs addition,subtraction,multiplication,and division.

Program:

```
import java.util.Scanner;  
  
public class BasicCalculator {  
    public static void main(String[] args) {  
        Scanner scanner = new Scanner(System.in);  
  
        while (true) {  
            System.out.println("Options:");  
            System.out.println("Enter 'add' for addition");  
            System.out.println("Enter 'subtract' for subtraction");  
            System.out.println("Enter 'multiply' for multiplication");  
            System.out.println("Enter 'divide' for division");  
            System.out.println("Enter 'quit' to end the program");  
  
            System.out.print(": ");
```

```
String user_input = scanner.nextLine();

if (user_input.equals("quit")) {
    break;
} else if (user_input.equals("add") || user_input.equals("subtract") ||
user_input.equals("multiply") || user_input.equals("divide")) {
    System.out.print("Enter first number: ");
    double num1 = scanner.nextDouble();
    System.out.print("Enter second number: ");
    double num2 = scanner.nextDouble();

    if (user_input.equals("add")) {
        System.out.println("Result: " + add(num1, num2));
    } else if (user_input.equals("subtract")) {
        System.out.println("Result: " + subtract(num1, num2));
    } else if (user_input.equals("multiply")) {
        System.out.println("Result: " + multiply(num1, num2));
    } else if (user_input.equals("divide")) {
        System.out.println("Result: " + divide(num1, num2));
    }
} else {
    System.out.println("Invalid input. Please enter a valid operation.");
}

// Consume the newline character
scanner.nextLine();
}
```

```
    scanner.close();  
}
```

```
public static double add(double x, double y) {  
    return x + y;  
}
```

```
public static double subtract(double x, double y) {  
    return x - y;  
}
```

```
public static double multiply(double x, double y) {  
    return x * y;  
}
```

```
public static double divide(double x, double y) {  
    if (y == 0) {  
        System.out.println("Cannot divide by zero");  
        return 0;  
    }  
    return x / y;  
}  
}
```

**3. Create a program that takes user input and displays the corresponding output.**

```
import java.util.Scanner;
```

```
public class UserInputProgram {  
    public static void main(String[] args) {  
        Scanner scanner = new Scanner(System.in);  
  
        System.out.print("Enter your name: ");  
        String name = scanner.nextLine();  
  
        System.out.println("Hello, " + name + "!");  
  
        System.out.print("Enter your age: ");  
        int age = scanner.nextInt();  
  
        if (age < 0) {  
            System.out.println("Invalid age. Please enter a valid age.");  
        } else if (age < 18) {  
            System.out.println("You are a minor.");  
        } else if (age >= 18 && age < 65) {  
            System.out.println("You are an adult.");  
        } else {  
            System.out.println("You are a senior citizen.");  
        }
```

```
scanner.close();
```

```
}
```

```
}
```