Assignment:03

Q1.
Write a program to input two numbers and find the maximum between two numbers using the conditional/ternary operator.

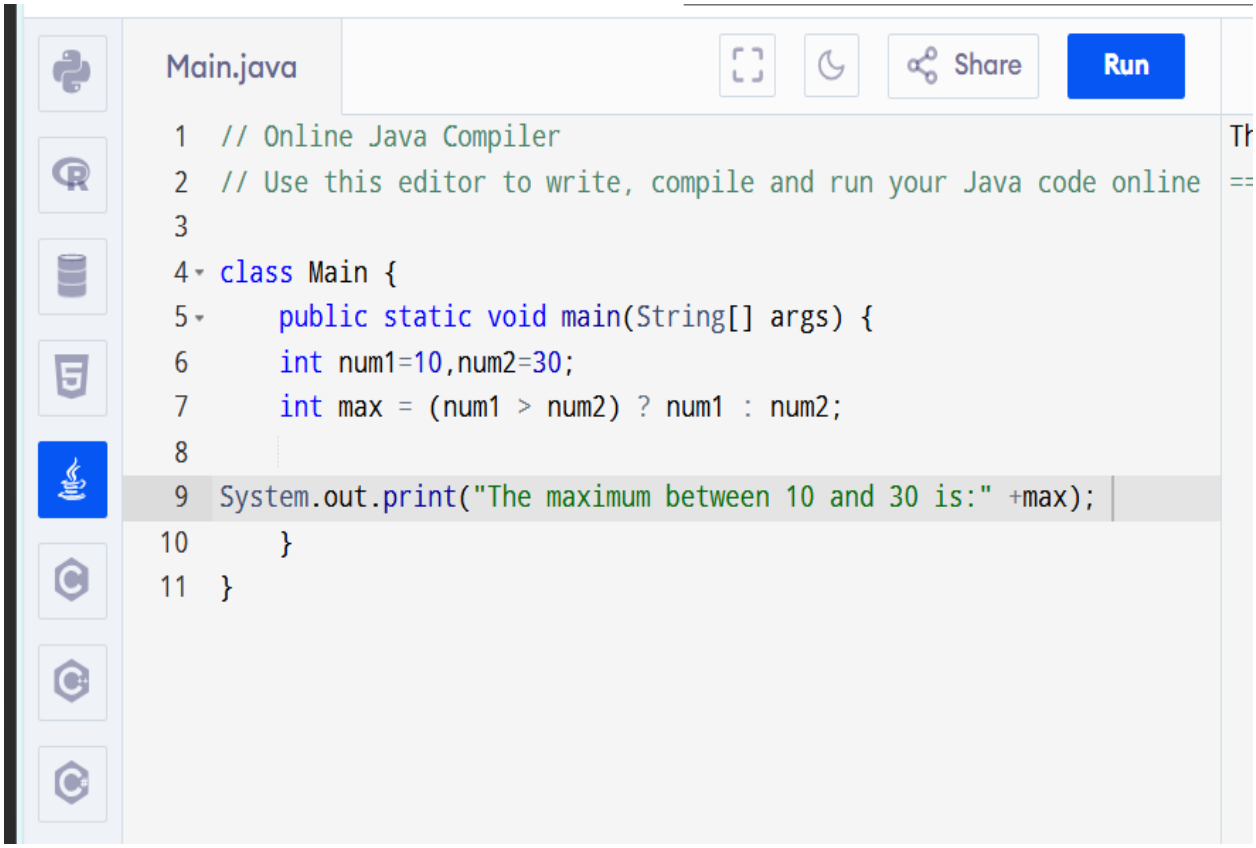
Sample Input:

num1 = 10

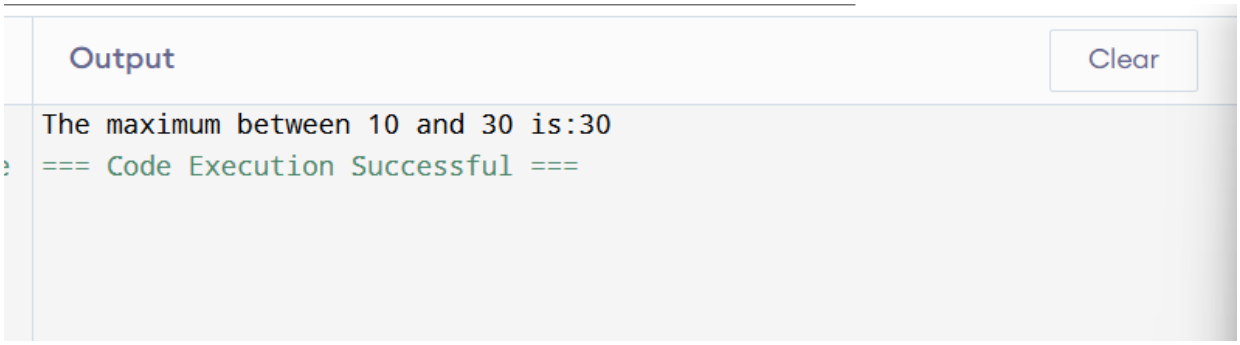
num2 = 30

Expected Output:

Maximum between 10 and 30 is: 30



OUTPUT:



Q2.

Write a program to declare two variables num and n and take an input during compilation time to check whether the nth bit of the given number is set (1) or not (0).

Logic to get nth bit of a number:

Step by step descriptive logic to get the nth bit of a number.

1. Take an input of any number and store it in some variable, say num.
2. Take an input the bit position and store it in some variable, say n.
3. To get the nth bit of num right shift num, n times. Then perform bitwise AND with 1 i.e.

```
bitStatus = (num >> n) & 1;
```

Sample Input:

Input number: num = 12

Input nth bit number: n = 2

Expected Output:

Bit 2 of 12 is set (1)

NthBitCheck.java

Share Run

```java
import java.util.Scanner;

class NthBitCheck {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter a number: ");
        int num = sc.nextInt();

        System.out.print("Enter bit position (n): ");
        int n = sc.nextInt();

        int bitStatus = (num >> n) & 1;

        if(bitStatus == 1)
            System.out.println("Bit " + n + " of " + num + " is
                set (1).");
        else
            System.out.println("Bit " + n + " of " + num + " is
                not set (0).");
    }
}
```

OUTPUT:

Output Clear

```
Enter a number: 1
Enter bit position (n): 0
Bit 0 of 1 is set (1).

=== Code Execution Successful ===
```