Name : R Anush **Date :** 20/09/2023
Student Code : AF0336714
Batch Code : Java_ANP-C6315

Lab Assignment-2

Q1: Write a program to show the difference between logical and bitwise operator.

Input:

```
package CoreJava;
import java.util.Scanner;
public class LogicalndBitwaseOptr {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner scanner = new Scanner(System.in);
// Read input from the user
System.out.print("Enter the first number: ");
int a = scanner.nextInt();
System.out.print("Enter the second number: ");
int b = scanner.nextInt();
// Logical AND operator
System.out.println("Logical AND (a && b): " + (a != 0 && b != 0));
// Logical OR operator
System.out.println("Logical OR (a || b): " + (a != 0 || b != 0));
// Logical NOT operator
System.out.println("Logical NOT (!a): " + !(a != 0));
// Bitwise AND operator
System.out.println("Bitwise AND (a & b): " + (a & b));
// Bitwise OR operator
System.out.println("Bitwise OR (a | b): " + (a | b));
// Bitwise XOR operator
System.out.println("Bitwise XOR (a ^ b): " + (a ^ b));
// Bitwise NOT operator
System.out.println("Bitwise NOT (~a): " + ~a);
// Bitwise left shift operator
System.out.println("Bitwise left shift (a << 2): " + (a << 2));
// Bitwise right shift operator
System.out.println("Bitwise right shift (a >> 2): " + (a >> 2));
```

```
        // Bitwise unsigned right shift operator
        System.out.println("Bitwise unsigned right shift (a >>> 2): " + (a >>> 2));
        scanner.close();
          }

}
```

Output:

```
Enter the first number: 10
Enter the second number: 5
Logical AND (a && b): true
Logical OR (a || b): true
Logical NOT (!a): false
Bitwise AND (a & b): 0
Bitwise OR (a | b): 15
Bitwise XOR (a ^ b): 15
Bitwise NOT (~a): -11
Bitwise left shift (a << 2): 40
Bitwise right shift (a >> 2): 2
Bitwise unsigned right shift (a >>> 2): 2
```

Q2: Write a program to display all operations from assignment operator.

Input:

```
package CoreJava;

public class AssignmentOperator {

	public static void main(String[] args) {P a g e  | 3
		// TODO Auto-generated method stub

		int a = 10;
	int b = 20;
	// Assignment operator
	a = b;
	// Display the value of a
	System.out.println("The value of a is: " + a);
	// Addition assignment operator
	a += b;
	// Display the value of a
	System.out.println("The value of a is: " + a);
	// Subtraction assignment operator
	a -= b;
	// Display the value of a
	System.out.println("The value of a is: " + a);
	// Multiplication assignment operator
	a *= b;
	// Display the value of a
	System.out.println("The value of a is: " + a);
	// Division assignment operator
	a /= b;
	// Display the value of a
	System.out.println("The value of a is: " + a);
	// Modulus assignment operator
	a %= b;
	// Display the value of a
	System.out.println("The value of a is: " + a);
	// Bitwise AND assignment operator
	a &= b;
	// Display the value of a
	System.out.println("The value of a is: " + a);
	// Bitwise OR assignment operator
```

```
        a |= b;
        // Display the value of a
        System.out.println("The value of a is: " + a);
        // Bitwise XOR assignment operator
        a ^= b;
        // Display the value of a
        System.out.println("The value of a is: " + a);
        // Left shift assignment operator
        a <<= b;
        // Display the value of a
        System.out.println("The value of a is: " + a);
        // Right shift assignment operator
        a >>= b;
        // Display the value of a
        System.out.println("The value of a is: " + a);
        // Unsigned right shift assignment operator
        a >>>= b;
        // Display the value of a
        System.out.println("The value of a is: " + a);

          }

}
```

Output:

```
The value of a is: 20
The value of a is: 40
The value of a is: 20
The value of a is: 400
The value of a is: 20
The value of a is: 0
The value of a is: 0
The value of a is: 20
The value of a is: 0
The value of a is: 0
The value of a is: 0
The value of a is: 0
```