

Object Oriented Programming

Assignment 01

Question 1:

Operator is basically a symbol that perform some operation like addition, subtraction, multiplication, on variables.

for example:

```
public class Operator {
    public static void main (String[] args) {
        int a = 5, b = 10;
        int sum = a + b;
        // + is an operator.
    }
}
```

Question 2:

Symbolic operator means a special character or symbol used to perform action on variable.

⇒ Types of Operator in Java:

- 1.) Assignment → (=)
- 2.) Arithmetic → (+, -, *, /, %)
- 3.) Relational → (>, <, >=, <=, ==, !=)
- 4.) Logical → (&&, ||, !)
- 5.) Shorthand Arithmetic → (+=, -=, *=, /=, %=)
- 6.) " Increment/Decrement → (++ , --)
- 7.) String Operator → (+)
- 8.) Ternary Operator → (? :)

→ General Code:

```
public class Operator {
    public static void main (String[] args) {
```

int a = 10, b = 20;

→ Assignment operator

// Arithmetic Operators

```
System.out.println("Addition: " + (a+b));
System.out.println("Subtraction: " + (a-b));
System.out.println("Multiplication: " + (a*b));
System.out.println("Division: " + (a/b));
System.out.println("Modulus: " + (a%b));
```

// Relational Operator

// General Code As per Question 3.

// Logical Operator

```
System.out.println("a is greater than 0
& b is less than 1: " + ((a>0) && (b<1)));
```

// Shorthand Arithmetic

```
System.out.println("a + 2 = " + (a+=2));
```

// Shorthand Decrement

```
System.out.println("a - 1 = " + (a--));
```

// String Operator

```
String firstName = "Mohammad";
```

```
String lastName = "Hassan";
```

```
String fullName = firstName + lastName;
```

Unary Operator

```
System.out.println("is a greater than b?"
    + (a > b ? "Yes" : "No"));
```

Question 3.

Relational Operator supported by Java are b.

→ ($>$, $<$, $>=$, $<=$, $==$, $!=$)

General Code:

```
public class Relational {
    public static void main(String[] args) {
```

```
        int a = 10, b = 20;
```

```
        System.out.println("a > b " + (a > b));
        System.out.println("a < b " + (a < b));
        System.out.println("a >= b " + (a >= b));
        System.out.println("a <= b " + (a <= b));
        System.out.println("a == b " + (a == b));
        System.out.println("a != b " + (a != b));
```

```
    }
```

```
}
```