# Assignment-1

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Topic        :    Right shift & Left shift
                     (Bitwise Operator)

# Bitwise Operator

In Bitwise operator there are 7 different operations can be performed. In that we have to discuss two of bitwise operator. They are

       1.Right Shift Operator
       2.Left Shift Operator

These operators operates on the binary format of a number.

## Right Shift Operator (>>):

We know that shift operators are operates on binary format of a number.
For example  8

          128  64  32  16  8  4  2  1

    8  -  0   0   0   0  1 0 0 0   (Binary of 8)

Here, when we apply right shift of 8 then it **move one bit right.**

Right shift of 8 by 1  -  0 0 0 0 0 1 0 0   (Now it is **4**)
Right shift of 8 by 2  -  0 0 0 0 0 0 1 0   (Now it is **2**)

So, the right shift of 8 by 1 becomes 4, right shift of 8 by 2 becomes 2.

## Left Shift Operator (<<):

Let us take one Example is 2

          128  64  32  16  8  4  2  1

    2  -  0   0   0   0   0 0 1 0   (Binary of 2)

Here, when we apply left shift of 2 then it **move one bit left.**

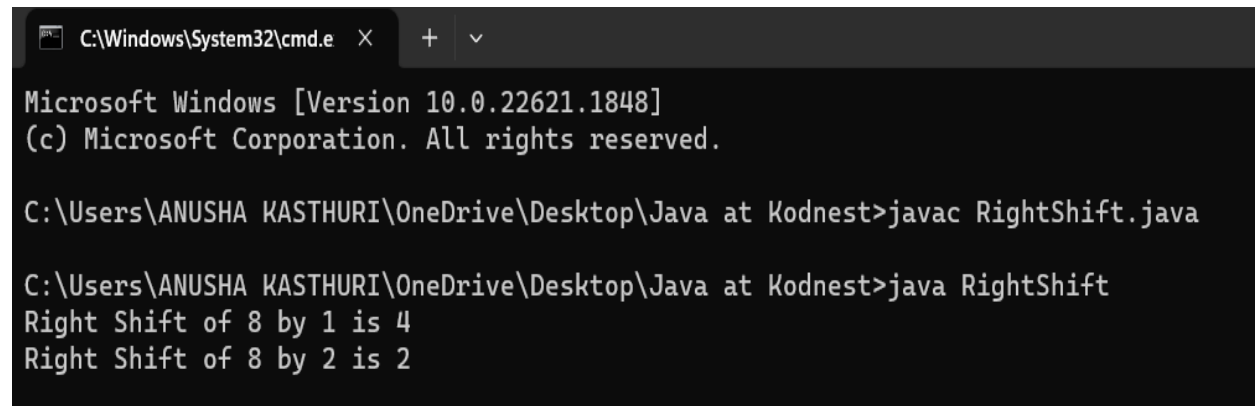Right shift of 2 by 1   -   0 0 0 0 0 1 0 0     (Now it is **4)**
Right shift of 2 by 2   -   0 0 0 0 1 0 0 0     (Now it is **8**)

So, the right shift of 2 by 1 becomes 4, right shift of 2 by 2 becomes 8.

**Write a java program using Right Shift operator?**

```java
class RightShift
{
       public static void main (String []args)
       {
              int a=8;
              System.out.println("Right Shift of 8 by 1 is " +(a>>1));
              System.out.println("Right Shift of 8 by 2 is " +(a>>2));
       }
}
```

**Output:**

**Write a java program using Left Shift operator?**

```
class LeftShift
{
        public static void main (String []args)
        {
                int a=2;
                System.out.println("Right Shift of 2 by 1 is " +(a<<1));
                System.out.println("Right Shift of 2 by 2 is " +(a<<2));
        }
}
```

**Output:**
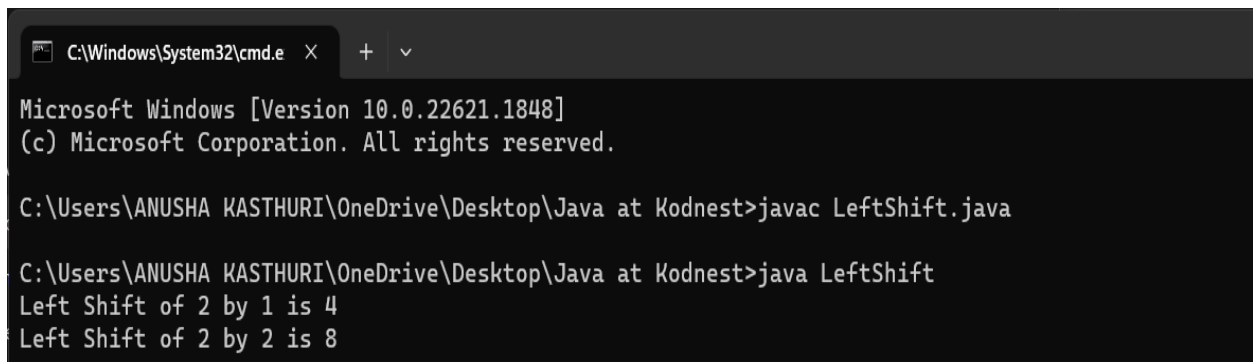


```
C:\Windows\System32\cmd.e   ×    +   ∨

Microsoft Windows [Version 10.0.22621.1848]
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C:\Users\ANUSHA KASTHURI\OneDrive\Desktop\Java at Kodnest>javac LeftShift.java

C:\Users\ANUSHA KASTHURI\OneDrive\Desktop\Java at Kodnest>java LeftShift
Left Shift of 2 by 1 is 4
Left Shift of 2 by 2 is 8
```