

# School of Computer Science Engineering and Technology

Course- BTech

Course Code- CSET109

Year- First

Type- Core

Course Name- Object Oriented Programming Using Java

Semester- Even Batch- BTech 2<sup>nd</sup> Semester

## Tutorial-3

Tutorial No.	Name	CO1	CO2	CO3
3	Basics	✓	--	--

**Objective:** The main objective of this tutorial is to learn about the basics of Java language.

3.1 What is the final value of ctr after the iteration process given below, executes?

```
int ctr = 0;
for (int i = 1 ; i <= 5 ; i++)
for (int j = 1 ; j <= 5 ; j+=2)
++ctr;
```

3.2 State the output when the following program segment is executed:

```
String a ="Smartphone", b="Graphic Art";
String h=a.substring(2, 5);
String k=b.substring(8).toUpperCase();
System.out.println(h);
System.out.println(k.equalsIgnoreCase(h));
```

3.3 Give the output of the following program:

```
public class test {
    public static void main(String args[])
    {
        double [] mylist={1, 5,5,5,5,1};
        double max=mylist[0];
        int indexofmax=0;
        for(int i=1; i<mylist.length; i++)
        {
            If(mylist[i]>max)
            {
                Max=mylist[i]; indexofmax=i;
            }
            System.out.println(indexofmax);
        }
    }
}
```

3.4 Predict the output and the number of times the loop runs:

```
class Test {
    public static void main(String args[]) {
        int i;
        for(i=0;i<5;i++)
```

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```
        System.out.println(i*i*i);
    }
}
```

3.5 Give the output of the following:

```
int a[4]={2,4,6,8};
for(i=0;i<=1;i++)
{
    s=a[i]+a[3-i];
    System.out.println(s);
}
```

3.6 Give the output of the following:

```
int n[]={1,2,3,5,7,9,13,16};
double a=Math.pow(n[4], n[1]);
double b=Math.sqrt(n[5]+n[7]);
System.out.println("a=" + a);
System.out.println("b=" + b);
int a[]=new int [5];
a[0]=4; a[1]=8; a[2]=7; a[3]=12; a[4]=3;
System.out.println(a[2+1]);
```

3.7 What will be the output of the program?

```
public class StringCheck {
    boolean foo(String str) {
        int x = str.compareTo("INCOMMUTABLE");
        System.out.println("x=" + x);
        boolean ret = x == 0 ? true : false;
        return ret;
    }
    public static void main(String[] args) {
        StringCheck obj = new StringCheck();
        boolean a = obj.foo("INCOMPUTABLE");
        System.out.println(a);
    }
}
```

3.8 What will be the output of the program?

```
class Test
{
    public static void main(String [] args)
    {
        int x= 0;
        int y= 0;
        for (int z = 0; z < 5; z++)
        {
            if (( ++x > 2 ) && ( ++y > 2))
            {
                x++;
            }
        }
    }
}
```

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```
    }  
    System.out.println(x + " " + y);  
  }  
}
```

3.9 Rewrite the following using ternary operator:

```
if(a > b)  
{  
    if (a > c)  
        g = a;  
    else  
        g = c;  
}  
else if (b > c)  
    g = b;  
else  
    g = c;
```

3.10 What will be the output of the following Java program?

```
class Output  
{  
    public static void main(String args[])  
    {  
        final int a=10,b=20;  
        while(a<b)  
        {  
            System.out.println("Hello"); }  
        System.out.println("World");  
    }  
}
```