School of Computer Science Engineering and Technology

Course- BTech   Type- Core
Course Code- **CSET109**   Course Name- **Object Oriented Programming Using Java**
Year- First   Semester- Even Batch- BTech 2nd Semester

Tutorial-5

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

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

5.1 What is the output of the program?

```java
class Helper
{
   private int data;
   private Helper()
   {
      data = 5;
   }
}
public class Test
{
   public static void main(String[] args)
   {
      Helper help = new Helper();
      System.out.println(help.data);
   }
}
```

5.2 What will be the output of the following program?

```java
public class Sketch {
   static int ad = 100;
   static int bc = 200;
   static {
      ad += 1;
      bc += 1;
   }
   public static void main(String args[]) {
      ad += 5;
      bc += 10;
      System.out.println(ad + bc);
   }
   static {
      ad += 100;
      bc += 200;
   }
}
```

5.3 What will be the output of the following program?

```java
public class CallBy {
    static void execute(Byte x, Byte y) {
        System.out.println("execute, execute");
    }
    static void execute(Byte x, Byte y, Byte z) {
        System.out.println("execute, execute, execute");
    }
    static void execute(byte... x) {
        System.out.println("execute");
    }
    public static void main(String[] args) {
        byte b = 5;
        execute(b);
        execute(b, b);
        execute(b, b, b);
        execute(b, b, b, b);
    }
}
```

5.4 What will be the output of the following program?

```java
public class NValueIs {
    public static void main(String[] args) {
        int num1 = 1;
        int num2 = 2;
        System.out.println("Before swap method, num1 is " + num1 + " and num2 is " + num2);
        swap(num1, num2);
        System.out.println("After swap method, num1 is " + num1 + " and num2 is " + num2);
    }
    public static void swap(int n1, int n2) {
        int temp = n1;
        n1 = n2;
        n2 = temp;
    }
}
```

5.5 Predict the output of the following program:

```java
class Parent
{
    public void m1()
    {
        System.out.println("Class Parent method");
    }
}
public class Child extends Parent
{
    public void m2()
    {
        System.out.println("Class Child method");
```

```
  }
  public static void main(String args[])
  {
    Child obj = new Child();
    obj.m1();
    obj.m2();
  }
}
```

5.6 Give the output of the following:
```
class X
{
  void display()
  {
    System.out.println("class X dispaly method ");
  }
}
class Y
{
  void display()
  {
    System.out.println("class Y display method ");
  }
}
public class Z extends X,Y
{
  public static void main(String args[])
  {
    Z obj=new Z();
    obj.display();
  }
}
```

5.7 What will be the output of the program?
```
public class Test
{
  public Test()
  {
    System.out.printf("1");
    new Test(10);
    System.out.printf("5");
  }
  public Test(int temp)
  {
    System.out.printf("2");
    new Test(10, 20);
    System.out.printf("4");
  }
  public Test(int data, int temp)
  {
```

```java
        System.out.printf("3");
    }
     public static void main(String[] args)
    {
        Test obj = new Test();
    }
}
```

5.8 What will be the output of the program?

```java
class Base
{
    public static String s = " Super Class ";
    public Base()
    {
        System.out.printf("1");
    }
}
public class Derived extends Base
{
    public Derived()
    {
        System.out.printf("2");
        super();
    }
 public static void main(String[] args)
    {
        Derived obj = new Derived();
        System.out.printf(s);
    }
}
```

5.9 Predict the output of the following program:

```java
class Parent
{
int a = 20;
}
class Child extends Parent
{
int a = 30;
void show()
{
System.out.println(a);//print child class value of a
System.out.println(super.a);//print parent class value of a
}
public static void main(String args[])
{
Child c = new Child();
c.show();
}
}
```

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

```java
public class Test
{
    public Test()
    {
        System.out.printf("1");
        new Test(10);
        System.out.printf("5");
    }
    public Test(int temp)
    {
        System.out.printf("2");
        new Test(10, 20);
        System.out.printf("4");
    }
    public Test(int data, int temp)
    {
        System.out.printf("3");

    }
    public static void main(String[] args)
    {
        Test obj = new Test();
    }
}
```