Assignment: 1

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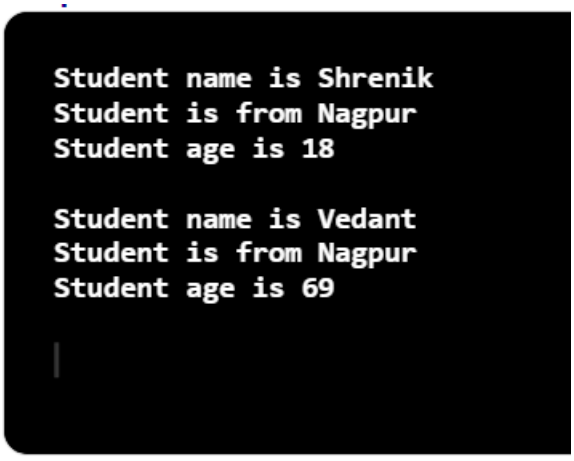
Course: OOPS Date: 20-7-21

Aim: Understanding Basics of OOP.

1. Write a program to create a class Student with data 'name, city and age' along with method printData to display the data. Create the two objects s1,s2 to declare and access the values.

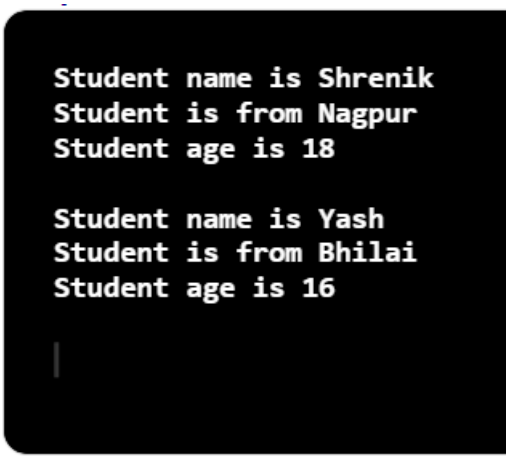
```
class Student
{
   String name, city;
   int age;
   static int m;
   void printData()
   {
      System.out.println("Student name is "+name);
      System.out.println("Student is from "+city);
      System.out.println("Student age is "+age+"\n");
   }
}
public class Stest
{
```

```
    public static void main(String args[])
    {
        Student s1=new Student();
        Student s2=new Student();
        s1.name="Shrenik";
        s1.city="Nagpur";
        s1.age=18;
        s2.name="Vedant";
        s2.city="Nagpur";
        s2.age=69;
        s1.printData();
        s2.printData();
    }
}
```



2. Write a program to create a class Student2 along with two method getData(), printData() to get the value through argument and display the data in printData. Create the two objects s1 ,s2 to declare and access the values from class STtest.

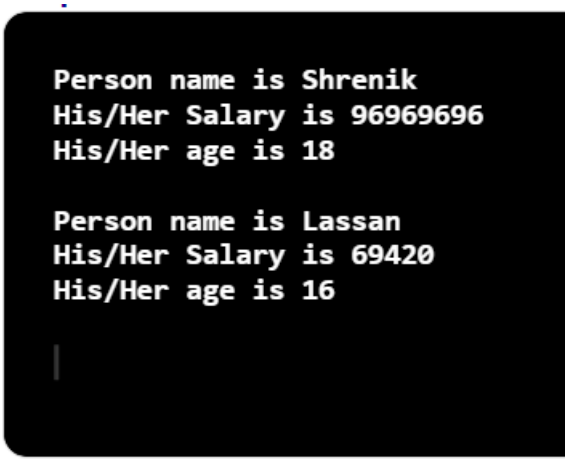
```
class Student2
{
   String name, city;
   int age;
   static int m;
   void getData(String name, String city, int age)
   {
      this.name=name;
      this.city=city;
      this.age=age;
   }
   void printData()
   {
      System.out.println("Student name is "+name);
      System.out.println("Student is from "+city);
      System.out.println("Student age is "+age+"\n");
   }
}
public class Stest
{
   public static void main(String args[])
   {
      Student2 s1=new Student2();
      Student2 s2=new Student2();
      s1.name="Shrenik";
      s1.city="Nagpur";
      s1.age=18;
      s2.getData("Yash","Bhilai",16);
      s1.printData();
      s2.printData();
   }
}
```



3. WAP that describes a class person. It should have instance variables to record name, age and salary. Create a person object. Set and display its instance variables.

```
class Person
{
   String name;
   int age, salary;
   static int m;
   void getData(String name, int salary, int age)
   {
      this.name=name;
      this.salary=salary;
      this.age=age;
   }
   void printData()
   {
      System.out.println("Person name is "+name);
      System.out.println("His/Her Salary is "+salary);
      System.out.println("His/Her age is "+age+"\n");
   }
}
public class PersonData
{
   public static void main(String args[])
   {
      Person p1=new Person();
      Person p2=new Person();
```

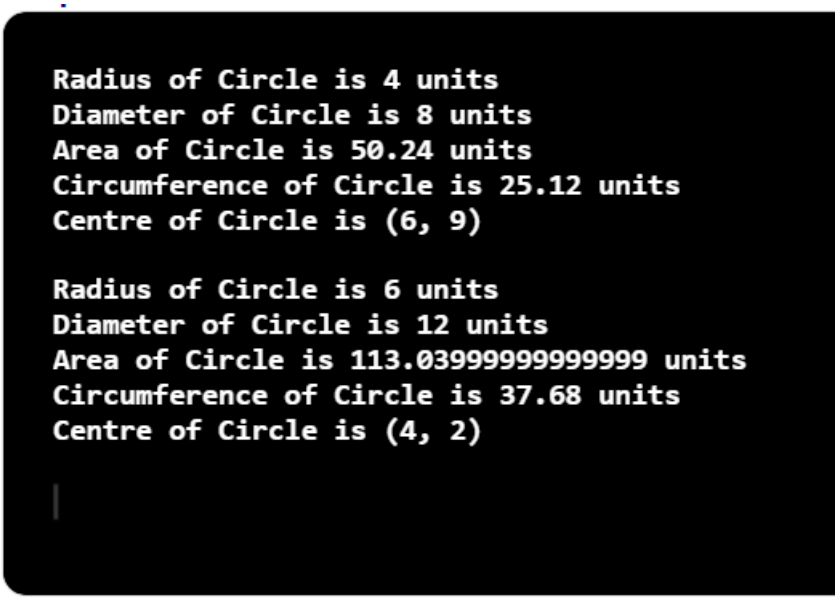
```
        p1.name="Shrenik";
        p1.salary=96969696;
        p1.age=18;
        p2.getData("Lassan",69420,16);
        p1.printData();
        p2.printData();
    }
}
```



4. WAP that creates a class circle with instance variables for the centre and the radius. Initialize and display its variables.

```
class Circle
{
    int x, y, r;
    void getData(int x, int y, int r)
    {
        this.x=x;
        this.y=y;
        this.r=r;
    }
    void printData()
    {
        System.out.println("Radius of Circle is "+r+" units");
        System.out.println("Diameter of Circle is "+2*r+" units");
        System.out.println("Area of Circle is "+3.14*r*r+" units");
        System.out.println("Circumference of Circle is "+2*3.14*r+" units");
        System.out.println("Centre of Circle is ("+x+", "+y+")\n");
```

```
    }
}
public class CircleData
{
    public static void main(String args[])
    {
        Circle c1=new Circle();
        Circle c2=new Circle();
        c1.x=6;
        c1.y=9;
        c1.r=4;
        c2.getData(4,2,6);
        c1.printData();
        c2.printData();
    }
}
```



5. Write a Java program to create a Student class with following fields:

    a. Hall ticket number
    b. Student Name
    c. Department.

    Create ‘n’ number of Student objects where ‘n’ value is passed as input to the constructor.

```
class Student
{
   String name, department;
   int hallticket;
   void getData(String name, String department, int hallticket)
   {
      this.name=name;
      this.department=department;
      this.hallticket=hallticket;
   }
   void printData()
   {
      System.out.println("Student name is "+name);
      System.out.println("Student is from "+department);
      System.out.println("Student hall ticket "+hallticket+"\n");
   }
}
public class Stest
{
   public static void main(String args[])
   {
      Student s1=new Student();
      Student s2=new Student();
      s1.name="Shrenik";
      s1.department="CSE (Cyber Security)";
      s1.hallticket=86069;
      s2.getData("Manoj Tiwari","Music",69420);
      s1.printData();
      s2.printData();
   }
}
```

```
Student name is Shrenik
Student is from CSE (Cyber Security)
Student hall ticket 86069

Student name is Manoj Tiwari
Student is from Music
Student hall ticket 69420
```