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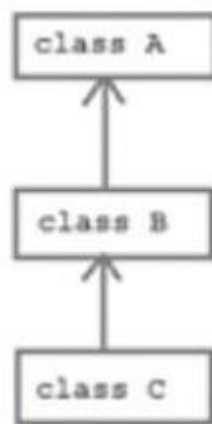
Course: Object Oriented Programming using Java

Experiment no. 7

Aim: To implement Inheritance

Problem Statement 1:

WAP to demonstrate the role of Constructors in inheritance in the following class diagram:



Code:

```
class A
{
    int a=10;
    public A()
    {
        System.out.println("Feature 1");
    }
}

class B extends A
{
    public B()
    {
        System.out.println("Feature 2");
    }
}

class C extends B
```



```
{  
    public C()  
    {  
        System.out.println("Feature 3");  
    }  
}  
public class InheritanceConstructor  
{  
    public static void main(String []args)  
    {  
        C obj1=new C();  
    }  
}
```

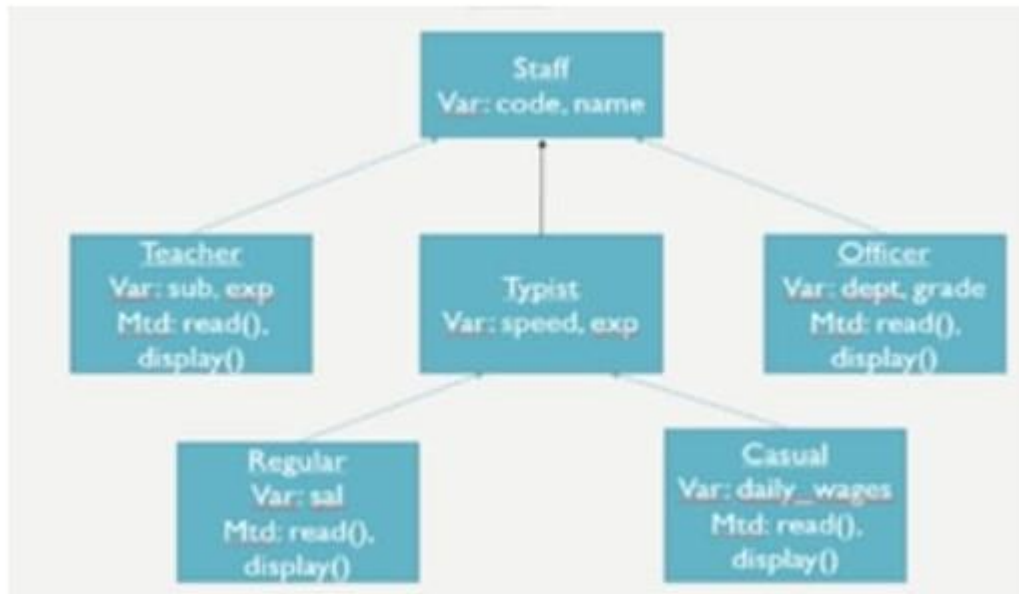
Output :

```
C:\Users\91720\OneDrive\Desktop\Anish Java>javac InheritanceConstructor.java  
  
C:\Users\91720\OneDrive\Desktop\Anish Java>java InheritanceConstructor  
Feature 1  
Feature 2  
Feature 3
```



Problem Statement 2:

Display data of the specialized classes given in the following class diagram.



Code:

```
import java.util.*;

class Staff
{
    Scanner sc=new Scanner(System.in);
    int code;
    String name;
}

class Teacher extends Staff
{
    int exp;
    String sub;

    public void read()
    {
        System.out.println("Enter Name");
```



```
        name=sc.nextLine();

        System.out.println("Enter Code");

        code=sc.nextInt();

        System.out.println("Enter Experience");

        exp=sc.nextInt();

        sc.nextLine();

        System.out.println("Enter Subject");

        sub=sc.nextLine();

    }

    public void display1()

    {

        System.out.println(code+" "+name+" "+sub+" "+" "+exp);

    }

}

class Typist extends Staff

{

    int speed;

    int exp;

}

class Regular extends Typist

{

    int sal;

    public void read()

    {

        System.out.println("Enter Name");

        name=sc.nextLine();

        System.out.println("Enter Code");

        code=sc.nextInt();

        System.out.println("Enter Experience");

        exp=sc.nextInt();

        System.out.println("Enter Speed");

        speed=sc.nextInt();

        sc.nextLine();

    }

}
```



```
        System.out.println("Enter Salary");

        sal=sc.nextInt();

    }

    public void display2()
    {

        System.out.println(code+" "+name+" "+speed+" "+" "+exp+" "+sal);

    }
}

class Casual extends Typist
{

    int dailyWages;

    public void read()
    {

        System.out.println("Enter Name");

        name=sc.nextLine();

        System.out.println("Enter Code");

        code=sc.nextInt();

        System.out.println("Enter Experience");

        exp=sc.nextInt();

        System.out.println("Enter Speed");

        speed=sc.nextInt();

        System.out.println("Enter daily Wages");

        dailyWages=sc.nextInt();

    }

    public void display3()
    {

        System.out.println(code+" "+name+" "+speed+" "+" "+exp+" "+dailyWages);

    }

}

class Officer extends Staff
{
```



```
String grads;

String dept;

int sal;

public void read()
{
    System.out.println("Enter Name");
    name=sc.nextLine();
    System.out.println("Enter Code");
    code=sc.nextInt();
    sc.nextLine();
    System.out.println("Enter Department");
    dept=sc.nextLine();
    System.out.println("Enter Grades");
    grads=sc.nextLine();
    System.out.println("Enter Salary");
    sal=sc.nextInt();
}

public void display4()
{
    System.out.println(code+" "+name+" "+dept+" "+grads);
}

}

class MultilevelStaff
{
    public static void main(String[] args)
    {
        Teacher obj1=new Teacher();
        obj1.read();
        obj1.display1();
        Regular obj2=new Regular();
        obj2.read();
        obj2.display2();
        Casual obj3=new Casual();
```



```
obj3.read();  
  
obj3.display3();  
  
Officer obj4=new Officer();  
  
obj4.read();  
  
obj4.display4();  
  
}  
  
}
```

Output:

```
C:\Users\91720\OneDrive\Desktop  
Enter Name  
Anish  
Enter Code  
11  
Enter Experience  
5  
Enter Subject  
English  
11 Anish English 5  
Enter Name  
Sonali  
Enter Code  
65  
Enter Experience  
7  
Enter Speed  
100  
Enter Salary  
80000  
65 Sonali 100 7 80000  
Enter Name  
Manish  
Enter Code  
67  
Enter Experience  
8  
Enter Speed  
110  
Enter daily Wages  
4500  
67 Manish 110 8 4500
```



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```
Enter Name
Laxmi
Enter Code
54
Enter Department
IT
Enter Grades
A
Enter Salary
45000
54 Laxmi IT A
```