

```

import java.io.*;
import java.util.*;
abstract class Shape{
    abstract void numberOfSides();
}
class Rectangle extends Shape{
    void numberOfSides(){
        System.out.println("No.of sides of Rectangle = 4 ");
    }
}
class Triangle extends Shape{
    void numberOfSides(){
        System.out.println("No.of sides of Triangle = 3 ");
    }
}
class Hexagon extends Shape{
    void numberOfSides(){
        System.out.println("No.of sides of Hexagon = 6");
    }
}
class AbstractExample{
    public static void main(String args[]){
        Rectangle ob1 = new Rectangle();
        Triangle ob2 = new Triangle();
        Hexagon ob3 = new Hexagon();
        ob1.numberOfSides();
        ob2.numberOfSides();
        ob3.numberOfSides();
    }
}

```

The screenshot shows a terminal window titled "Terminal" with the date and time "Mar 5 10:24 AM". The user is in a directory "jishnu@pop-os: ~/Desktop/Java Programming/LAB/cycle3". The terminal shows the following commands and output:

```

jishnu@pop-os:~/Desktop/Java Programming/LAB/cycle3$ javac polymorphismDemo.java
jishnu@pop-os:~/Desktop/Java Programming/LAB/cycle3$ java polymorphismDemo
No. of sides of Rectangle = 4
No. of sides of Triangle = 3
No. of sides of Hexagon = 6
jishnu@pop-os:~/Desktop/Java Programming/LAB/cycle3$

```

```

class Employee{
    String name,address,phone_no;
    int age;
    double salary;
    Employee(String n,int a,String ph,String add,double sal){
        name=n;
        age=a;
        phone_no=ph;
        address=add;
        salary=sal;
    }
    void printSalary(){
        System.out.println("salary: "+salary);
    }
}
class Officer extends Employee{
    String specialization;
    Officer(String n,int a,String ph,String add,double sal){
        super(n,a,ph,add,sal);
    }
    void officerInfo(){
        System.out.println("OFFICER\nName : "+name+"\nAge : "+age+"\nphone number : 
"+phone_no+"\nAddress : "+address);
    }
}
class Manager extends Employee{
    String department;
    Manager(String n,int a,String ph,String add,double sal){
        super(n,a,ph,add,sal);
    }
    void managerInfo(){
        System.out.println("\nMANAGER\nName : "+name+"\nAge : "+age+"\nphone 
number : "+phone_no+"\nAddress : "+address);
    }
}
class inheritanceDemo{
    public static void main(String args[]){

        Officer o=new Officer("Raj",45,"9786542232","house_name\n\t post_office\n\t 
district\n\t State",50000);
        Manager m=new Manager("Ann",50,"8262672465","house_name\n\t post_office\n\t 
district\n\t State",80000);
        o.officerInfo();
        o.printSalary();
        m.managerInfo();
        m.printSalary();
    }
}

```

```
Activities Terminal Mar 5 11:40 AM
jishnu@pop-os: ~/Desktop/Java Programming/LAB/cycle2
jishnu@pop-os:~/Desktop/Java Programming/LAB/cycle2$ javac inheritanceDemo.java
jishnu@pop-os:~/Desktop/Java Programming/LAB/cycle2$ java inheritanceDemo
OFFICER
Name : Raj
Age :45
phone number : 9786542232
Address : house_name
          post_office
          district
          State
salary: 50000.0

MANAGER
Name : Ann
Age :50
phone number : 8262672465
Address : house_name
          post_office
          district
          State
salary: 80000.0
jishnu@pop-os:~/Desktop/Java Programming/LAB/cycle2$
```