Name : Adwait S Purao

UID : 2021300101

Batch : B2

Q1: **Create base class Grandfather with data members name,age,money and method printMoney().**

Derive father class From Grandfather class and derive Child class from Father class.

Everytime a child class is created it gets 50% of fathers's wealth.

Accept grandfather's wealth from user and use the child class object to print everyone's wealth using printMoney().

eg - Gomes(Grandfather) wealth - Rs 50000

Brand(Father) wealth - Rs 25000

Alexa(Child) wealth - Rs 12500

Code:

```
import java.util.*;


class Grandfather{
    String name;
   public int age,money;
   public Grandfather(String name,int age,int money){
        this.name=name;
        this.age=age;
        this.money=money;
    }

    void printMoney(){
        System.out.println("Grand Father has rupees:"+money);
    }
}
class Father extends Grandfather{

   public Father(String name, int age, int money)
   {
        super(name, age, money);

   }
        void printMoney(){
            super.printMoney();
            money=money/2;
            System.out.println("Father has rupees:"+money);

        }
    }
```

```
class Child extends Father{
   public Child(String name, int age, int money)
   {
        super(name,age,money);

   }
        void printMoney(){
            super.printMoney();
            money=money/2;

            System.out.println("Child has rupees:"+money);

        }
}
public class Inheritance {
    public static void main(String[] args) {
        Scanner sc =new Scanner(System.in);

        System.out.println("Enter the name,age and money of Grandfather:");

        Child c= new Child(sc.next(),sc.nextInt(),sc.nextInt());
        c.printMoney();



    }


}
```

Output:

```
(base) itlab@itlab-OptiPlex-3010:~/Desktop/javaprograms$  /usr/bin/env /
usr/lib/jvm/java-8-openjdk-amd64/bin/java -cp /home/itlab/.config/Code/U
ser/workspaceStorage/48582411a1fb7e148864eb8564773fe7/redhat.java/jdt_ws
/javaprograms_6bcc9a52/bin Inheritance
Enter the name,age and money of Grandfather:
Suresh
56
10000
Grand Father has rupees:10000
Father has rupees:5000
Child has rupees:2500
(base) itlab@itlab-OptiPlex-3010:~/Desktop/javaprograms$
```

Q2: **Define parent class "Employee" that has 3 private attributes**

String name, String id, int age.

Employee has constructor with 3 arguments that set value of name, id, age.

Class "SalariedEmployee" is a sub class of Employee and has 1 private attribute empSalary and type.

"SalariedEmployee" can be of type permanent or on contract and has constructor SalariedEmployee(String name, String id, int age, double empSalary, String Type) to set the values.

constructor SalariedEmployee must call the superclass constructor to set name, id, age and call setter method to set the salary.

Employee salary is empSalary + 2000(allowance) if he is a permanent employee else Employee salary is empSalary (no allowance).

Accept the details of 5 employees and print details of the employee with highest salary.

Code:

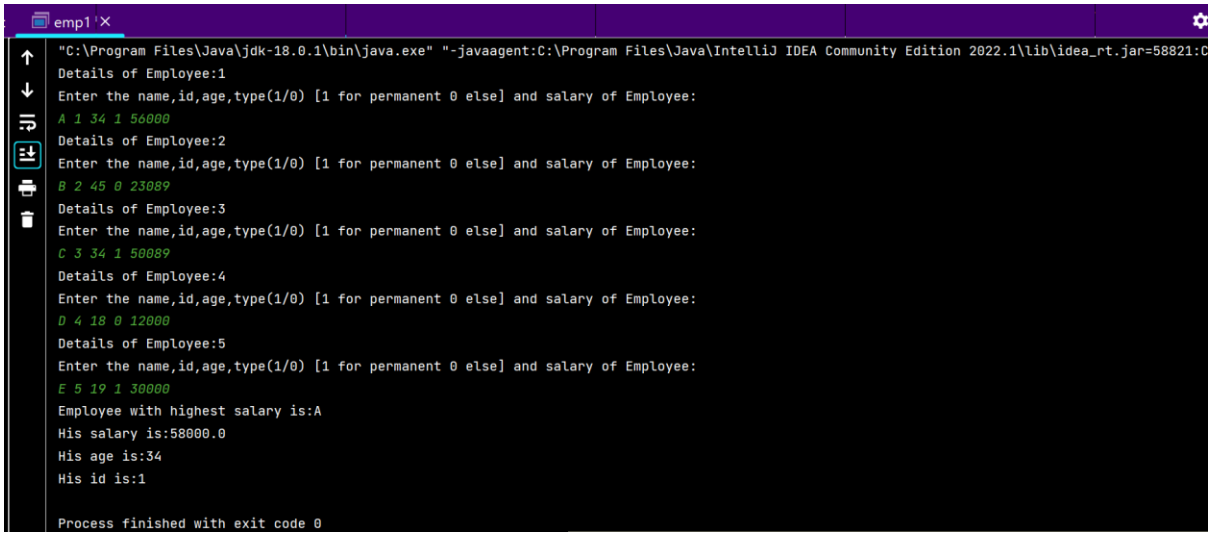
```
import java.util.Scanner;

class Employee{
     String name;
     String id;
     int age;

    public Employee(String name,String id,int
age){
        this.name=name;
        this.id=id;
        this.age=age;
    }
}
class SalariedEmployee extends Employee{
    double salary;
    int type;
    public SalariedEmployee(String name,String
id,int age,int type,double salary){
        super(name,id,age);
        this.salary=salary;
        this.type=type;
    }
}
public class emp1 {
    public static void main(String[] args) {
        Scanner sc=new Scanner(System.in);
```

```
        SalariedEmployee se [] = new
SalariedEmployee[5];
        for(int i=0;i<5;i++){
            System.out.println("Details of
Employee:"+(i+1));
            System.out.println("Enter the
name,id,age,type(1/0) [1 for permanent 0 else] and
salary of Employee:");
            String name=sc.next();
            String id=sc.next();
            int age= sc.nextInt();
            int type=sc.nextInt();
            double salary= sc.nextDouble();
            if(type==1){
                salary+=2000;
            }
            se[i]= new
SalariedEmployee(name,id,age,type,salary);
        }
        int m=0;
        for(int h=0;h<5;h++){
            if(se[h].salary>se[m].salary){
                m=h;
            }
        }
        System.out.println("Employee with highest
salary is:" + se[m].name);
        System.out.println("His salary
is:"+se[m].salary);
        System.out.println("His age
is:"+se[m].age);
        System.out.println("His id is:"+se[m].id);
    }
}
```

Output:


emp1
"C:\Program Files\Java\jdk-18.0.1\bin\java.exe" "-javaagent:C:\Program Files\Java\IntelliJ IDEA Community Edition 2022.1\lib\idea_rt.jar=58821:C
Details of Employee:1
Enter the name,id,age,type(1/0) [1 for permanent 0 else] and salary of Employee:
A 1 34 1 56000
Details of Employee:2
Enter the name,id,age,type(1/0) [1 for permanent 0 else] and salary of Employee:
B 2 45 0 23089
Details of Employee:3
Enter the name,id,age,type(1/0) [1 for permanent 0 else] and salary of Employee:
C 3 34 1 50089
Details of Employee:4
Enter the name,id,age,type(1/0) [1 for permanent 0 else] and salary of Employee:
D 4 18 0 12000
Details of Employee:5
Enter the name,id,age,type(1/0) [1 for permanent 0 else] and salary of Employee:
E 5 19 1 30000
Employee with highest salary is:A
His salary is:58000.0
His age is:34
His id is:1
Process finished with exit code 0