Experiment number 2

Aim: Write a class 'Employee' with the following specifications:

Data Members: String empName : Name of the employee

String empId : Unique ID of the employee

salary : Salary of employee (Choose appropriate data-type)

Create a constructor to define the values for these data members. Create another driver class 'EmployeeDemo' with a main() method, which creates a new Employee object for an employee named "Raj" with Unique ID "E201945", salary 12,000. Print these details to the console. Details to be taken by the user.

Theory: In this program, we have to use encapsulation. Encapsulation is defined as the wrapping up of data into a single unit.

Algorithm:

1) public class EmployeeDemo{ public static void main(String[] args){

2) Scanner sc = new Scanner(System.in)

3) enter number of employees and store in int n

4) make an array object of class Employee[] arr= new Employee[n]

5) for(int i=0;i<n;i++){ arr[i]= new Employee

6) take name, id and salary from user

7) arr[i].setName, arr[i].setId, arr[i].setSalary

8) in class Employee, there are 3 functions with return types string, string and float respectively, which will set the name, ID and salary of the user.

9) String a=arr[i].getName();

String b=arr[i].getId();

float c=arr[i].getSalary();

10) arr[i].display(a,b,c)

in class Employee, public void display(String a, String b, String c){System.out.println(a);

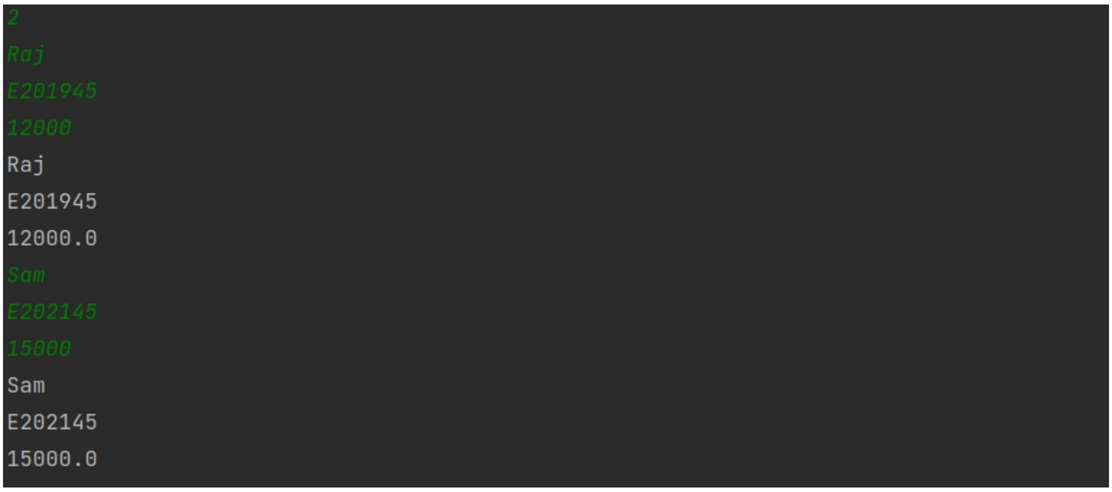
System.out.println(b);

System.out.println(c);

Code:

```
import java.util.*;


class Employee{
    private String empName,empId;

    private float salary;

    Employee( ){ //constructor

        empName=‘Samarth‘;

        empId=‘E202023‘;

        salary=15000f;

    }
    public String getName( ){

        return empName;

    }
    public String getId( ){

        return empId;

    }
    public float getSalary( ){

        return salary;

    }
    public void setName(String newName) {

        this.empName = newName;

    }
    public void setId(String newId){

        this.empId = newId;

    }
    public void setSalary(int newSal){

        this.salary = newSal;

    }


    public void display(String a, String b , float c){

        System.out.println(a);

        System.out.println(b);

        System.out.println(c);

    }
}


public class EmployeeDemo{ //driver class

    public static void main(String[] args){

        Scanner sc = new Scanner(System.in);

        System.out.println(‘enter the number of employees=‘);

        int n= sc.nextInt( );

        Employee[] arr =new Employee[n];

        for(int i = 0; i<n ; i++){

            arr[i]=new Employee( );
            String newName=sc.next( );

            String newId=sc.next( );

            int newSal=sc.nextInt( );

            //Employee emp= new Employee( );

            arr[i].setName(newName);

            arr[i].setId(newId);

            arr[i].setSalary(newSal);


            String a=arr[i].getName( );

            String b=arr[i].getId( );

            float c=arr[i].getSalary( );


            arr[i].display(a,b,c);

        }

    }

}
```

Output:



```
2
Raj
E201945
12000
Raj
E201945
12000.0
Sam
E202145
15000
Sam
E202145
15000.0
```

Conclusion:

by writing this program, I learnt how to use encapsulation. The concept of public and private access specifiers became more clear to me, and i also learnt how get and set methods work in java.

Samarth Gupta
2021600023

C2, AIML.