

Variation 1 – static implementation

Code:

```
1 package day1;
2
3 import java.util.ArrayList;
4
5
6 public class Employee {
7     public String name,address;
8     private int salary;
9     public int id;
10    static private int counter;
11    static private List<Employee> emob = new ArrayList<>();
12    Employee(String n, String a, int s){
13        this.name = n;
14        this.address = a;
15        this.salary = s;
16        this.id = counter+1;
17        counter++;
18        emob.add(this);
19    }
20    int Getsalary(Employee emp) {
21        return(emp.salary);
22    }
23    int Getcount() {
24        return(counter);
25    }
26    Employee Getemob(int i) {
27        return(emob.get(i));
28    }
29 }
30
31 class SU extends Employee{
32
33    SU(String n, String a, int s) {
34        super(n, a, s);
35    }
36    private int Calculatesalary(Employee emp) {
37        return( Getsalary(emp) *10 );
38    }
39    public void Checkemp() {
40        for (int i=0;i< Getcount();i++) {
41            Employee tmob = Getemob(i);
42
43            public void Checkemp() {
44                for (int i=0;i< Getcount();i++) {
45                    Employee tmob = Getemob(i);
46                    System.out.println("ID: "+tmob.id+", Emp Name: "+ tmob.name +", Address: "+tmob.address+", Salary: "+tmob.Getsalary(tmob)+", Salary with hike: "+Calculatesalary(tmob));
47                    System.out.println("-----");
48                }
49            }
50        }
51    }
52
53    class Maincls{
54        public static void main(String[] args) {
55            new Employee("Raj", "Alpha, Kolkata", 1000);
56            new Employee("Ravi", "Beta, Kolkata", 300);
57            new Employee("Raju", "Gamma, Kolkata", 200);
58            SU suser = new SU("Ramu","Delta, Kolkata", 400);
59            suser.Checkemp();
60        }
61    }
62 }
```

Output:

```
Console
<terminated> Maincls (2) [Java Application] C:\Languages\JRE8\bin\javaw.exe (11 Nov, 2020 12:07:53 PM – 12:07:56 PM)
ID: 1, Emp Name: Raj, Address: Alpha, Kolkata, Salary: 1000, Salary with hike: 10000
-----
ID: 2, Emp Name: Ravi, Address: Beta, Kolkata, Salary: 300, Salary with hike: 3000
-----
ID: 3, Emp Name: Raju, Address: Gamma, Kolkata, Salary: 200, Salary with hike: 2000
-----
ID: 4, Emp Name: Ramu, Address: Delta, Kolkata, Salary: 400, Salary with hike: 4000
-----
```

Variation 2 – Dynamic (using files)

Code:

```

1 package day1;
2
3 import java.io.BufferedReader;
4
11
12 public class Employeeed {
13     public String name,address;
14     private int salary;
15     public int id;
16     static private List<Employeeed> emob = new ArrayList<>();
17     Employeeed(){
18
19     }
20     Employeeed(String n, String a, int s){
21         this.name = n;
22         this.address = a;
23         this.salary = s;
24         this.id = LineCount()+1;
25         try {
26             BufferedWriter bw = new BufferedWriter(new FileWriter("data.tcs", true));
27             bw.write(this.id+"@"+this.name+"@"+this.address+"@"+this.salary+"\n");
28             bw.close();
29         } catch (IOException e) {
30             System.out.println("write error");
31         }
32     }
33     Employeeed(int i, String n, String a, int s){
34         this.name = n;
35         this.address = a;
36         this.salary = s;
37         this.id = i;
38     }
39     protected static int LineCount() {
40         int co = 0;
41         try {
42             BufferedReader br = new BufferedReader(new FileReader("data.tcs"));
43             while(br.readLine()!=null) {
44                 co++;
45             }
46             br.close();
47         } catch (IOException e) {
48             System.out.println("line count error");
49         }
50         return(co);
51     }
52 }
53
54 int Getsalary(Employeeed emp) {
55     return(emp.salary);
56 }
57 protected static void UpdateList() {
58     emob.clear();
59     try {
60         BufferedReader br = new BufferedReader(new FileReader("data.tcs"));
61         String emli;
62         while((emli=br.readLine()) != null) {
63             String[] emval = emli.split("@",4);
64             try {
65                 emob.add(new Employeeed(Integer.parseInt(emval[0]),emval[1],emval[2],Integer.parseInt(emval[3])));
66             } catch (ArrayIndexOutOfBoundsException e) {
67                 System.out.println("array list index");
68             }
69             br.close();
70         } catch (IOException e) {
71             System.out.println("line reading error");
72         }
73     }
74     Employeeed Getemob(int i) {
75         return(emob.get(i));
76     }
77 }
78
79 class SUD extends Employeeed{
80     SUD(){
81     }
82     SUD(String n, String a, int s) {
83         super(n, a, s);
84     }
85     private int Calculatesalary(Employeeed emp) {
86         return( Getsalary(emp) *10 );
87     }
88     public void Checkemp() {
89         UpdateList();
90         for (int i=0;i< LineCount();i++) {
91             Employeeed tmob = Getemob(i);
92             System.out.println("ID: "+tmob.id+", Emp Name: "+ tmob.name +", Address: "+tmob.address+", Salary: "+tmob.Getsalary(tmob)+", Salary with hike: "+Calculatesalary(tmob));
93             System.out.println("-----");
94         }
95     }
96 }
97
98 }

```

```

99 class Mainclsd{
100     public static void main(String[] args) {
101         int rein=0;
102         String re;
103         SUD suser = new SUD();
104         while(rein != 3) {
105             System.out.println("1. To add 2. Be SU 3.Quit");
106             Scanner inr = new Scanner(System.in);
107             re = inr.nextLine();
108             try {
109                 rein = Integer.parseInt(re);
110             } catch(Exception e) {
111                 rein=2;
112             }
113
114             switch(rein) {
115                 case 1 : {
116                     System.out.println("name");
117                     String name = inr.nextLine();
118                     System.out.println("address");
119                     String add = inr.nextLine();
120                     System.out.println("salary");
121                     String sal = inr.nextLine();
122                     int insal;
123                     try {
124                         insal = Integer.parseInt(sal);
125                     } catch(Exception e) {
126                         insal=0;
127                     }
128                     new Employeeed(name,add,insal);
129                     break;
130                 }
131                 case 2 : {
132                     suser.Checkemp();
133                     break;
134                 }
135                 case 3 : {
136                     System.out.println("quitting");
137                     inr.close();
138                     break;
139                 }
140                 default : System.out.println("enter valid no.");
141             }
142         }
143     }

```


Output:

```

Console
<terminated> Mainclsd (1) [Java Application] C:\Languages\JRE8\bin\javaw.exe (11 Nov, 2020 12:25:16 PM – 12:26:20 PM)
1. To add 2. Be SU 3.Quit
2
ID: 1, Emp Name: Raj, Address: Alpha, Kolkata, Salary: 1000, Salary with hike: 10000
-----
ID: 2, Emp Name: Ravi, Address: Beta, Kolkata, Salary: 300, Salary with hike: 3000
-----
ID: 3, Emp Name: Raju, Address: Gamma, Kolkata, Salary: 200, Salary with hike: 2000
-----
ID: 4, Emp Name: Ramu, Address: Delta, Kolkata, Salary: 400, Salary with hike: 4000
-----
ID: 5, Emp Name: Rajesh, Address: Re, Olympus, Salary: 400, Salary with hike: 4000
-----
1. To add 2. Be SU 3.Quit
1
name
Riyaz
address
read, Chebronyl
salary
100
1. To add 2. Be SU 3.Quit
2
ID: 1, Emp Name: Raj, Address: Alpha, Kolkata, Salary: 1000, Salary with hike: 10000
-----
ID: 2, Emp Name: Ravi, Address: Beta, Kolkata, Salary: 300, Salary with hike: 3000
-----
ID: 3, Emp Name: Raju, Address: Gamma, Kolkata, Salary: 200, Salary with hike: 2000
-----
ID: 4, Emp Name: Ramu, Address: Delta, Kolkata, Salary: 400, Salary with hike: 4000
-----
ID: 5, Emp Name: Rajesh, Address: Re, Olympus, Salary: 400, Salary with hike: 4000
-----
ID: 6, Emp Name: Riyaz, Address: read, Chebronyl, Salary: 100, Salary with hike: 1000
-----
1. To add 2. Be SU 3.Quit
3
quitting

```

File:

 data.tcs - Notepad

File Edit Format View Help

```
1@Raj@Alpha, Kolkata@1000  
2@Ravi@Beta, Kolkata@300  
3@Raju@Gamma, Kolkata@200  
4@Ramu@Delta, Kolkata@400  
5@Rajesh@Re, Olympus@400  
6@Riyaz@read, Chebronyl@100
```