

## **“Experiment 2.4”**

Student Name: **SUMIT KUMAR**

Branch: **CSE**

Semester: **5**

Subject Name: **PBLJ Lab**

UID: **20BCS8226**

Section/Group: **808-A**

Date of Submission: **28-10-22**

Subject Code: **20CSP-321**

### **Aim:**

Employee management systems

### **Minimum Hardware Requirements:**

- 2 GHz CPU or 1 virtual CPU in virtualized environments.
- 1 GB of RAM.
- 4 GB of storage.

### **Minimum Software Requirements:**

Software	Version
● OS	● Mac OS 10.15, HP-UX 11i V3, AIX 7.2, Windows Server 2019, Windows 10, Solaris 11.3, Red Hat Enterprise Linux 8.1, Ubuntu Server 20.04
● JDK	● JDK 1.8.0, JDK 11, Eclipse IDE, Net, NetBeans 8.2

## Source code:

```
import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.ObjectInputStream;
import java.io.ObjectOutputStream;
import java.io.Serializable;
import java.util.ArrayList;
import java.util.Scanner;

@SuppressWarnings("serial")
class Employee implements Serializable{

    int id;
    String name;
    float salary;
    long contact_no;
    String email_id;

    public Employee(int id, String name, float salary, long contact_no, String email_id)
    {
        this.id = id;
        this.name = name;
        this.salary = salary;
        this.contact_no = contact_no;
        this.email_id = email_id;
    }

    public String toString()
    {
        return "\nEmployee Details : " + "\nID: " + this.id + "\nName: " + this.name +
"\nSalary: " +
        this.salary + "\nContact No: " + this.contact_no + "\nEmail-id: " +
this.email_id;
    }

}

public class Main
{
    static void display(ArrayList<Employee> al)
    {
        System.out.println("\n-----Employee List-----\n");
    }
}
```

```

        System.out.println(String.format("%-10s%-15s%-10s%-20s%-10s",
"ID", "Name", "salary", "contact-no", "Email-Id"));
        for(Employee e : al)
        {
            System.out.println(String.format("%-5s%-20s%-10s%-15s%-
10s",e.id,e.name,e.salary,e.contact_no,e.email_id));
        }
    }

    @SuppressWarnings("unchecked")
    public static void main(String[] args)
    {
        int id;
        String name;
        float salary;
        long contact_no;
        String email_id;

        Scanner sc = new Scanner(System.in);
        ArrayList<Employee> al = new ArrayList<Employee>();

        File f = null;
        FileInputStream fis = null;
        ObjectInputStream ois = null;
        FileOutputStream fos = null;
        ObjectOutputStream oos =null;
        try{

            f = new File("N:/Java Work Space/Eclipse Programs/Employee Management
Tool/src/EmployeeDataList1.txt");
            if(f.exists())
            {
                fis = new FileInputStream(f);
                ois = new ObjectInputStream(fis);
                al = (ArrayList<Employee>)ois.readObject();
            }

        }
        catch(Exception exp){
            System.out.println(exp);
        }
        do
        {
            System.out.println("\n*****Welcome to the Employee Management System*****\n");
            System.out.println("1). Add Employee to the DataBase\n" +

```

in this company\n" +

"2). Search for Employee\n" +  
"3). Edit Employee details\n" +  
"4). Delete Employee Details\n" +  
"5). Display all Employees working

"6). EXIT\n");

System.out.println("Enter your choice : ");

int ch = sc.nextInt();

switch(ch)

{

case 1: System.out.println("\nEnter the following details to ADD list:\n");

System.out.println("Enter ID :");

id = sc.nextInt();

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

name = sc.next();

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

salary = sc.nextFloat();

System.out.println("Enter Contact No :");

contact\_no = sc.nextLong();

System.out.println("Enter Email-ID :");

email\_id = sc.next();

al.add(new Employee(id, name, salary, contact\_no, email\_id));

display(al);

break;

case 2: System.out.println("Enter the Employee ID to search :");

id = sc.nextInt();

int i=0;

for(Employee e: al)

{

if(id == e.id)

{

System.out.println(e+"\n");

i++;

}

}

if(i == 0)

{

System.out.println("\nEmployee Details are not available, Please enter a valid ID!!");

}

break;

case 3: System.out.println("\nEnter the Employee ID to EDIT the details");

id = sc.nextInt();

```

        int j=0;
        for(Employee e: al)
        {
            if(id == e.id)
            {
                j++;
                do{
                    int ch1 =0;
                    System.out.println("\nEDIT Employee Details :\n" +
"1). Employee ID\n" +
"2). Name\n" +
"3). Salary\n" +
"4). Contact No.\n" +
"5). Email-ID\n" +
"6). GO BACK\n");
                    System.out.println("Enter your choice : ");
                    ch1 = sc.nextInt();
                    switch(ch1)
                    {
                        case 1: System.out.println("\nEnter new Employee ID:");
                                e.id =sc.nextInt();
                                System.out.println(e+"\n");
                                break;

                        case 2: System.out.println("Enter new Employee Name:");
                                e.name =sc.nextLine();
                                System.out.println(e+"\n");
                                break;

                        case 3: System.out.println("Enter new Employee Salary:");
                                e.salary =sc.nextFloat();
                                System.out.println(e+"\n");
                                break;

                        case 4: System.out.println("Enter new Employee Contact No. :");
                                e.contact_no =sc.nextLong();
                                System.out.println(e+"\n");
                                break;

```

```

        case 5: System.out.println("Enter new Employee Email-ID :");
                                e.email_id =sc.next();
                                System.out.println(e+"\n");
                                break;

                                case 6: j++;

                                                break;

default : System.out.println("\nEnter a correct choice from the List :");
                                                break;

                                }
                                }
                                while(j==1);
                                }
                                }
                                if(j == 0)
                                {
System.out.println("\nEmployee Details are not available, Please enter a valid ID!!");
                                }

                                break;

case 4: System.out.println("\nEnter Employee ID to DELETE from the Databse :");
        id = sc.nextInt();
        int k=0;
        try{
        for(Employee e: al)
        {
                if(id == e.id)
                {
                                                al.remove(e);
                                                display(al);
                                                k++;
                }
        }
        if(k == 0)
        {
System.out.println("\nEmployee Details are not available, Please enter a valid ID!!");
        }
        }
        catch(Exception ex){
                System.out.println(ex);
        }
        break;

```

```

case 5: try {
    al = (ArrayList<Employee>)ois.readObject();

    } catch (ClassNotFoundException e2) {

        System.out.println(e2);
    } catch (Exception e2) {

        System.out.println(e2);
    }

    display(al);
    break;

case 6: try {
    fos = new FileOutputStream(f);
    oos = new ObjectOutputStream(fos);
    oos.writeObject(al);
    } catch (IOException e1) {
        e1.printStackTrace();
    }
    catch(Exception e2){
        e2.printStackTrace();
    }
    finally{
        try {
            fis.close();
            ois.close();
            fos.close();
            oos.close();
        } catch (Exception e1) {
            e1.printStackTrace();
        }

    }

System.out.println("\nYou have chosen EXIT !! Saving Files and closing the tool.");
sc.close();
System.exit(0);
break;

default : System.out.println("\nEnter a correct choice from the List :");
        break;

    }

}

```

```

        while(true);
    }
}

```

## Output:

```

*****Welcome to the Employee Management System*****
1). Add Employee to the DataBase
2). Search for Employee
3). Edit Employee details
4). Delete Employee Details
5). Display all Employees working in this company
6). EXIT
Enter your choice :
1
Enter the following details to ADD list:
Enter ID :
8226
Enter Name :
SUMIT
Enter Salary :
1000
Enter Contact No :
7992334688
Enter Email-ID :
sumit@gmail.com
-----Employee List-----
ID      Name      salary    contact-no    Email-Id
8226    SUMIT      1000.0    7992334688    sumit@gmail.com
*****Welcome to the Employee Management System*****

```

```

*****Welcome to the Employee Management System*****
1). Add Employee to the DataBase
2). Search for Employee
3). Edit Employee details
4). Delete Employee Details
5). Display all Employees working in this company
6). EXIT
Enter your choice :
2
Enter the Employee ID to search :
8226
Employee Details :
ID: 8226
Name: SUMIT
Salary: 1000.0
Contact No: 7992334688
Email-id: sumit@gmail.com
*****Welcome to the Employee Management System*****
1). Add Employee to the DataBase
2). Search for Employee
3). Edit Employee details
4). Delete Employee Details
5). Display all Employees working in this company
6). EXIT

```



```
GDB online Debugger | Compile: X +
onlinegdb.com
input
6). EXIT
Enter your choice :
3
Enter the Employee ID to EDIT the details
8226
EDIT Employee Details :
1). Employee ID
2). Name
3). Salary
4). Contact No.
5). Email-ID
6). GO BACK
Enter your choice :
3
Enter new Employee Salary:
6000
Employee Details :
ID: 8226
Name: SUMIT
Salary: 6000.0
Contact No: 7992334688
Email-id: sumit@gmail.com
EDIT Employee Details :
1). Employee ID
2). Name
```

```
GDB online Debugger | Compile: X +
onlinegdb.com
input
Email-id: sumit@gmail.com
EDIT Employee Details :
1). Employee ID
2). Name
3). Salary
4). Contact No.
5). Email-ID
6). GO BACK
Enter your choice :
6
*****Welcome to the Employee Management System*****
1). Add Employee to the DataBase
2). Search for Employee
3). Edit Employee details
4). Delete Employee Details
5). Display all Employees working in this company
6). EXIT
Enter your choice :
5
java.lang.NullPointerException
-----Employee List-----
ID      Name      salary   contact-no   Email-Id
8226    SUMIT      6000.0   7992334688   sumit@gmail.com
```