**“Experiment 2.4”**

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Subject Name: **PBLJ Lab** 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, Ellipse 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" +

"2). Search for Employee\n" +

"3). Edit Employee details\n" +

"4). Delete Employee Details\n" +

"5). Display all Employees working in this company\n" +

"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:**







