Experiment 1.1

Student Name: Sachin Kumar Singh   **UID:** 21BCS9217
Branch: BE CSE   **Section/Group:** 646-B
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Subject Name: Project-based learning in java   **Subject Code:**21CSH-319

Aim: Create an application to save the employee information using an array.

Objectives: Given the following table containing information about employees of an organization, develop a small java application,which accept employee id from command prompt and display the details

Code:

```java
package University.Java_Using_Project.Experiment1;

import java.util.*;
import java.util.Date;


class Employee{

    private int emoNo;
    private String empName;
    private final Date joiningDate = new Date();
    private String designationCode;
    private String department;
    private int basic;
    private int hra;
    private int it;

    public Employee(){}

    public Employee(int emoNo, String empName, String designationCode, String department, int basic, int hra, int it) {
        this.emoNo = emoNo;
        this.empName = empName;
        this.designationCode = designationCode;
        this.department = department;
        this.basic = basic;
```

```java
        this.hra = hra;
        this.it = it;
    }


    public int getEmoNo() {
        return emoNo;
    }

    public void setEmoNo(int emoNo) {
        this.emoNo = emoNo;
    }

    public String getEmpName() {
        return empName;
    }

    public void setEmpName(String empName) {
        this.empName = empName;
    }

    public String getDesignationCode() {
        return designationCode;
    }

    public void setDesignationCode(String designationCode) {
        this.designationCode = designationCode;
    }

    public String getDepartment() {
        return department;
    }

    public void setDepartment(String department) {
        this.department = department;
    }

    public int getBasic() {
        return basic;
    }
```

```java
public void setBasic(int basic) {
    this.basic = basic;
}

public int getHra() {
    return hra;
}

public void setHra(int hra) {
    this.hra = hra;
}

public int getIt() {
    return it;
}

public void setIt(int it) {
    this.it = it;
}

public String getDesignation(String designationCode) {

    return switch (designationCode) {
        case "e" -> "Engineer";
        case "c" -> "Consultant";
        case "k" -> "Clerk";
        case "r" -> "Receptionist";
        case "m" -> "Manager";
        default -> "Unknown";
    };
}

int calculateSalary(String designationCode){
    int salary = 0;

    switch (designationCode){
        case "e":
            salary = basic+hra+20000-it;
            break;
        case "c":
            salary = basic+hra+32000-it;
            break;
```

```java
            case "k":
                salary = basic+hra+12000-it;
                break;
            case "r":
                salary = basic+hra+15000-it;
                break;
            case "m":
                salary = basic+hra+40000-it;
                break;
            default:
        }

        return salary;
    }

    void display(List<Employee> list){
        System.out.println("Emp No.\t Emp Name\t Department\t Designation\t Salary");
        for (Employee e : list) {
            System.out.println(e.getEmoNo() + "\t\t" + e.getEmpName() + "\t\t" +
e.getDepartment() + "\t\t" + e.getDesignation(e.designationCode) + "\t\t" +
e.calculateSalary(e.designationCode));
        }
        System.out.println();
    }

    void  getEmployeeById(int empId,List<Employee> list){

        System.out.println("Emp No.\t Emp Name\t Department\t Designation\t Salary");

        for (Employee e : list) {
            if (empId == e.emoNo) {
                System.out.println(e.getEmoNo() + "\t\t" + e.getEmpName() + "\t\t" +
e.getDepartment() + "\t\t" + e.getDesignationCode() + "\t\t" +
e.calculateSalary(e.designationCode));
            }
        }
        System.out.println();

    }
```

```java
        void run(Scanner in){
            List<Employee> list = new ArrayList<>();
            list.add(new Employee(9200,"Sabhya Mahajan","e","Eng",40000,8000,3000));
            list.add(new Employee(9895,"Rishav","e","Eng",20000,8000,3000));
            list.add(new Employee(9217,"Sachin Kumar
Singh","k","R&D",32000,5000,2000));
            list.add(new Employee(1234,"Keshav","r","Finance",22000,5000,3000));
            list.add(new Employee(9194,"Sarbeet","c","R&D",32000,2000,2000));

            while(true){
                System.out.println("Enter 1 to enter employee details");
                System.out.println("Enter 2 to fetch employee details");
                System.out.println("Enter 3 to get employee by employee no.");
                System.out.println("Enter 4 to exit");

                int choice = in.nextInt();

                switch(choice){
                    case 1: {
                        System.out.println("Enter employee id");
                        int empNo = in.nextInt();
                        System.out.println("Enter employee name");
                        String empName= in.next();
                        System.out.println("Enter employee designation code ");
                        String designationCode = in.next();
                        System.out.println("Enter employee department");
                        String department = in.next();
                        System.out.println("Enter Basic");
                        int basic = in.nextInt();
                        System.out.println("Enter HRA");
                        int hra = in.nextInt();
                        System.out.println("Enter IT");
                        int it= in.nextInt();

                        Employee employee = new
Employee(empNo,empName,designationCode,department,basic,hra,it);

                        list.add(employee);
                    }
                    break;
                    case 2:{
                        new Employee().display(list);
```

```java
            }break;
            case 3:{
                System.out.println("Enter the Emp No. to fetch details");
                int empNo = in.nextInt();
                new Employee().getEmployeeById(empNo,list);
            }
            break;
            case 4:{
                System.exit(0);
            }
            break;
            default:{
                System.out.println("Invalid input");
            }
        }
    }
  }
}

public class Experiment {

    public static void main(String[] args){
        Scanner in = new Scanner(System.in);
        System.out.println("Name: Sachin Kumar Singh\nUID: 21BCS9217");
        Employee employee = new Employee();
        employee.run(in);

    }

}
```

Output:

```
"C:\Program Files\Java\jdk-18.0.1.1\bin\java.exe" ...
Name: Sachin Kumar Singh
UID: 21BCS9217
Enter 1 to enter employee details
Enter 2 to fetch employee details
Enter 3 to get employee by employee no.
Enter 4 to exit
3
Enter the Emp No. to fetch details
9217
Emp No.  Emp Name    Department  Designation    Salary
9217         Sachin Kumar Singh     R&D      k       47000
```