



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment 1

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Subject Name: PBLJ LAB

UID: 22BCS12806

Section/Group: KRG - 2 B

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Subject Code: 22CSH-359

1. Aim: Create an application to save the employee information using arrays and which accepts employee id from the command prompt and displays the employee details along with his salary.

2. Objective:

- i. To learn about Array Data Structure.
- ii. To calculate the salary with respect to the formula (Basic + HRA + DA – Income Tax).
- iii. Streamlined Decision-Making for HR , the program assists HR teams in making informed decisions regarding payroll, promotions, and budgeting.

3. Problem Statement: Design and implement a Employee Management System that allows users to manage employee records effectively.

4. Implementation/Code:

~ **Employee.java**

package com;

```
public class Employee {  
    public int EmpNo;  
    public String EmpName;  
    public String JoinDate;  
    public char DesignationCode;  
    public String Department;  
    public int Basic;  
    public int HRA;  
    public int IT;
```

```
    public Employee(int EmpNo,String EmpName, String JoinDate,char DesignationCode,  
        String Department,int Basic, int HRA,int IT) {  
        this.EmpNo = EmpNo;  
        this.EmpName = EmpName;  
        this.JoinDate = JoinDate;  
        this.DesignationCode = DesignationCode;  
        this.Department = Department;  
        this.Basic = Basic;  
        this.HRA = HRA;  
        this.IT = IT;  
    }  
}
```



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```
public void retrieveData(String designation,int DA) {  
    int Salary = Basic + HRA - IT + DA;  
    System.out.println("Emp No\t" + "Name\t" + "Dpt.\t" + "Dsgn.\t" + "Salary");  
    System.out.println(EmpNo + "\t" + EmpName + "\t" + Department + "\t" +  
designation + "\t" + Salary);  
}  
}
```

~Designation.java

package com;

```
public class Designation {  
    public char DesignationCode;  
    public String Designation;  
    public int DA;  
  
    public Designation(char Dsgcode,String dsg,int DA) {  
        this.DesignationCode = Dsgcode;  
        this.Designation = dsg;  
        this.DA = DA;  
    }  
}
```

~App.java

```
import com.Designation;  
import com.Employee;  
import java.util.Scanner;
```

```
public class App {  
    public static int getIndex(Employee[] emp,int value) {  
        int k = -1;  
        for(int i = 0;i < emp.length; i++) {  
            if(emp[i].EmpNo == value) {  
                k = i;  
                break;  
            }  
        }  
        if(k == -1) {  
            System.out.println("There is no employee with empID: "+ value);  
        }  
        return k;  
    }  
  
    public static Designation findDesg(char code,Designation[] dsg) {  
        for(Designation d : dsg) {
```

```
        if(d.DesignationCode == code) {
            return d;
        }
    }
    return null;
}

public static void main(String[] args) throws Exception {
    System.out.println("Welcome to employee management system !!\nDivyanshu
Jaiswal\t22BCS12806");
    Scanner sc = new Scanner(System.in);

    Employee[] emp = {
        new Employee(1001, "Ashish", "01/04/2009", 'e', "R&D", 20000, 8000, 3000),
        new Employee(1002, "Sushma", "23/08/2012", 'c', "PM", 30000, 12000, 9000),
        new Employee(1003, "Rahul", "12/11/2008", 'k', "Actt", 10000, 8000, 1000),
        new Employee(1004, "Chahat", "29/01/2013", 'r', "Front Desk", 12000, 6000, 2000),
        new Employee(1005, "Ranjan", "16/07/2005", 'm', "Engg", 50000, 20000, 20000),
        new Employee(1006, "Suman", "01/01/2000", 'e', "Manufacturing", 23000, 9000, 4400),
        new Employee(1007, "Tanmay", "12/06/2006", 'c', "PM", 29000, 12000, 10000)
    };

    Designation[] dsg = {
        new Designation('e', "Engineer", 20000),
        new Designation('c', "Consultant", 32000),
        new Designation('k', "Clerk", 12000),
        new Designation('r', "Receptionist", 15000),
        new Designation('m', "Manager", 40000)
    };

    System.out.println("Enter the employee ID to print its data:");
    int n = sc.nextInt();
    int index = getIndex(emp, n);

    if(index != -1) {
        char designationcode = emp[index].DesignationCode;
        Designation obj = findDesg(designationcode, dsg);
        String dsgnation = obj.Designation;
        int DA = obj.DA;

        emp[index].retrieveData(dsgnation, DA);
    }
    sc.close();
}
```



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5. Output:

```
▼ TERMINAL
● PS D:\cu\code\.vscode\.cu experiment\java\Experiment-1> & 'C:\Pro
experiment\java\Experiment-1\bin' 'App'
Welcome to employee management system !!
Divyanshu Jaiswal      22BCS12806
Enter the employee ID to print its data:
123
There is no employee with empID: 123
● PS D:\cu\code\.vscode\.cu experiment\java\Experiment-1> d:; cd 'c
CodeDetailsInExceptionMessages' '-cp' 'D:\cu\code\.vscode\.cu expe
Welcome to employee management system !!
Divyanshu Jaiswal      22BCS12806
Enter the employee ID to print its data:
1003
Emp No  Name    Dpt.   Dsgn.   Salary
1003    Rahul   Actt   Clerk   29000
○ PS D:\cu\code\.vscode\.cu experiment\java\Experiment-1> █
```

6. Learning Outcomes:

- i. Use of array, array of objects.
- ii. Use of class and packages.
- iii. Use of Scanner class for taking input.