

ASSIGNMENT 4

MARASIGAN, VEM AIENSI A.
2BSCS-1

SOURCE CODE

[domain package]

```
DepartmentReport.java x DepartmentDA.java x EmployeeDA.java x Department.java x Employee.java x emp.csv x deptemp.csv x dep.csv x
1 package domain;
2
3 3 usages
4 public class Department {
5     2 usages
6     private String depCode;
7     2 usages
8     private String depName;
9     2 usages
10    private Double depTotalSalary;
11
12    1 usage
13    public Department(String depCode, String depName)
14    {
15        this.depCode = depCode;
16        this.depName = depName;
17    }
18    1 usage
19    public String getDepCode() { return depCode; }
20
21    1 usage
22    public String getDepName() { return depName; }
23
24    1 usage
25    public Double getDepTotalSalary() { return depTotalSalary; }
26
27    1 usage
28    public void setDepTotalSalary(Double depTotalSalary) {
29        this.depTotalSalary = depTotalSalary;
30    }
31 }
```

```
DepartmentReport.java x DepartmentDA.java x EmployeeDA.java x Department.java x Employee.java x emp.csv x deptemp.csv x dep.csv x
1 package domain;
2
3 9 usages
4 public class Employee {
5     2 usages
6     private String empNo;
7     2 usages
8     private String lastName;
9     2 usages
10    private String firstName;
11    2 usages
12    private Double salary;
13
14    1 usage
15    public Employee(String empNo, String lastName, String firstName) {
16        this.empNo = empNo;
17        this.lastName = lastName;
18        this.firstName = firstName;
19    }
20
21    1 usage
22    public String getEmpNo() { return empNo; }
23
24    1 usage
25    public String getLastName() { return lastName; }
26
27    1 usage
28    public String getFirstName() { return firstName; }
29
30    2 usages
31    public Double getSalary() { return salary; }
32
33    1 usage
34    public void setSalary(Double salary) { this.salary = salary; }
35 }
```

Source files:

https://drive.google.com/drive/folders/1kBAGnhz4T83zSLBWJn6VIMekdPCWqb6B?usp=share_link

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[dao package]

```

1  package dao;
2  import domain.Employee;
3  import java.util.*;
4  import java.io.*;
5  public class EmployeeDA {
6      private HashMap<String, Employee> employeeMap;
7      public HashMap<String, Employee> getEmployeeMap() {return employeeMap;}
8
9      public EmployeeDA(String depCode) throws FileNotFoundException
10     {
11         Scanner readEmpInfo = new Scanner(new FileReader( fileName: "src/emp.csv"));
12
13         employeeMap = new HashMap<>();
14         int key = 0;
15
16         readEmpInfo.nextLine();
17         while(readEmpInfo.hasNext())
18         {
19             String empStringData = readEmpInfo.nextLine();
20             String[] empData = empStringData.split( regex: ",");
21
22             //determine employee's depCode
23             String empDep = deptempInfo(empData[0], col: 0);
24
25             if(empDep.equals(depCode))
26             {
27                 Employee employee = new Employee(empData[0], empData[1], empData[2]);
28                 employee.setSalary(Double.parseDouble(deptempInfo(empData[0], col: 2)));
29                 //returns the salary from deptemp.csv and then converted to double
30                 employeeMap.put(depCode+key, employee);
31                 key++;
32             }
33         }
34     }
35
36     private String deptempInfo(String empNo, int col) throws FileNotFoundException
37     {
38         String data = "";
39         Scanner readDeptempInfo = new Scanner(new FileReader( fileName: "src/deptemp.csv"));
40
41         readDeptempInfo.nextLine();
42         while(readDeptempInfo.hasNext())
43         {
44             String tempStringData = readDeptempInfo.nextLine();
45             String[] tempData = tempStringData.split( regex: ",");
46
47             if(tempData[1].equals(empNo))
48             {
49                 data = (tempData[col]);
50             }
51         }
52         return data;
53     }
54 }

```

Source files:

https://drive.google.com/drive/folders/1kBaNhgz4T83zSLBWJn6VIMekdPCWqb6B?usp=share_link

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DepartmentDA

```

DepartmentReport.java x DepartmentDA.java x EmployeeDA.java x Department.java x Employee.java x emp.csv x deptemp.csv x
1 package dao;
2 import domain.*;
3
4 import java.text.DecimalFormat;
5 import java.util.*;
6 import java.io.*;
7
8 public class DepartmentDA {
9     1 usage
10     public DepartmentDA() throws FileNotFoundException
11     {
12         Scanner readDepInfo = new Scanner(new FileReader("src/dep.csv"));
13
14         int key = 0;
15
16         readDepInfo.nextLine();
17         while(readDepInfo.hasNext())
18         {
19             String depStringData = readDepInfo.nextLine();
20             String[] depData = depStringData.split(" ");
21
22             Department department = new Department(depData[0], depData[1]);
23             EmployeeDA employees = new EmployeeDA(depData[0]);
24
25             //Calculate Total Salary
26             department.setDepTotalSalary(CalculateTotalSalary(employees.getEmployeeMap()));
27
28             //Print the report
29             System.out.println(AnalyzedReport(department, employees.getEmployeeMap()));
30         }
31     }
32
33     1 usage
34     @ private Double CalculateTotalSalary(HashMap<String, Employee> empMap)
35     {
36         Double tSalary = 0.0;
37         for(Map.Entry<String, Employee> entry: empMap.entrySet())
38         {
39             tSalary += entry.getValue().getSalary();
40         }
41         return tSalary;
42     }
43
44     1 usage
45     @ private String AnalyzedReport(Department dep, HashMap<String, Employee> empMap)
46     {
47         DecimalFormat df = new DecimalFormat("###,###,###.00");
48         String report = "Department Code: " + dep.getDepCode() + "\n"
49             + "Department Name: " + dep.getDepName() + "\n"
50             + "Department Salary: " + df.format(dep.getDepTotalSalary()) + "\n";
51
52         report += "-----[ Details ]-----\n";
53         report += "EmpNo\tEmployee Name\t\t\tSalary\n";
54
55         for(Map.Entry<String, Employee> entry: empMap.entrySet())
56         {
57             String empName = wordAligner(entry.getValue().getLastName()
58                 + ", " + entry.getValue().getFirstName());
59
60             report += entry.getValue().getEmpNo() + "\t"
61                 + empName + "\t"
62                 + df.format(entry.getValue().getSalary()) + "\n";
63         }
64         return report;
65     }
66
67     1 usage
68     static String wordAligner(String word)
69     {
70         //this method transforms the word length to a fixed length for alignment purposes
71         String fixed = word;
72         while(fixed.length() < 20)
73             fixed += " ";
74         return fixed;
75     }
76 }

```

Source files:

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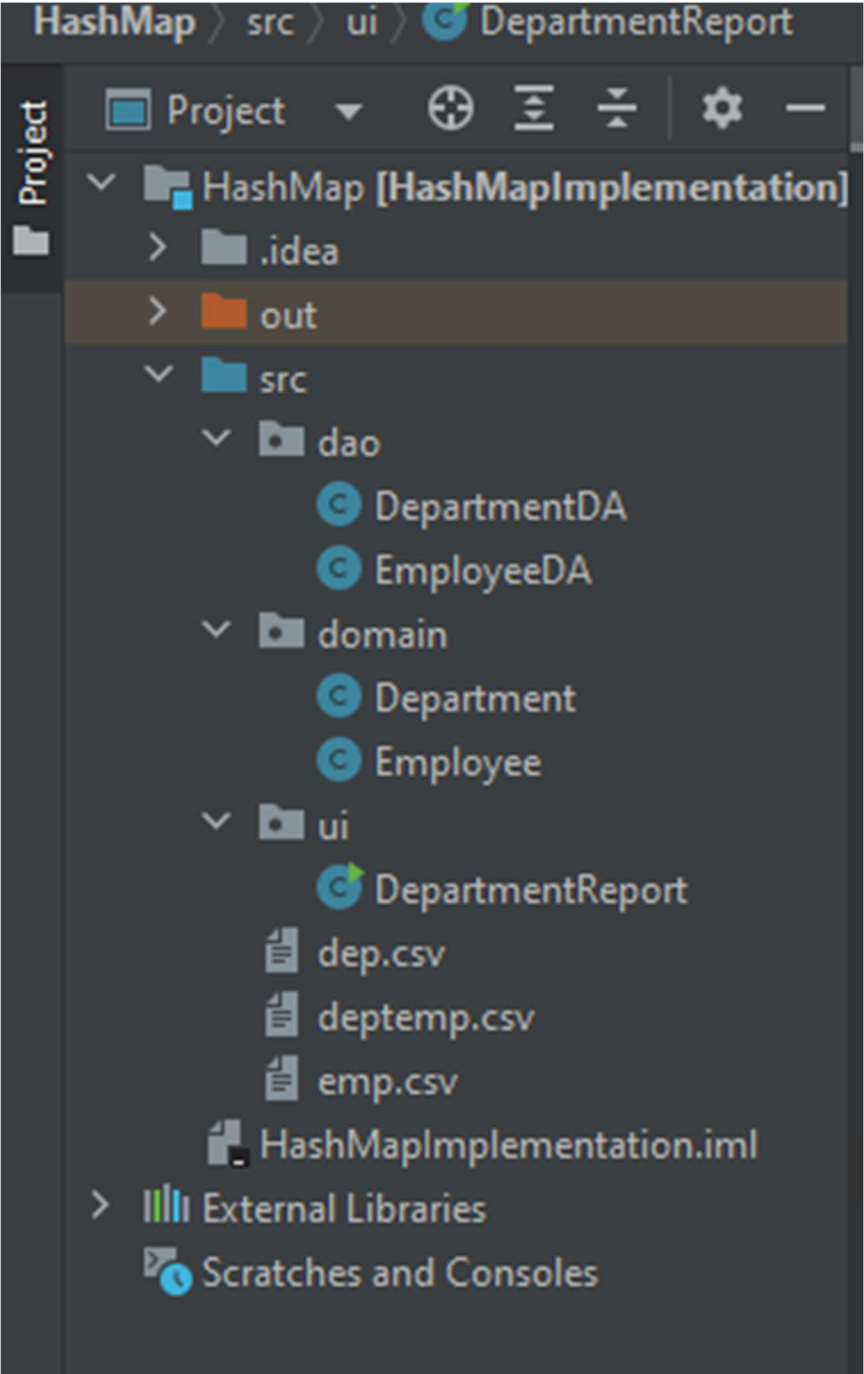
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[ui package]

```
1 package ui;
2 import dao.DepartmentDA;
3 import java.io.*;
4 public class DepartmentReport {
5     public static void main(String[] args) throws FileNotFoundException {
6
7         System.out.print("      +-----+\n" +
8             "-----| Department Report |-----\n" +
9             "      +-----+\n\n");
10        new DepartmentDA();
11    }
12 }
13
```

[Project package list]



Source files:
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OUTPUT

```
Run: DepartmentReport x
"C:\Program Files\Java\jdk-19\bin\java.exe" "-java
+-----+
-----| Department Report |-----
+-----+

Department Code: IT
Department Name: Information Tech
Department Salary: 126,000.00
-----[ Details ]-----
EmpNo   Employee Name      Salary
E123    Maxwell, John       30,000.00
E125    Ortiz, Manuel        51,000.00
E124    Delos Reyes, Ernesto   45,000.00

Department Code: HR
Department Name: Human Resource
Department Salary: 91,000.00
-----[ Details ]-----
EmpNo   Employee Name      Salary
E252    Rosanto, Margareth     25,000.00
E251    Natividad, Lisa        66,000.00

Department Code: FNC
Department Name: Finance
Department Salary: 108,000.00
-----[ Details ]-----
EmpNo   Employee Name      Salary
E370    Baldo, Jason          42,000.00
E371    Hernandez, Timothy    29,000.00
E372    Cruz, Ricardo         37,000.00

Process finished with exit code 0
```