

Experiment 1

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Branch: CSE

Section/Group: 607/A

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Date of Performance: 06/09/2022

Subject Name: PROJECT BASED LEARNING IN JAVA LAB

Subject Code: 20CSP-321

1. Aim/Overview of the practical:

Create an application to save the employee information using arrays.

2. Task to be done/ Which logistics used:

Given the following table containing information about employees of an organization, develop a small java application, which accepts employee

id from

the command prompt and displays the following details as output:

You may assume that the array is initialized with the following details:

| Emp No. | Emp Name | Join Date | Desig Code | Dept | Basic | HRA | IT |
|---------|----------|------------|------------|-----------------|-------|-------|-------|
| 1001 | Ashish | 01/04/2009 | e | R&D | 20000 | 8000 | 3000 |
| 1002 | Sushma | 23/08/2012 | c | PM | 30000 | 12000 | 9000 |
| 1003 | Rahul | 12/11/2008 | k | Acct | 10000 | 8000 | 1000 |
| 1004 | Chahat | 29/01/2013 | r | Front Desk | 12000 | 6000 | 2000 |
| 1005 | Ranjan | 16/07/2005 | m | Engg | 50000 | 20000 | 20000 |
| 1006 | Suman | 1/1/2000 | e | Manu factur ing | 23000 | 9000 | 4400 |
| 1007 | Tanmay | 12/06/2006 | c | PM | 29000 | 12000 | 10000 |

Salary is calculated as Basic+HRA+DA-IT. (DA details are given in the Designation table) Designation details:

| Designation Code | Designation | DA |
|------------------|--------------|-------|
| e | Engineer | 20000 |
| c | Consultant | 32000 |
| k | Clerk | 12000 |
| r | Receptionist | 15000 |
| m | Manager | 40000 |

Use Switch-Case to print Designation in the output and to find the value of DA for a particular employee.

O/P Expected:

- Assuming that your class name is Project1, and you execute your code as `java Project1 1003`, it should display the following output :

Emp No. Emp Name Department Designation Salary

1003 Rahul Acct Clerk 29000

2. java Project1 123

There is no employee with empid : 200

3. Algorithm/Flowchart (For programming based labs):

- 1.START
- 2.Declare different array for storing different values of empName,empID...etc and store value in it.
- 3.Ask the user for input the id need to be searched.
- 4.Using for loop with switch case to define DA and designation of employeeand then calculate salary with the help of DA.
- 5.Print the info of employee if (emp id<7).
- 6.END

4. Steps for experiment/practical/Code:

```
package com.company;
import java.util.Scanner;
public
class Main
{
public
static void main(String[] args)
{
int empno[] = { 1001, 1002, 1003, 1004, 1005, 1006, 1007 };
String empname[] = {"Ashish", "Sushma", "Rahul", "Chahat", "Ranjan", "Suman",
"Tanmay"};
char designationcode[] = {'e', 'c', 'k', 'r', 'm', 'e', 'c'};
String department[] = {"R&D", "PM", "Acct", "Front Desk", "Engg", "Manufacturing",
"PM"};
int basic[] = {20000, 30000, 10000, 12000, 50000, 23000, 29000};
int hra[] = {8000, 12000, 8000, 6000, 20000, 9000, 12000};
int it[] = {3000, 9000, 1000, 2000, 20000, 4400, 10000};
String designationcodemean[] = {"e", "c", "k", "r", "m"};
```

```
String designation[] = {"Engineer", "Consultant", "Clerk", "Receptionist", "Manager"};
int da[] = {20000, 32000, 12000, 15000, 40000};
Scanner sc = new Scanner(System.in);
System.out.println("Enter employee number : ");
int empnumber = sc.nextInt();
String designationofemployee[];
designationofemployee = new String[7];
int da_sal[];
da_sal = new int[7];
int salary[];
salary = new int[7];

for (int a = 0; a < 7; a++)
{
    char code;
    code = designationcode[a];
    switch (code)
    {
        case 'e':
            designationofemployee[a] = "Engineer";
            da_sal[a] = 20000;
        case 'c':
            designationofemployee[a] = "Consultant";
            da_sal[a] = 32000;
        case 'k':
            designationofemployee[a] = "Clerk";
            da_sal[a] = 12000;
        case 'r':
            designationofemployee[a] = "Receptionist";
            da_sal[a] = 15000;
        case 'm':
            designationofemployee[a] = "Manager";
            da_sal[a] = 40000;
        default:
            designationofemployee[a] = "Invalid";

            da_sal[a] = 0;
    }
}
```

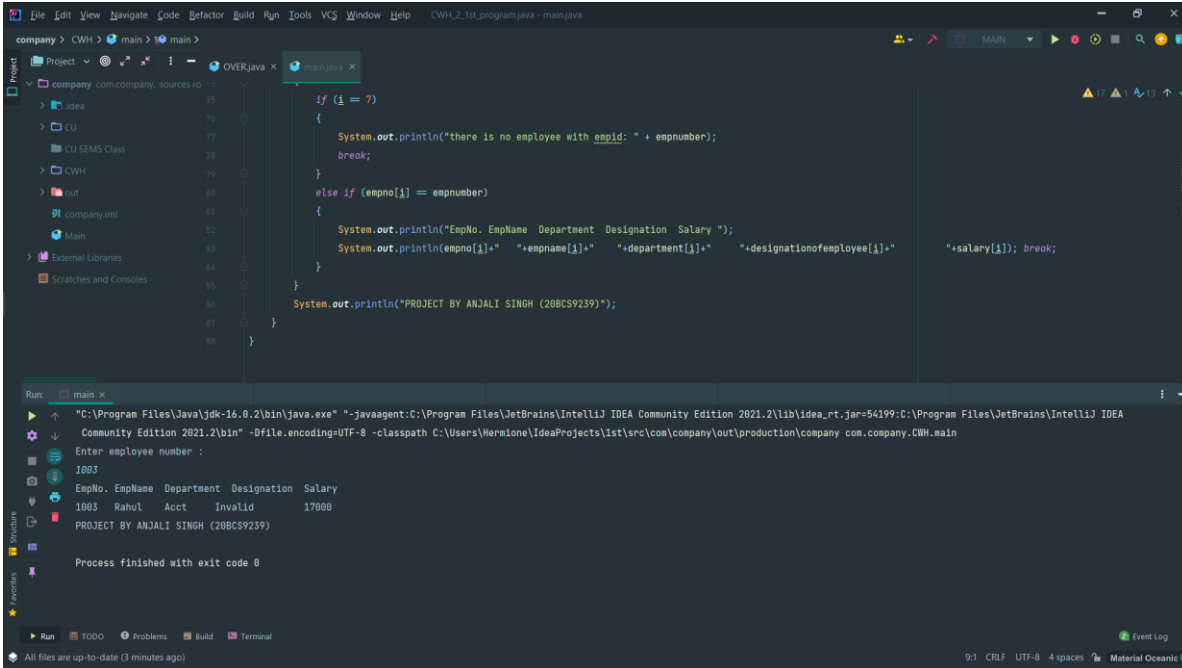
```
    }  
}  
  
for (int b = 0; b < 7; b++)  
{  
    salary[b] = basic[b] + hra[b] + da_sal[b] - it[b];  
}  
for (int i = 0; i <= 7; i++)  
{  
    if (i == 7)  
    {  
        System.out.println("there is no employee with empid: " + empnumber);  
        break;  
    }  
    else if (empno[i] == empnumber)  
    {  
        System.out.println("EmpNo. EmpName Department Designation Salary ");  
        System.out.println(empno[i]+" "+empname[i]+" "+department[i]+" "+designati  
onofemployee[i]+" "+salary[i]); break;  
    }  
}  
System.out.println("PROJECT BY ANJALI SINGH (20BCS9239)");  
}  
}
```

5. Observations/Discussions/ Complexity Analysis:

So here we are at first store data of employee with the help of array and then use switch case for defining DA and designation code for different departments and then we calculate salary of employee according to their designation. Then we take a input from user as of a empid and will show the data of employee matching that empid, and if there is no data matching that empid print there is no employee with empid.

6. Result/Output/Writing Summary:

a) When we search with a valid number it will show information related to that employee.



```

17  if (i == 7)
18  {
19      System.out.println("there is no employee with empid: " + empnumber);
20      break;
21  }
22  else if (empno[i] == empnumber)
23  {
24      System.out.println("EmpNo. EmpName Department Designation Salary ");
25      System.out.println(empno[i] + " " + empname[i] + " " + department[i] + " " + designationofemployee[i] + " " + salary[i]); break;
26  }
27  System.out.println("PROJECT BY ANJALI SINGH (20BCS9239)");
28  }

```

Run: main x

"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.2\lib\idea_rt.jar=54199:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.2\bin" -Dfile.encoding=UTF-8 -classpath C:\Users\Hermione\IdeaProjects\1st\src\com\company\out\production\company com.company.CWH.main

Enter employee number :

1003

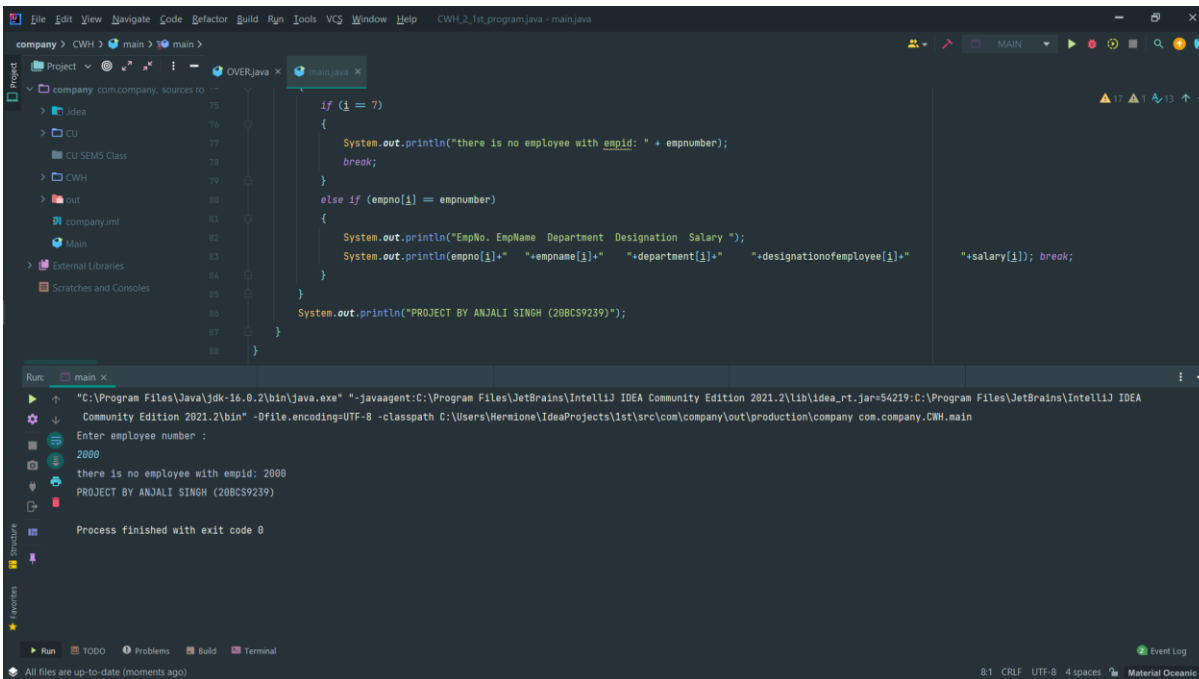
EmpNo. EmpName Department Designation Salary

1003 Rahul Acct Invalid 17000

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Process finished with exit code 0

b) When we search for a id which is not a part of data then it will show no employee.



```

17  if (i == 7)
18  {
19      System.out.println("there is no employee with empid: " + empnumber);
20      break;
21  }
22  else if (empno[i] == empnumber)
23  {
24      System.out.println("EmpNo. EmpName Department Designation Salary ");
25      System.out.println(empno[i] + " " + empname[i] + " " + department[i] + " " + designationofemployee[i] + " " + salary[i]); break;
26  }
27  System.out.println("PROJECT BY ANJALI SINGH (20BCS9239)");
28  }

```

Run: main x

"C:\Program Files\Java\jdk-16.0.2\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.2\lib\idea_rt.jar=54219:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.2\bin" -Dfile.encoding=UTF-8 -classpath C:\Users\Hermione\IdeaProjects\1st\src\com\company\out\production\company com.company.CWH.main

Enter employee number :

2000

there is no employee with empid: 2000

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Process finished with exit code 0

Learning outcomes (What I have learnt):

1. I learn how to use intellij idea for executing java programs.
2. I learn basics related to java program implementation.
3. I learn to store information using array in java.
4. I learn working of switch case.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

| Sr. No. | Parameters | Marks Obtained | Maximum Marks |
|---------|------------|----------------|---------------|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| | | | |