## Experiment 1

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**Subject Name: Project Based Learning**      Subject Code: 22CSH-359
                in Java with Lab

1. **Aim:** 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: Emp No Emp Name Department Designation and Salary
   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.

2. **Objective:**
**i.** 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

**ii.** java Project1 123
There is no employee with empid : 123

3. **Implementation/Code:**
```java
import java.util.Scanner;

public class Project1 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        String[] empNo = {"1001", "1002", "1003", "1004", "1005", "1006", "1007"};
```

```java
        String[] empName = {"Ashish", "Sushma", "Rahul", "Chahat",
"Ranjan", "Suman", "Tanmay"};
        String[] joinDate = {"01/04/2009", "23/08/2012", "12/11/2008",
"29/01/2013", "16/07/2005", "01/01/2000", "12/06/2006"};
        String[] desigCode = {"e", "c", "k", "r", "m", "e", "c"};
        String[] dept = {"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};

        System.out.print("Enter Employee ID: ");
        Int EmpId = sc.nextInt();

        int index = -1;
        for (int i = 0; i < empNo.length; i++) {
           if (empNo[i].equals(inputEmpId)) {
              index = i;
              break;
           }
        }

        if (index == -1) {
           System.out.println("There is no employee with empid: " +
inputEmpId);
        } else {
           int da;
           String designation;
           switch (desigCode[index]) {
              case "e":
                 designation = "Engineer";
                 da = 20000;
                 break;
              case "c":
```

```java
                designation = "Consultant";
                da = 32000;
                break;
            case "k":
                designation = "Clerk";
                da = 12000;
                break;
            case "r":
                designation = "Receptionist";
                da = 15000;
                break;
            case "m":
                designation = "Manager";
                da = 40000;
                break;
            default:
                designation = "Unknown";
                da = 0;
        }

        int salary = basic[index] + hra[index] + da - it[index];

        System.out.println("Emp No     Emp Name    Department    Designation    Salary");
        System.out.println(empNo[index] + "    " + empName[index] + "    " +
                dept[index] + "    " + designation + "    " + salary);
    }

    sc.close();
    }
}
```

4. **Output:**

```
Enter Employee ID:
1007
Emp No      Emp Name      Department      Designation      Salary
1007        Tanmay        PM              Consultant       63000


...Program finished with exit code 0
Press ENTER to exit console.
```

```
Enter Employee ID:
1010
There is no employee with empid: 1010



...Program finished with exit code 0
Press ENTER to exit console.
```

5. **Learning Outcomes:**
   i.   Understand how to map employee details (like designation codes to roles) using efficient logic and structures.
   ii.  Learn to identify and address input mismatches or invalid entries through proper validation and error messages.
   iii. Gain skills in presenting data in a well-structured and readable format for better user understanding.