



# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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## Experiment 1

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**Subject Name:** Project Based Learning  
in Java with Lab

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**Section/Group:**901\_A

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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 facturing	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:

```
import java.util.Scanner;
```

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

        System.out.println("Please enter an employee ID:");
        int empId = scanner.nextInt();
        String[][] employees = {
            {"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", "Manufacturing", "23000", "9000", "4400"},
            {"1007", "Tanmay", "12/06/2006", "c", "PM", "29000", "12000", "10000"}
        }
```

```
};
int index = -1;
for (int i = 0; i < employees.length; i++) {
    if (Integer.parseInt(employees[i][0]) == empId) {
        index = i;
        break;
    }
}

if (index == -1) {
    System.out.println("There is no employee with empid: " + empId);
    return;
}

String designation = "";
int da = 0;
char desigCode = employees[index][3].charAt(0);
switch (desigCode) {
    case 'e':
        designation = "Engineer";
        da = 20000;
        break;
    case 'c':
        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:
        System.out.println("Invalid designation code.");
        return;
}

int basic = Integer.parseInt(employees[index][5]);
int hra = Integer.parseInt(employees[index][6]);
int it = Integer.parseInt(employees[index][7]);
int salary = basic + hra + da - it;

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

```
System.out.println(employees[index][0] + " " + employees[index][1] + " " +  
employees[index][4] + " " + designation + " " + salary);
```

```
scanner.close();
```

```
}  
}
```

#### 4. Output:

```
Please enter an employee ID:
```

```
1003
```

```
Emp No. Emp Name Department Designation Salary
```

```
1003 Rahul Acct Clerk 29000
```

```
Please enter an employee ID:
```

```
10010
```

```
There is no employee with empid: 10010
```

#### 5. Learning Outcomes:

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