



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment 1

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Subject Name: PBLJ Lab

Subject Code: 22CSH-359

1. Aim: Create an application to save the employee information using arrays.

2. Objective:

- To learn the implementation of Scanner Class.
- To learn about arrays in Java.
- To learn about basic arithmetic calculation in Java.

3. Problem Statement: 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. (EmpNo, EmpName, Department, Designation and Salary).

4. Algorithm:

- a) Create Employee class and Department class to store the data Employee and Department respectively.
- b) Now create an array of some size with these two classes as their types.
- c) Now define the Department table values statically.
- d) To take input of the Employee table create a method and use Scanner class to take user input.
- e) Create a method that takes EmpNo as input and prints the necessary details.
- f) The salary is to be calculated using the formula : $\text{Basic} + \text{HRA} + \text{DA} + \text{IT}$
- g) Create the main method to manage all method's sequence.

5. Implementation/Code:

```
package Practical1;
```



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```
import java.util.Scanner;
class Emp {
    int empNo;
    String empName;
    String joinDate;
    char desigCode;
    String dept;
    int basic;
    int hra;
    int it;
}
class DD{
    char code;
    String designation;
    int DA;
}
public class Employee
{
    static Emp[] emp = new Emp[20];
    static DD[] dd = new DD[20];
    static int count=-1;
    static void disp(int data){
        int a = 0 ;
        for(; a <= count ; a++) {
            if(data == emp[a].empNo)
                break;
        }
        if(a==count+1){
            System.out.println("Data not found");
            return;
        }
        System.out.println("Emp No.\tEmp_Name\tDepartment\tDesignation\tSalary");
        String des = getDesignation(emp[a].desigCode);
        int sal = getSal(emp[a].basic, emp[a].hra,emp[a].it , getDa(emp[a].desigCode));

        System.out.println(emp[a].empNo+"\t"+emp[a].empName+"\t\t"+emp[a].dept+"\t\t"+des
        +"\t"+sal);
    }
}
```

```
static String getDesignation(char ch)
{
    int a= 0 ;
    for(; a < 5 ; a++)
    {
        if(dd[a].code == ch)
            break;
    }
    return dd[a].designation;
}

static int getSal(int basic, int hra , int it , int da)
{
    return basic+hra+da-it;
}

static int getDa(char ch)
{
    int a= 0 ;
    for(; a < 5 ; a++)
    {
        if(dd[a].code == ch)
            break;
    }
    return dd[a].DA;
}

static void add()
{
    Scanner S = new Scanner(System.in);
    count++;
    System.out.println("Enter the following details:\nempNo, empName, joinDate,
designCode, dept, basic, hra, it");
    emp[count] = new Emp();
    emp[count].empNo = S.nextInt();
    S.nextLine();
    emp[count].empName = S.nextLine();
    emp[count].joinDate = S.nextLine();
    emp[count].desigCode = S.next().charAt(0);
    S.nextLine();
}
```

```
emp[count].dept = S.nextLine();
emp[count].basic = S.nextInt();
emp[count].hra = S.nextInt();
emp[count].it = S.nextInt();
}
static void init()
{
    for(int a = 0 ; a <= 4 ; a++)
        dd[a] = new DD();
    dd[0].code='e';
    dd[1].code='c';
    dd[2].code='k';
    dd[3].code='r';
    dd[4].code='m';

    dd[0].designation = "Engineer";
    dd[1].designation = "Consultant";
    dd[2].designation = "Clerk";
    dd[3].designation = "Receptionist";
    dd[4].designation = "Manager";

    dd[0].DA = 20000;
    dd[1].DA = 32000;
    dd[2].DA = 12000;
    dd[3].DA = 15000;
    dd[4].DA = 40000;
}
public static void main(String[] args)
{
    Scanner S = new Scanner(System.in);
    init();
    add();
    System.out.print("Enter empNo: ");
    int data = S.nextInt();
    disp(data);
}
}
```



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6. Output:

```
Enter the following details:
empNo, empName, joinDate, designCode, dept, basic, hra, it
1
Manav
25-12-24
e
CSE
2000
2500
5000
Enter empNo: 1
Emp No. Emp_Name      Department  Designation  Salary
1      Manav          CSE         Engineer     19500
```

7. Learning Outcomes:

- a) Learned about array in Java.
- b) Learned about taking input from Scanner class.
- c) Learned about using custom data types as data types of array in Java.