



Experiment 1

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

1. Aim:

Create an application to save employee information using arrays.

2. Objective:

The primary objective of Employee Management System is to contain information about employees of an organization, develop a small java application ,which accepts employee id from the command prompt and displays the details.

3. Implementation/Code: `import java.util.Scanner; class Employee {`

```
    int id;  
    String name;  
    String designation;    String  
    department;    String  
    contactNumber;    double  
    salary;
```



```
Employee(int id, String name, String designation, String department,  
String contactNumber, double salary) {    this.id = id;    this.name  
= name; this.designation = designation;
```

```
        this.department = department;    this.contactNumber  
= contactNumber;  
        this.salary = salary;  
    }
```

```
    @Override    public String toString() {    return String.format("%-  
10d %-20s %-20s %-20s %-15s %-10.2f", id, name,  
designation, department, contactNumber, salary);  
    }
```

```
    }  
    public class EmployeeManager {    static final int MAX_EMPLOYEES  
= 100;    static Employee[] employees = new  
Employee[MAX_EMPLOYEES];    static int count = 0;
```

```
        public static void addEmployee(Scanner scanner) {    if  
(count >= MAX_EMPLOYEES) {  
            System.out.println("Employee list is full. Cannot add more  
employees.");    return;  
        }
```

```
        System.out.print("Enter Employee ID: ");  
int id = scanner.nextInt();    scanner.nextLine();
```

```
        System.out.print("Enter Employee Name: ");
```



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```
String name = scanner.nextLine();

System.out.print("Enter Employee Designation: ");

String designation = scanner.nextLine();

System.out.print("Enter Employee Department: ");
String department = scanner.nextLine();

System.out.print("Enter Employee Contact Number: ");
String contactNumber = scanner.nextLine();

System.out.print("Enter Employee Salary: ");    double salary
= scanner.nextDouble();

    employees[count++] = new Employee(id, name, designation,
department, contactNumber, salary);
    System.out.println("Employee added successfully!");
}

public static void viewAllEmployees() {    if
(count == 0) {
    System.out.println("No employees found.");    return;
}
System.
out.prin
```



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```
        tln("\nEmployee
        List:");

        System.out.printf("%-10s %-20s %-20s %-20s %-15s %-10s\n",
        "ID", "Name", "Designation", "Department", "Contact", "Salary");

        System.out.println("=====
        =====
        =====");

        for (int i = 0; i < count; i++) {
            System.out.println(employees[i]);
        }

        public static void main(String[] args) {
            Scanner scanner = new Scanner(System.in);    int
            choice;    do {
                System.out.println("\n **** Employee Management System ****
            ");
                System.out.println("1. Add Employee");
                System.out.println("2. View All Employees");
                System.out.println("3. Exit");
                System.out.print("Enter your choice: ");    choice
            = scanner.nextInt();
                switch (choice)
```

```
{           case
1:
addEmployee(scanner);
break;           case 2:
                viewAllEmployees();           break;
case 3:
                System.out.println("Exiting the application. Goodbye!");
break;           default:
                System.out.println("Invalid choice. Please try again.");
                }
} while (choice != 3);

scanner.close();
}
}
```

4. Output



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```
**** Employee Management System ****
1. Add Employee
2. View All Employees
3. Exit
Enter your choice: 1
Enter Employee ID: 1001
Enter Employee Name: Karan Nagpal
Enter Employee Designation: Eng
Enter Employee Department: CSE
Enter Employee Contact Number: 1234567890
Enter Employee Salary: 70000
Employee added successfully!
```



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**** Employee Management System ****

1. Add Employee
2. View All Employees
3. Exit

Enter your choice: 2

Employee List:

ID	Name	Designation	Department	Contact	Salary
1001	Karan Nagpal	Eng	CSE	1234567890	70000.00



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5. Learning Outcome

- Learnt about use of arrays in java.
- Learnt how to create and use classes (Employee) to encapsulate data.

- Developed logical flows for adding, displaying, and exiting operations in a program.
- Handled edge cases like exceeding array limits or no employees added.