BRACT's
VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY, PUNE – 48
An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune

SD(LP-II) ASSIGNMENT (S.Y.B. Tech. – DIV: C)

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**********Assignment No.9**********

- **Aim**: Company maintains employee info. as employee ID , name , designation and salary . Allow user to add, delete innfo. of employee . Display info. of particular employee. If employee does not exist an appropriate message is displayed. If it is, then the system displays the emplyee details. Use index sequential file to maintain the data.
- **Objective:** We have to implement this using index sequential file organization.
- **Theory**: File is a collection of records related to each other. The file size is limited by the size of memory and storage medium.

File organization ensures that records are available for processing. It is used to determine an efficient file organization for each base relation.

Indexed sequential access file organization:

i. Indexed sequential access file combines both sequential file and direct access file organization.
ii. In indexed sequential access file, records are stored randomly on a direct access device such as magnetic disk by a primary key.
iii. This file have multiple keys. These keys can be alphanumeric in which the records are ordered is called primary key.
iv. The data can be access either sequentially or randomly using the index. The index is stored in a file and read into memory when the file is opened.

Advantages of Indexed sequential access file organization:

i. In indexed sequential access file, sequential file and random file access is possible.
ii. It accesses the records very fast if the index table is properly organized.
iii. The records can be inserted in the middle of the file.

iv. It provides quick access for sequential and direct processing.

v. It reduces the degree of the sequential search.

- **Program:**
- **Output:**

```
**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
6.Delete at position
7.Search
8.Save Data
9.Open File & Display file
10.Display Opened File
11.Clear the files
12.Search For IDs
13.Exit
Enter your option: 1

Enter name: pr
Enter id: 56
Enter designation: kl
Enter salary: 5400

**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
6.Delete at position
7.Search
8.Save Data
9.Open File & Display file
```

```
10.Display Opened File
11.Clear the files
12.Search For IDs
13.Exit
Enter your option: 1

Enter name: ld
Enter id: 98
Enter designation: df
Enter salary: 2001

**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
6.Delete at position
7.Search
8.Save Data
9.Open File & Display file
10.Display Opened File
11.Clear the files
12.Search For IDs
13.Exit
Enter your option: 1

Enter name: ws
Enter id: 12
Enter designation: ssd
Enter salary: 8720
```

```
**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
6.Delete at position
7.Search
8.Save Data
9.Open File & Display file
10.Display Opened File
11.Clear the files
12.Search For IDs
13.Exit
Enter your option: 2

Name is pr
id is 56
Designation is kl
Salary is 5400

Name is ld
id is 98
Designation is df
Salary is 2001

Name is ws
id is 12
Designation is ssd
Salary is 8720
**********Welcome**********
Enter the operation mode below
```

```
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
6.Delete at position
7.Search
8.Save Data
9.Open File & Display file
10.Display Opened File
11.Clear the files
12.Search For IDs
13.Exit
Enter your option: 3

Enter name: qw
Enter id: 45
Enter designation: cx
Enter salary: 9865

**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
6.Delete at position
7.Search
8.Save Data
9.Open File & Display file
10.Display Opened File
11.Clear the files
```

```
12.Search For IDs
13.Exit
Enter your option: 4

Enter name:
Enter name: sd
Enter id: 54
Enter designation: cv
Enter salary: 7646

Enter position:2

**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
6.Delete at position
7.Search
8.Save Data
9.Open File & Display file
10.Display Opened File
11.Clear the files
12.Search For IDs
13.Exit
Enter your option: 2

Name is qw
id is 45
Designation is cx
Salary is 9865
```

```
Name is sd
id is 54
Designation is cv
Salary is 7646

Name is pr
id is 56
Designation is kl
Salary is 5400

Name is ld
id is 98
Designation is df
Salary is 2001

Name is ws
id is 12
Designation is ssd
Salary is 8720
**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
6.Delete at position
7.Search
8.Save Data
9.Open File & Display file
10.Display Opened File
11.Clear the files
```

```
9.Open File & Display file
10.Display Opened File
11.Clear the files
12.Search For IDs
13.Exit
Enter your option: 5
**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
6.Delete at position
7.Search
8.Save Data
9.Open File & Display file
10.Display Opened File
11.Clear the files
12.Search For IDs
13.Exit
Enter your option: 2

Name is sd
id is 54
Designation is cv
Salary is 7646

Name is pr
id is 56
Designation is kl
Salary is 5400
```

```
Name is ld
id is 98
Designation is df
Salary is 2001

Name is ws
id is 12
Designation is ssd
Salary is 8720
**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
6.Delete at position
7.Search
8.Save Data
9.Open File & Display file
10.Display Opened File
11.Clear the files
12.Search For IDs
13.Exit
Enter your option: 6

Enter position:3
**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
```

```
5.Delete at begin
6.Delete at position
7.Search
8.Save Data
9.Open File & Display file
10.Display Opened File
11.Clear the files
12.Search For IDs
13.Exit
Enter your option: 2

Name is sd
id is 54
Designation is cv
Salary is 7646

Name is pr
id is 56
Designation is kl
Salary is 5400

Name is ws
id is 12
Designation is ssd
Salary is 8720
**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
6.Delete at position
```

```
7.Search
8.Save Data
9.Open File & Display file
10.Display Opened File
11.Clear the files
12.Search For IDs
13.Exit
Enter your option: 7

Enter id to be found:56
Position is:2**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
6.Delete at position
7.Search
8.Save Data
9.Open File & Display file
10.Display Opened File
11.Clear the files
12.Search For IDs
13.Exit
Enter your option: 8
**********Welcome**********
Enter the operation mode below
1.Enter new element to link
2.Display the elements of array
3.Insert at beginning
4.Insert in middle
5.Delete at begin
```

- **Conclusion:** Thus, we implemented this example using index sequential file organization.