

Assignment No 2F

Company maintains employee information as employee ID, name, designation and salary. Allow user to add, delete information of employee. Display information of particular employee. If employee does not exist an appropriate message is displayed. If it is, then the system displays the employee details. Use index sequential file to maintain the data.

Objectives:

1. To understand concept of file organization in data structure.
2. To understand concept & features of sequential file organization.

Learning Objectives:

- To understand concept of file organization in data structure.
- To understand concept & features of sequential file organization.

Learning Outcome:

- Define class for sequential file using Object Oriented features.
- Analyze working of various operations on sequential file.

Theory:

What is File?

File is a collection of records related to each other. The file size is limited by the size of memory and storage medium.

There are two important features of file:

1. File Activity
2. File Volatility

File activity specifies percent of actual records which proceed in a single run.

File volatility addresses the properties of record changes. It helps to increase the efficiency of disk design than tape.

File Organization

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

For example, if we want to retrieve employee records in alphabetical order of name. Sorting the file by employee name is a good file organization. However, if we want to retrieve all employees whose marks are in a certain range, a file ordered by employee name would not be a good file organization.

Types of File Organization

There are three types of organizing the file:

1. Sequential access file organization
2. Direct access file organization
3. Indexed sequential access file organization

1. Sequential access file organization

- Storing and sorting in contiguous block within files on tape or disk is called as **sequential access file organization**.
- In sequential access file organization, all records are stored in a sequential order. The records are arranged in the ascending or descending order of a key field.
- Sequential file search starts from the beginning of the file and the records can be added at the end of the file.
- In sequential file, it is not possible to add a record in the middle of the file without rewriting the file.

Advantages of sequential file

- It is simple to program and easy to design.
- Sequential file is best use if storage space.

Disadvantages of sequential file

- Sequential file is time consuming process.
- It has high data redundancy.
- Random searching is not possible.

Conclusion: This program gives us the knowledge sequential file organization.