

Introduction

- 1. File Data Object*
- 2. File Implementation*

File Data Object

A file is data structure is with two special features:

1. It ordinarily is represented on a secondary storage device. Such as disk or tape . That's why it takes larger space
2. Its life time consist a greater time spam than that of the program creating it.

Types of file :

1) Sequential file :

A structure that is composed of a linear data sequence of components of same data type. like in Pascal a file specifies as :

Master : file of EmployeeRec;

File Data Type

Defines a file name Master whose components are of type EmployeeRec. File structure can be accessed in two ways:

- Read Mode
- Write Mode

Specification: The major operation are :

1. Open
2. Read
3. Write
4. End of File Test
5. Close

File Implementation

Text Files:

A text file is a file of characters. Text files are the primary form of file for input-output to the user in most language because text files may be printed and may be created as directly from keyboard device.

Interactive Input-Output:

During execution of a program a write operation on this file is interpreted as a command to display the characters on the terminal screen. A read operation is a command that request input of data from keyboard usually beginning with display of a prompt character on the screen.

File Implementation

Interactive file have the following character:

- The file must be in both read and write mode at the same time. Ordinarily these operation performed in alternative way.
- Buffering of data on input and output is restricted. Rarely more than one line of data be collected in an input buffer before it processed. Data collected in a output buffer must be displayed before a read request is made to terminal.
- The file position pointer and end of file test have less significance.

File Implementation

- Direct –Access File:

A direct access file is organized so that any single component may be accessed at random , just as in array or in record. The subscript used to select a component is called its key may be an integer or any identifier .

Basically a direct access file is organized as an unordered set of components with a key value associated with each component. Initially a file the file is empty. A write operation creates a new component on the external storage device and copies the value into it. An index is a vector of such a pairs. Each write operation that writes a component with a new key value another value adds another pair to index.

File Implementation

Thus writing on a direct access file is similar to assignment to a component of a vector. Where key value is the subscript. The index is used to search or locate the component in a file.

- Indexed Sequential Files:

An indexed sequential file is similar to the direct access file. With additional facility to access the component in sequence, beginning from a component selected at random

This organization is a provides a comprises between the pure sequential and pure direct access organizations.

An indexed sequential file requires an index of key values .When a read an write operation selects a components with a particular key .

File Implementation

To advance to the next file component in sequence , next entry in the index is accessed and that entry becomes the current component.