

* Assignment 4 *

Title :- file Handling;

problem statement:-

write a c++ program that creates an output file . write information to it , classes the file and open it again as an input file and read the information from the files .

prerequisites:- Object oriented programming.

Objectives:- To learn the Concept of file handling.

Theory:-

stream:- A stream is a sequence of bytes. It acts, as source from which the input data can be obtained or as a destination to which the output data can be sent.

① Input stream:-

Input stream are used to hold input from a data producer, such as a keyboard, a file, or network. The source stream that provides data to the program is called the input stream.

② Output stream:-

output stream are used to hold output for a particular data consumer such as a monitor, a file or a printer. This destination

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stream that receive data from the program is called the output stream.

File handling provides three new data types.

- ① ofstream - output stream.
- ② ifstream - input stream.
- ③ fstream - file stream.

To perform file processing c++, header file `<iostream>` and `<fstream>` must be included in your c++ source file.

Opening a file:-

A file must be opened you can read from it or write to it.

Syntax:-

```
void open (const char* file name, ios::  
open mode);
```

Modes:-

ios:: app → append mode

ios:: ato → read (write control to end)

ios:: in → reading mode.

ios:: out → writing mode.

ios:: ~~trunc~~ trunc → If file already exist
it content will be truncated before
opening the file.

Closing a file:-

When a c++ terminates it automati-
cally close all the stream, release all the

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allocated memory and close all the open files.

Syntax :- `void close ();`

write to a file.

- while doing C++ programming, you write information to a file from your program using the stream insertion operator (`<<`) just as you use that operator to output information to the screen.
- The only difference is that you use an `ofstream` or `ifstream` object instead of the `Cout` object.

Reading from a file :-

- You read information from a file into your program using the stream extraction operation (`>>`) just as you use that operator to input information from the keyboard.
- `ifstream` or `ifstream` object instead of `in` object.
- Syntax.

`File.read (char* &v, size of (v));`
`File.write ((char*) &v, size of (v));`

Facilities :-

linux operating system, C++.

Algorithm:-

- ① start
- ② create a class
- ③ define data member roll number and name.
- ④ define accept () to take name and roll number from user.
- ⑤ define display () to display the record.
- ⑥ In main() create the object of class and ifstream class.
- ⑦ To take a limit from user in a variable.
- ⑧ open the file in out mode, call accept() to take record from user, then call write() to write that record into the file and at the end close that file.
- ⑨ open the file in mode, read the record from the file, call display() function to display the record and at the end close that file.
- ⑩ stop.

Conclusion:- Hence we have studied of file Handling.