

Assignment - 07. (OOPS)

Class - SE I

DOP :

Batch - F1

DOS :

Roll No. 21123.

Title: Demonstrate various file operation using c++.

Objective - 1) To learn and understand stream and files in Object oriented paradigm . 2) To demonstrate file operation like create, open, read, write and close a file.

Problem statement: write c++ program that create an output file, writes information to it closes the file and open it again as an input file and read the information from the file.

Theory: The iostream library is an object-oriented library that provides input and output functionality using streams. A Stream is an abstraction that represents a device on which input and output operation are performed. A Stream can basically be represented as a source or destination of characters of indefinite length.

Streams are generally associated to a physical source or destination of characters like a disk file, the keyboard, or console, so the characters gotten or written to/from our abstraction called stream are physically I/P, O/P to the physical device. for example, file streams are c++ object to manipulate and interact with files; Once a file stream is used to open a file, any I/P or O/P operation performed on that stream is physically reflected in the file.

Description.

Data types

fstream

This data type represents the file stream generally and has the capabilities of both ofstream and ifstream which means it can create files, write information to files and read information from files.

ofstream

This data type represents the O/P file stream and is used to create files and to write information to files.

ifstream

This data type represents the input file stream generally and is used to read information from files.

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

Opening file: A file must be opened before you can read from it or write to it. Either the ofstream or fstream object may be used to open a file for writing and ifstream object is used to open a file for reading purpose only.

Closing a file: When C++ program terminates it automatically closes, flushes all the stream, release all the allocated memory and close all the opened file. But it is always a good practice that a programmer should close all the opened file before program termination.

Writing 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 fstream obj instead of the cout object.

Reading from a file: you read information from a file into your program using the stream extraction operator(>>) just as you use that operator to input information from the key board. The only difference is that you use an ifstream or fstream obj instead of the cin object.

Algorithm.

- 1) Include required header files like iostream, fstream
- 2) Create a class A
- 3) Define the function for write, read, and append.
- 4) In write fn

4.1 Open the file and write some data into file & close it.

- 5) In read fn

5.1 Read the text which is written into file.
5.2 Close it.

- 6) In append fn

6.1 Open the file in append mode
6.2 Write the text which need to append.
6.3 Close.

- 7) Stop.

Test cases

Sr.No.	Description	I/P (excepted O/P)	Actual O/P	Result
1.	Enters other than user choice	terminated	terminated	Pass.
2.	Enter \$ to exit	ABC NOV ABC NOV ABC NOV	ABC NOV ABC NOV ABC NOV	Pass.
3.	Multiple lines are	A B C D E F G	A B C D E F G	Pass.

Accessible in program
(getline is used)

C D\$ C D C D

#

#

#

A B C D E F G

B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Q W E R T Y U I O P A S D F G H C V B N M

P Y U I O E R T D F G H C V B N M A S Q W Z X C V B N M

T R E D F G H C V B N M A S Q W Z X C V B N M

Q W E R T Y U I O P A S D F G H C V B N M

Q W E R T Y U I O P A S D F G H C V B N M

Q W E R T Y U I O P A S D F G H C V B N M

Q W E R T Y U I O P A S D F G H C V B N M

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