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CLASS: S.E. COMP-I.

ROLL NO.: 69

PRN.: F22111074

SEMESTER: SEM -III (2023-2024)

SUBJECT: OBJECT ORIENTED PROGRAMMING.

# ASSIGNMENT: B-4: -

Q. QUESTIONS:-

Q1) What is a File Mode? Describe the various file mode options available?

ANS. In C++, for every file operation, there exists a specific file mode. These file modes allow us to create, read, write, append or modify a file. The file modes are defined in the class `ios`.

The various types of file mode are: -

i) `ios::in`.

Searches for the file and opens it in the read mode only. (IF the file exists or it is found)

ii) `ios::out`.

Searches for the file and opens it in the write mode

iii) `ios::app` -

Searches for the file and opens it in the Append mode i.e. the mode allows you to append new data to the end of the file. IF the file is not found, a new file is created.

iv) `ios::ate` -

Searches for the file, opens it and positions the pointer at the end of the file. This mode when used with `ios::binary`, `ios::in` and `ios::out` modes, allows to modify the content

v) `ios::binary`.

Searches for the file and opens the file in binary format

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to perform binary input/output File operation

vi) ios::trunc -

Searches for the file and opens it to truncate or delete all of its content (if the file is found.)

vii) ios::nocreate -

Searches for the file and if the file is not found, a new file will not be created.

Q2.] What is the Difference between opening a file with constructor function and opening a file with open function? When is one method preferred over the other?

ANS. The difference between opening a file with constructor and opening a file with ~~constructor~~ open() method is:-

NO:-	Using CONSTRUCTOR :-	NO.	Using open() Method :-
(1)	File stream objects like ('ifstream', 'ofstream') are used and the file is opened during object creation.	(1)	File stream objects are created first, and then the open() method is called to open the file.
(2)	The file to work with is determined during object creation and cannot be changed later.	(2)	Provides more flexibility. you can change the file associated with the stream, at runtime by calling 'open()' with different file-name.
(3)	Automatic file opening and closing when the object goes out of scope. Helps prevent resource leaks.	(3)	Requires Manual opening and closing of the file using 'open()' and 'close()'. You need to manage resource cleanup.
(4)	<u>Syntax:-</u> 'streamclass' objectname ('filename');	(4)	<u>Syntax:-</u> 'streamclass' objname; objname.open("filename.extension");