File Handling in C++

File represents storage medium for storing data or information. Streams refer to sequence of bytes. In Files we store data i.e. text or binary data permanently and use these data to read or write in the form of input output operations by transferring bytes of data. So we use the term File Streams/File handling.

We use the header file <fstream> in C++ for handling

**C++ provides the following classes to perform output and input of characters to/from files:**

1. **ofstream: Stream class to write on files**
2. **ifstream: Stream class to read from files**
3. **fstream: Stream class to both read and write from/to files.**

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

**Opening a File**

**The first step to open the particular file for read or write operation. We can open file by**

**1. passing file name in constructor at the time of object creation**

**2. using the open() function.**

**Example:**

**Open File by using constructor**

**ifstream fin(“filename”);**

**Open File by using open() function**

**Calling of default constructor**

**ifstream fin;**

**fin.open(“filename”);**

**Following is the C++ program which open a file in reading mode. The program reads information from the file and outputs it onto the screen –**

**First of all create a text file in notepad add some data in a file and save it.**

**Example mfile.txt**

**#include<fstream>d**

**#include<iostream>**

**using namespace std;**

**int main()**

**{**

**ifstream fn("d:/mfile.txt");**

**char ch;**

**if(!fn)**

**{**

**cout<<"invalid filename"<<endl;**

**return 1;**

**}**

**while(!fn.eof())**

**{**

**fn.get(ch);**

**cout<<ch;**

**}**

**fn.close();**

**return 0;**

**}**

**Note: You can also use open() function to open file in a read mode.**

**ifstream fn;**

**fn.open("d:/mfile.txt");**

**In this C++ program open first file in reading mode and second in writing mode. The program will read the data from the file and write it in another file.**

**#include<fstream>**

**#include<iostream>**

**using namespace std;**

**int main()**

**{**

**ifstream fn;**

**fn.open("d:/mfile.txt");**

**fstream fout;**

**fout.open("d:/ptfile.txt");**

**char ch;**

**if(!fn)**

**{**

**cout<<"invalid filename"<<endl;**

**return 1;**

**}**

**while(!fn.eof())**

**{**

**fn.get(ch);**

**fout.put(ch);**

**cout<<ch;**

**}**

**fn.close();**

**fout.close();**

**return 0;**

**}**

**This C++ program will write the data line by line into a file and also read it line by line from the file.**

**#include<fstream>**

**#include<iostream>**

**using namespace std;**

**int main()**

**{**

**ifstream fn;**

**ofstream fout;**

**fout.open("d:/emp.txt");**

**string name;**

**int eid;**

**string line;**

**int ans=1;**

**while(ans==1)**

**{**

**cout<<"Enter name ";**

**getline(cin,name);**

**cout<<"Enter Eid ";**

**cin>>eid;**

**fout<<name<<" ";**

**fout<<eid<<" "<<endl;**

**cout<<"want to continue press 1";**

**cin>>ans;**

**cin.ignore();**

**}**

**fout.close();**

**fn.open("d:/emp.txt");**

**while(!fn.eof())**

**{**

**getline(fn,line);**

**cout<<line<<endl;**

**}**

**fn.close();**

**return 0;**

**}**