File Handling in c++:

File Handling

FH with CPP:

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header file : fstream.h compulsary

which contains defination of

-> ofstream class and ifstream class fstream

-> ofstream class used for write the data into the file

-> ifstream class used for read the data from the file

-> open() function is used to open the file

-> close() funcltion is used to close the file

ios class is used for modes of the FILE.

which are...

in : read the data

out : write the data

binary: used to read or write in binary format

app : add the new content from the EOF

Example:

========

objectofclass.open("filename","mode"); mode using open function

objectofclass("filename"); mode using constructor

we have been using the **iostream** standard library, which provides **cin** and **cout** methods for reading from standard input and writing to standard output respectively.

How to read and write from a file. This requires another standard C++ library called **fstream**, which defines three new data types:

Data Type	Description
Ofstream	This data type represents the output file stream and is used to create files and to write information to files.
Ifstream	This data type represents the input file stream and is used to read information from files.
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.

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

Opening a 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.

Following is the standard syntax for open() function, which is a member of fstream, ifstream, and ofstream objects.

void open(const char *filename, ios::openmode mode);

Here, the first argument specifies the name and location of the file to be opened and the second argument of the **open()** member function defines the mode in which the file should be opened.

Mode Flag	Description
ios::app	Append mode. All output to that file to be appended to the end.
ios::ate	Open a file for output and move the read/write control to the end of the file.
ios::in	Open a file for reading.
ios::out	Open a file for writing.
ios::trunk	If the file already exists, its contents will be truncated before opening the file.

1.To write data into file using constructor.

```
#include<iostream.h>
#include<conio.h>
#include<fstream.h>
void main()
{
clrscr();
ofstream obj("demo.txt");
obj<<"Hello"<<endl<<23<<endl;
cout<<"file is created";
getch();
}
```

2.To write data into file using open function.

```
#include<iostream.h>
#include<conio.h>
#include<fstream.h>
void main()
```

```
{
clrscr();
ofstream obj;
obj.open("demo1.txt");
obj<<"Welcome"<<endl<<"This is IT Networkz";
obj.close();
cout<<"file is created";
getch();
}
```

3.A program to read a file.

```
#include<iostream.h>
#include<conio.h>
#include<fstream.h>
void main()
{
char str[20];
int a;
clrscr();
ifstream obj("demo.txt");
obj>>str>>a;
cout<<str<<endl<<a;
getch();
}
```

4.Write data in a file using class.

```
#include<iostream.h>
#include<conio.h>
#include<fstream.h>
class student
{
private:
int Reg_no;
char cname[20];
public:
void setno()
{
```

```
cout<<"Enter the registration number";
cin>>Reg_no;
}
void setname()
{
cout<<"Enter the student name";
cin>>cname;
}
int getno()
{
return Reg_no;
}
char *getname()
{
return cname;
}
};
void main()
{
ofstream obj("nnn.txt");
clrscr();
student s;
s.setno();
s.setname();
obj<<s.getno();
obj<<s.getname();
obj.close();
getch();
}
```

5.A program to copy content of one file to another file.

```
#include<iostream.h>
#include<conio.h>
#include<fstream.h>
//To copy content of one file to another file.
void main()
{
```

```
ifstream fin;
fin.open("demo.txt");
ofstream fout;
fout.open("newf.txt");
char ch;
while(!fin.eof())
{
fin.get(ch);
fout<<ch;
}
cout<<"file is copied";
fin.close();
getch();
}
```

6.Read a file using getline function.

```
#include<iostream.h>
#include<conio.h>
#include<fstream.h>
void main()
{
clrscr();
ofstream fout;
fout.open("country.txt");
fout<<"United states of america";
fout<<"\nIndia";
fout.close();
fout.open("capital.txt");
fout<<"Washington";
fout<<"\nlondon";
fout.close();
//Reading a file
const int n=88;//size of line
char line[n];
ifstream fin;
fin.open("country.txt");
cout<<"content of the file"<<endl;
```

```
while(!fin.eof())
{
fin.getline(line,n);
cout<<line<<endl;
}
fin.close();
fin.open("capital.txt");
cout<<"\ncontent of file"<<endl;
while(!fin.eof())
{
fin.getline(line,n);
cout<<line<<endl;
}
fin.close();
getch();
}
```