



## File I/O in C++: Reading and Writing Files | C++ Tutorials for Beginners #60



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In this tutorial, we will discuss File I/O in C++: Reading and Writing Files

### File I/O in C++: Reading and Writing Files

These are some useful classes for working with files in C++

- `fstreambase`
- `ifstream` --> derived from `fstreambase`
- `ofstream` --> derived from `fstreambase`

In order to work with files in C++, you will have to open it. Primarily, there are 2 ways to open a file:

- Using the constructor

- Using the member function open() of the class

An example program is shown below to demonstrate the concept of reading and writing files

```
#include<iostream>
#include<fstream>

using namespace std;

int main(){
    string st = "Harry bhai";
    // Opening files using constructor and writing it
    ofstream out("sample60.txt"); // Write operation
    out<<st;

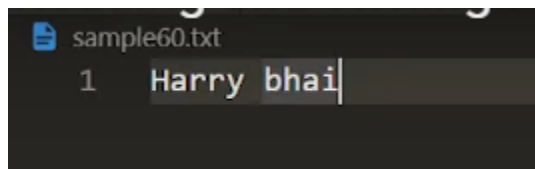
    return 0;
}
```

#### **Code Snippet 1: Writing Files Example Program**

As shown in a code snippet 1,

1. We have created a string “st” which has a value “harry Bhai”
2. Object “out” is created of the type ofstream and the file “sample60.txt” is passed to it
3. The string “st” is passed to object “out”

The output of the following program is shown in figure 1



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**Figure 1: Writing File Operation Output**

```
#include<iostream>
#include<fstream>

using namespace std;

int main(){
    string st2;
    // Opening files using constructor and reading it
    ifstream in("sample60b.txt"); // Read operation
    in>>st2;
    getline(in, st2);
    cout<<st2;

    return 0;
}
```

**Code Snippet 2: Reading Files Example Program**

As shown in a code snippet 1,

1. We have created a string “st2” which is empty
2. We have made a text file “sample60b.txt” and written “This is coming from a file” in it
3. Object “in” is created of the type instream and the file “sample60b.txt” is passed to it
4. The function “getline” is called and the object “in” and the string “st2” are passed to it. The main thing to note here is that the function “getline” is used when we want to read the whole line

5. String “st2” is printed

The output of the following program is shown in figure 2

```
This is coming from a file
```

**Figure 2: Reading File Operation Output**

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