File Handling in C++

File Handling in C++

What are files and streams?

- Files are used to store data permanently.
- A stream is an abstraction that represents a device on which input and output operations are performed.
- A stream can basically be represented as a source or destination of characters of indefinite length.

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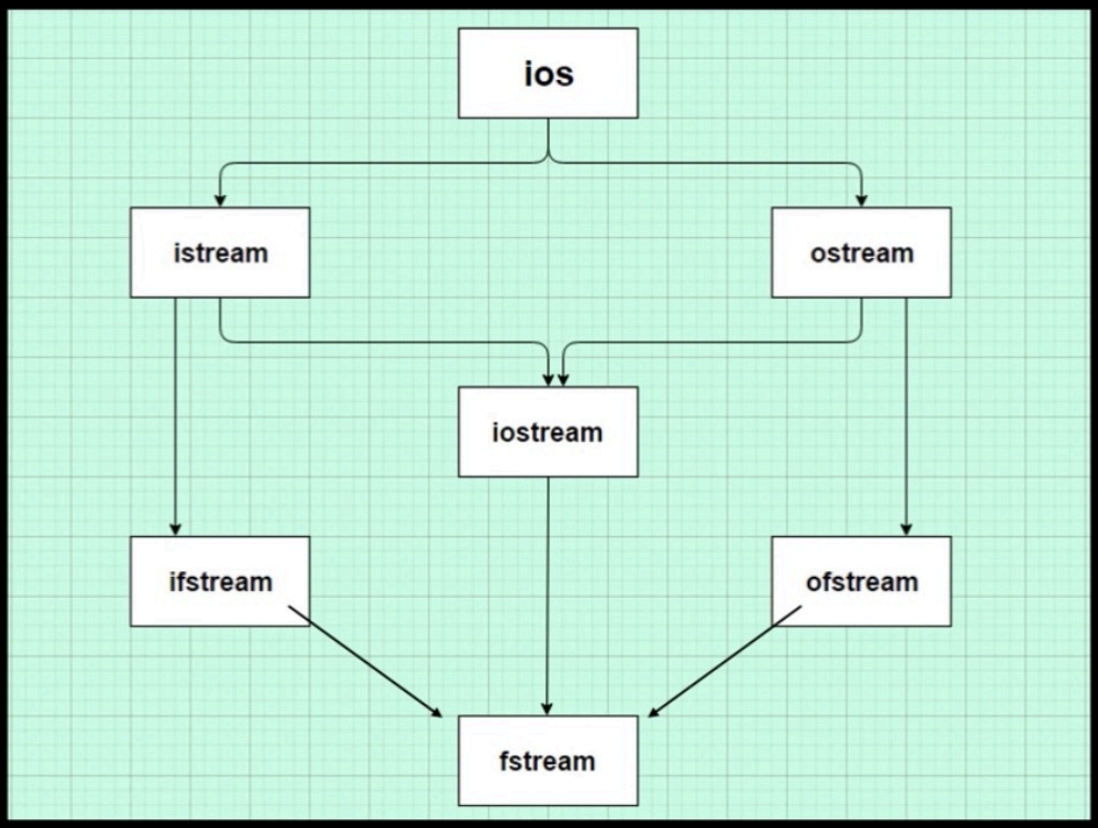


File Handling in C++

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.

File – Write Operation

```
#include<iostream>
#include<fstream>
using namespace std;

int main()
{

char arr[100];
cout<<"Enter name & age";

cin.getline(arr,100);


ofstream myfile("xyz1.txt"); // write into file ex: int x, float y
myfile<<arr;
myfile.close();

cout<<"File write done"<<endl<<endl;


return 0;
}
```

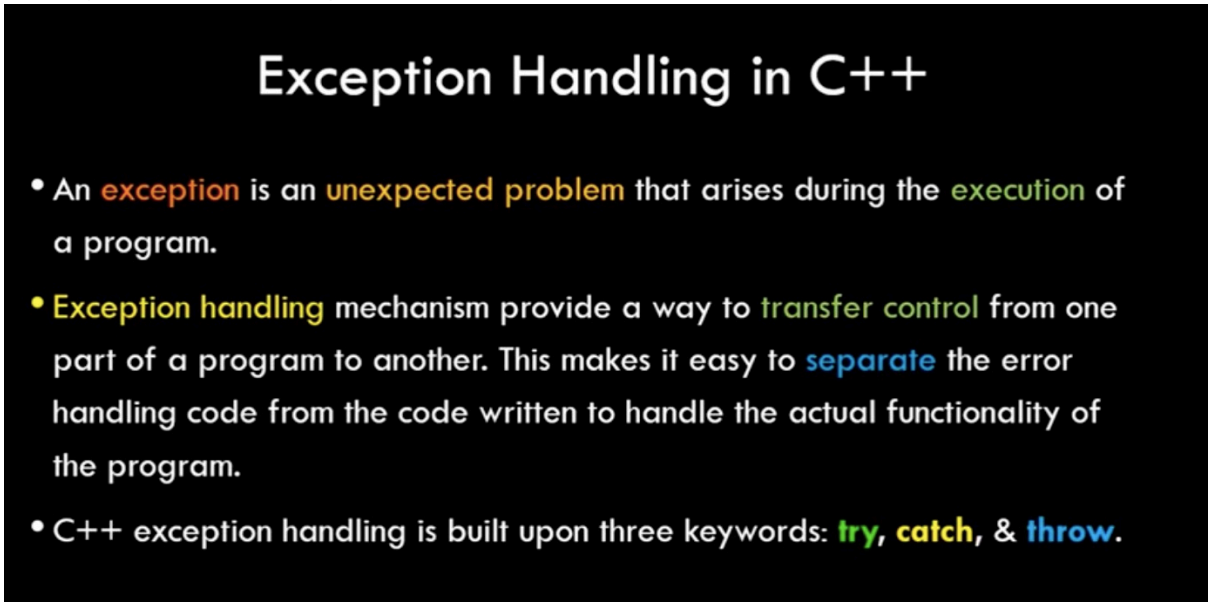
File Read Operation

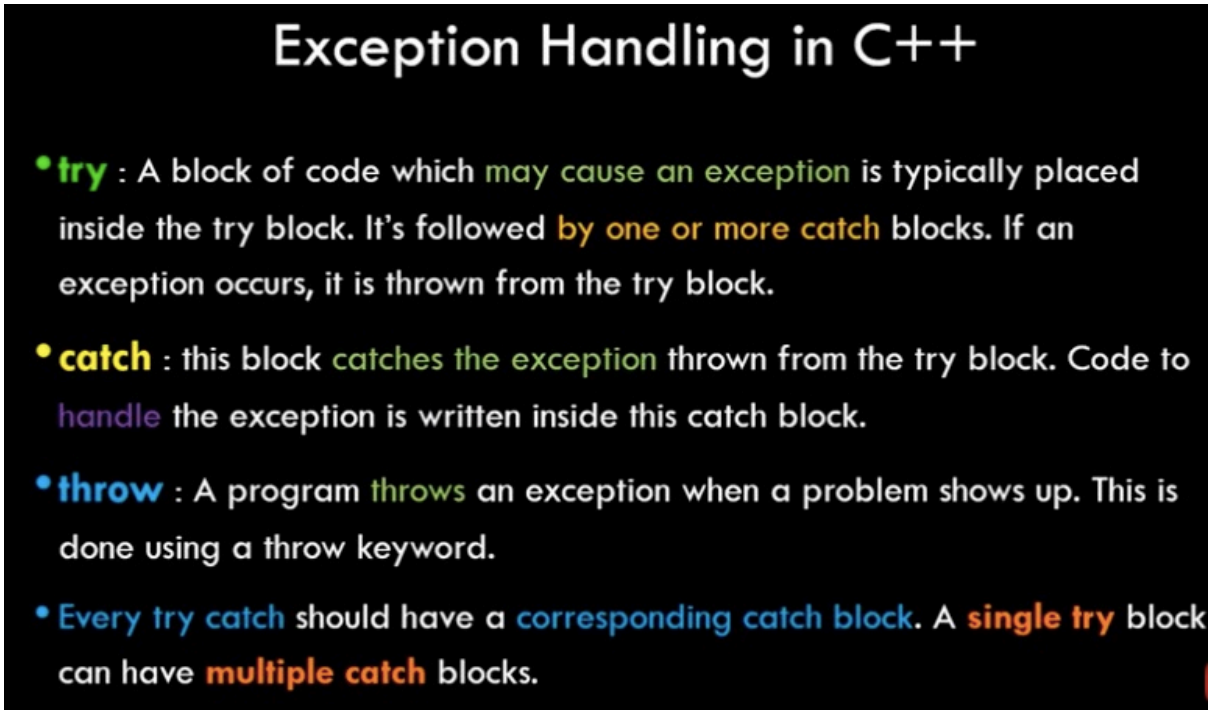
```
cout<<"Reading from file"<<endl;

char arr1[100];

ifstream obj("xyz1.txt");

obj.getline(arr1,100);

cout<<"File contents are: "<<arr1<<endl;

obj.close();
```

NOTE: above code will erase contents of files each time we execute.
If we want to store. Then use **append mode**

```
ofstream myfile("xyz1.txt",ios::app);
```

Exception handling in C++





CODE:

```
#include<iostream>
using namespace std;

int main()
{
        try
        {
                int momsAge;
                int sonsAge;
                cout<<"enter age"<<endl;

                cin>>momsAge;
                cin>>sonsAge;

                if(sonsAge >= momsAge)
                {
                        throw 99;
                }
        }
        catch(int x)
        {
                cout<<"son cannot be older than mom"<<x<<endl;
        }


return 0;
}
```

CODE 2:

```
#include<iostream>
using namespace std;

int main()
{

        int num,deno,result=0;
        cout<<"Enter num & deno"<<endl;
        cin>>num>>deno;
        try
        {
                if(deno==0)
                {
                        throw deno;
                }
                result = num/deno; // this pt
        }

        catch(int ex)
        {
                cout<<"Divide by zero not"<<ex<<endl;
        }

        cout<<"Result is "<<result<<endl;

return 0;
}
```

CODE 3:

```
catch(...) // default
{
    cout<<"Normal Error"<<endl;
}
```