Data Structures and Object Oriented Programming

Lecture 28

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File Handling

<fstream> hearder file

- **ifstream:** It is the input file stream class. Its member function **open( )** associates the stream with a specified file in an input mode.
- **ofstream:** It is the ouput file stream class. Its member function **open( )** associates the stream with a specified file in an output mode.
- **fstream :** It supports files for simultaneous input and output. It is derived from ifstream, ofstream and iostream classes.

ios::**in** - open file for input operation
ios::**out** - open file for output operation
ios::**app** - output appends at the end of the file.
ios::**trunc** - truncate the file and discard old contents.
ios::**binary** - for binary (raw byte) IO operation,

- **get( )**
- **getline( )**
- **write( )**
- **eof()**
- **sync()**
- **close()**
- **is_open()**

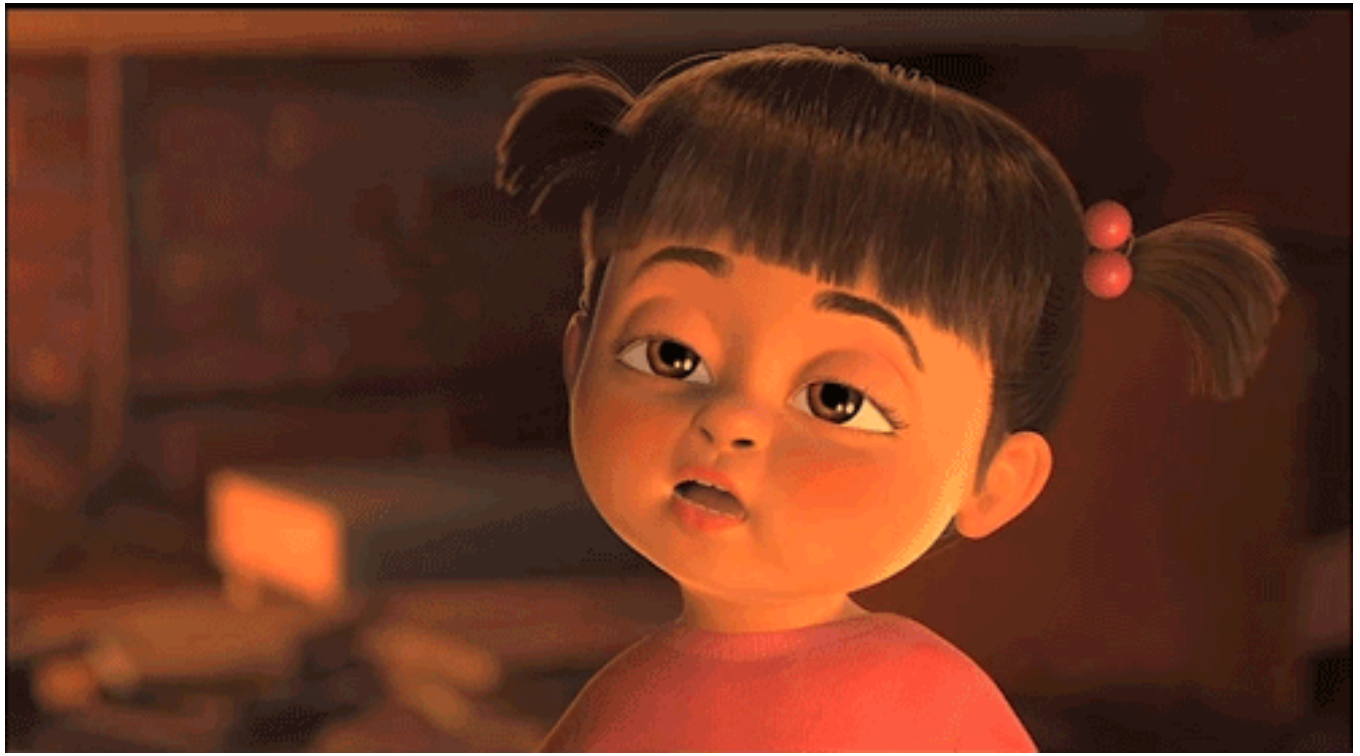
Example

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

int main() {

    fstream fs;   // creating object of fstream class

    for (int i = 0; i < 3; i++)
    {
        string Roll;
        string First_Name;
        string Last_Name;

        cout << "Please enter Roll Number" << endl;
        cin >> Roll;

        cout << "Please enter First Name" << endl;
        cin >> First_Name;

        cout << "Please enter Last Number" << endl;
        cin >> Last_Name;
        cout << endl;
        fs.open("test.txt", ios::out | ios::app);
        fs << Roll << '.' << First_Name << '.' << Last_Name << endl;
        fs.close();
    }
```

Example

```
    string search;
    cout << "Please enter Roll Number to search" << endl;
    cin >> search;
    fs.open("test.txt", ios::in);

    while (!fs.eof())  // Reading while end-of-file reached
    {
        string line;
        getline(fs, line); // Reading line-by-line

        int pos = 0;
        pos = line.find('.');
        string Roll = line.substr(0, pos);
        line.erase(0, pos + 1);

        pos = line.find('.');
        string First_Name = line.substr(0, pos);
        line.erase(0, pos + 1);

        string Last_Name = line;

        if (search == Roll)
        {
            cout << Roll << endl << First_Name << endl << Last_Name << endl;
        }
    }
return 0; // no need to close file
}
```

Thanks a lot



If you are taking a Nap, **wake up**.....Lecture Over