

CS 111

ifstream/ofstream

iostream

- iostream library contains cin and cout methods
- These functions receive input from the console and output data to the console
- We can perform related functions with files on the file system

ofstream

- Represents output file stream and is used to create files and copy data to files
 - Create ofstream object
 - Provide filename to write to
 - Use fout keyword to write data to file
 - Close ofstream object

Example

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

```
int main() {
    ofstream f;
    f.open("output.txt");
    f << "Hello" << endl;
    f << "World" << endl;
    f.close();
    return 0;
}
```

ifstream

- Represents the input file stream and reads data from files
 - Create an ifstream object
 - Use open method to connect to external file
 - Read in data until end of file (eof)
 - Close ifstream object

Example

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

int main() {
    ifstream f;
    f.open("output.txt");
    while(!f.eof()) {
        char x = f.get(); // get next character
        cout << x;}
    f.close();
    return 0;
}
```

fstream

- Represents the file stream generally and includes capabilities of both ifstream and ofstream
- fstream can read data from files, create files, and copy data to files