

# CSI 201

## Streams and Files

1. For file input and output we need:

```
#include <fstream>
```

2. This works as iostream. We must include it to get access to the ifstream and ofstream types.

3. For getting input from a file, we'll create an object that works like cin does. We've created fin, but we could create any name for this:

```
ifstream fin("my_input_file.txt"); //fin works like cin
if(!fin) {
    cerr << " Was unable to open this file " << endl;
    return 0; //quit this program
}
//do stuff with fin here - use fin like cin
vector<string> names;
string s;
fin >> s; //read in a word from the file
while(! fin.eof() ){ // read until end of file
    names.push_back(s);
    fin >> s;
}
fin.close(); //every opened file should be closed
```

4. To put output into a file, we'll create an object that works like cout does and use it like this:

```
ofstream fout("my_names.txt"); //fout works like cout
if(!fout) {
    cerr << " Was unable to open this file " << endl;
    return 0; //quit this program
}
if(names.size() > 2) {
    //output some lines to the file
    fout << " I'd like to tell a story about " << names.at(2) << endl;
    fout << " It all begins when we meet " << names.at(0) << endl;
    fout << " And it all ends when we meet " << names.at(1) << endl;
}
else {
    fout << "My story is simple. You won't like it." << endl;
}
//every opened file should be closed
fout.close();
```