FILE I/O

C++

#include <iostream>

So far, we have been using
the **iostream** standard library, which
provides **cin** and **cout** methods for reading
from standard input (key board) and writing to
standard output (screen) respectively.

#include <fstream>

Read from and write to a file requires the fstream library.

We will concern ourselves with text files only in CIS 22A & B.

Three new types: ifstream, ofstream, fstream.

We will use only the first two. There are many ways to do this – I have tried to pick an easy path that parallels all languages.

File Output

```
# include <fstream>

//Declare file pointer
ofstream fileOut;
//Open file
fileOut.open(". . . “);
//Redirect output to this object
fileOut << " Happy? “;
//Close file
fileOut.close();
```

File Input – opening the file

```
#include <fstream>
//Declare pointer to file
ifstream fileIn;
fileIn.open(". . . “);
      cout << fileIn.fail(); //interesting but not necessary
fileIn >> variable_of_your_choice;
      getline(  ,  ); //picks up the newline
```

File Input – part of GIGO Rule

```
if (fileIn.fail()) //Always check that it exists
{
   cout << "No such file";
   system("pause");
   exit(100);
}
```

File Input – Simple redirection

```
fileIn >> variable_of_your_choice;
    getline( , ); //picks up the newline
    fileIn.get(ch); //where ch is type char
```

File Input – looping until end of file

```
int count = 0;
while(!inFile.eof())
{
inFile>> mlsNum;
fileIn >> price >> sqFt;
. . .
count++;
}
```

Passing a file to a function

```
//Input file
void getData(ifstream& myFile, . . .

//Output file
Void output(ofstream& fileOut, . . .
```