**Stream I/O review**

**Unformatted** single character input/output

* while(cin.get(ch)) cout.put(ch);

**Line-oriented string** input

* While (getline(cin, str)) cout << str;
* Must remember to #include <string>

**Formatted** input/output (converts text to numbers)

* Cin >> var; cout << var;
* Whitespace skipped, converts between types

**Automatically created global stream objects**

* **Cin, cout, cerr, clog** for regular **chars**

String parsing

/\*\*  
 @file main.cpp  
  
 Complete the function below named list(). The list  
 function takes a string parameter, in the form  
 "alice.txt 40 50", which means:  
 > Open the file alice.txt - return false if it  
 can't be opened.  
 > If it can be opened then print the lines in the  
 file 40 through 50. Assume that lines start at  
 1 and that you include both line 40 and 50.  
 > Return true if you can open and list the file.  
  
\*/  
#include <iostream>  
#include <fstream>  
#include <sstream>  
using namespace std;  
  
bool list(const string& fileToPrint)  
{  
 istringstream args(fileToPrint);  
 string fname;  
 int start, stop;  
 args >> fname >> start >> stop;  
   
 if (args.fail()) return false;  
   
 ifstream in(fname);  
 if (in.fail()) return false;  
   
 int lineNo = 0;  
 string line;  
 while (getline(in, line)) {  
 lineNo++;  
 if (lineNo < start) continue; //continue goes to top of loop  
 if (lineNo > stop) break;  
 cout << line << endl;  
 }  
 return true;  
}  
  
int main()  
{  
 cout << "Lines 40-50 in alice.txt" << endl;  
 if (list("alice.txt 40 50"))  
 cout << " -- done" << endl;  
 else  
 cout << " XX Error reading alice.txt" << endl;  
  
 do {  
 cout << "Enter your command. Enter quit to stop" << endl;  
 cout << ">> ";  
 string cmd;  
 getline(cin, cmd);  
 if (cmd == "quit")  
 break;  
 cout << "Trying->" << cmd << endl;  
 if (list(cmd))  
 cout << " -- OK" << endl;  
 else  
 cout << " XX error->" << cmd << endl;  
 } while (true);  
  
 return 0;  
}