



General Computer Science for Engineers CISC 106 Lecture 35

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Lecture Overview

- Evaluation forms
- Filtering using the strcmpi function in matlab
- Writing to a file in matlab
- Reading and writing to a file in C++
- Using the C++ string class

Strcmpi function in Matlab

- Strcmpi = strcmp but case insensitive
- For completeness:
- Strncmp = strcmp for first n characters
- Demo
- (Note on code: strcmpiDemo.m writeToFileDemo.m fileInput.cc fileOutput.cc readLineByLine.m can all be copied from [/www/htdocs/CIS/106/cavazos/09S/examples/](http://www/htdocs/CIS/106/cavazos/09S/examples/) on strauss.udel.edu)

File I/O in Matlab

- Inputting a file, many ways, textread is one of the straightforward.
- Outputting to a file, e.g. saving a new playlist
- Fprintf is most straightforward way; demo

File I/O in C++

- File I/O
- Uses fstream (file streams)
- Will make variables of type ofstream and ifstream

C++ string class

Strings in C++ are variables of type string class

`#include <string>`

(NB: strings in C are arrays of characters)

(51-53 of Ullmann and Signer; also 444-457)

What is a class? (Chapter 7 of U&S)

Formal model of an object.

An instance of a class is an object.

e.g.

```
string line2 = "some text";
```

line2 is an object of type string class

C++ string class

- Why use classes and objects?

For one, they can have built in functions (methods)

e.g.

```
string s = "abcdefgh";
```

```
int k = s.length();
```

```
char c = "c";
```

```
int j = s.find(c);
```

```
cout << j << endl;
```

List of other string functions/methods:

<http://www.fredosaurus.com/notes-cpp/strings/header-string.html>

And <http://www.cppreference.com/wiki/string/start>

C++ string class

- More examples

e.g.

```
string s1 = "abcdefgh";
```

```
string s2 = "zyxw";
```

```
int j = s1.compare(s2); // just think of this as < (less  
    than)
```

```
cout << j << endl;
```




Questions?

Correlation

