Slides + code available at
www.github.com/pkorth/eecs280_recitation

EECS 280

Discussion 05: Feb 11, 2015

MichiganEngineering

Agenda

- Logistics

- Brief review of lecture material
  - const
  - C and C++ strings

- Work on Lab 05

Logistics

- Lab 05
  - Strings and IO
  - Due Friday 2/13
- Project 3
  - Euchre simulator (a Midwestern card game)
  - Pointers, arrays, structs, polymorphism, enums
  - Checkpoint due in one week, Thursday 2/19
- Midterm in two weeks, Wednesday 2/25

Uses of const

Declaring something const: “I won’t change this value”

- Compiler error if you do try to change it

We can mix const and non-const in one variable

Uses of const

`const int a;`	Can’t change int value of a
`const int *b;`	Can’t change int value of b, but can change where it points to
`int *const c;`	Can’t change where c points to, but can change the int value
`const int *const d;`	Can’t change either

Uses of const

If we declare a const variable, we must specify the value of it when we declare it

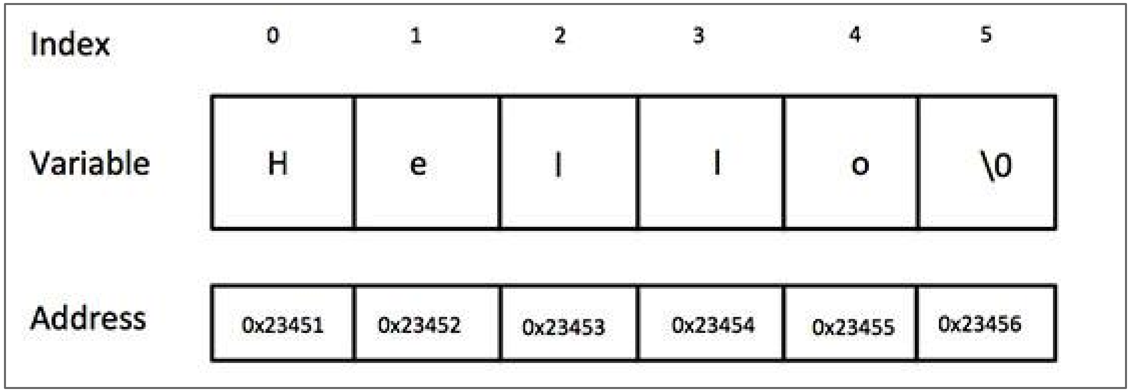
```
const int a;                     // NOT OKAY

const int a = 5;                 // FIXED
```

C strings

Just an array of chars! Nothing more.

```
char a[] = “Hello”;
```



Index	0	1	2	3	4	5
Variable	H	e	l	l	o	\0
Address	0x23451	0x23452	0x23453	0x23454	0x23455	0x23456

Don’t forget ‘\0’ null character at the end

Image:
http://www.tutorialspoint.com

C strings

Pass into a function just like any other array

```
int main() {
  char myString[] = “Hello, world”;
  doSomething(myString);
}

void doSomething(const char *str) {
  // …
}
```

C++ strings

A named data type

```
#include <string>
string myString = “Hello, world!”;
```

Advantages over C strings

Easy to use; “safe”

No max size

Has "." methods (e.g. `myString.length()`)

Can easily make copies, can easily concatenate

Lab 05

Goal

Use C-strings to write a spell-checker program.

Tasks

1. Implement strcmp_eecs280() using C strings
2. Implement getUserWord() using `cin` and findWord() using `ifstream`

Lecture 8 is very helpful for Task 2