Announcements

If You Didn’t Get A USB Key Come See Me To Get One!!!

HW 1 is released. It is due Feb. 8
Introduction to C
Complex Data Types

- arrays
- structures
- unions

Array notation x[i] is a shortcut to *(x+i). Just a wrapper for pointers.
Structures can hold many different data types.
Unions can be defined to be many different data types but can only hold ONE of those types at a time.
Introduction to C

Pointers

- Stores a memory address
- \&variable gives you the address
- \*variable gives you what is stored at that address

You can either access the address that is stored in the pointer variable (referencing) or what is stored in memory at that address (dereferencing).
Call by Value vs. Call by Reference

AKA pass by value vs pass by reference.
In pass by value the current value of a variable is passed. Any modifications to that variable do not change the original value of the variable. In pass by reference a reference to the memory location of a variable is passed. Any modifications to that memory location change the value of that variable everywhere. C uses call by value, with the exception of array’s and pointers. If you pass a pointer as a parameter then you are passing by reference. Array’s are passed as pointers to the first element of the array and thus are passed by reference.
Introduction to C

Writing a Linux Shell

- Accept Input From User, Parse Input
- Execute Built In Functions cd, pwd, pushd, popd.
- Execute program calls
Questions?