

Motivation

- Data structures = tree, graphs
- Working on large data structure
- Context switching

What We Learned Today

- Pointer Basics
- Pointers and Arrays
- Address Arithmetic
- Pointers and Functions
- String Manipulations

Assignments

- Reading
 - Chapter 5, The C Programming Language, Kernighan and Ritchie
- Complete the examples and exercises posted at www.tinyurl.com/UMaineCs

Applications

- OS context
 - Passing data from non privileged mode to privileged mode
- Networking Context
 - Passing large data structures around without copying them
- 3. Firmware Context
 - Indirect accessing and Hardware Register Mapping
- GUI
 - Callback Functions using Function pointers
- Generic functions that works on all data-types (void pointers)

Code Example and Worksheet

www.tinyurl.com/UMaineCs

GAME

- Professor writes on the board: `int john;`
- John stands up
- Professor writes: `int *sally = &john;`
- Sally stands up, points at john
- Professor: `int *bill = sally;`
- Bill stands up, points at John
- Professor: `int sam;`
- Sam stands up
- Professor: `bill = &sam;`
- Bill now points to Sam.
- Professor: `int **doug = &sally;`
- Doug points to sally