CS 232: Intro to C and Unix

Lecture 4

gcc -g file.c -o file -Wall

-g includes debug info

-o includes the name of the file to create

-Wall shows all compile errors

Debugging

Use printf (not recommended)

Use gdb

Variables

Declarations, initialization, and const

Arrays

Types

Variable identifiers can’t start with a number

Variables should be meaningful in name

Names can include underscores and alpha-numeric characters

Names must begin with a letter and are case sensitive

“const” will prevent modification of a value later.

Integer types

-Char (1 byte)

- short int

- int

- long int

Floating point

Float

Double

Long Double

The sizes of this types are machine-dependent frequently but limits are given in the limits.h and float.h values

Short and int are at least 16 bits in length

Long is going to be at least 32 bits

Sign and Unsigned variables are variables with the ability to be negative or not

All types are going to be signed by default with exception for char

You indicate signage with the unsigned and signed keywords.

C doesn’t check array bounds

Out-of-bounds errors will cause undefined program behavior and may crash immediately or much later.