

Ashley Nguyen – apn2my
 InLab04 – inlab4.pdf
 2/16/2016

What is your name? Ashley Nguyen
 What is your quest? World Domination via CS 2150
 What is your favorite color? Blue

Size of C++ data types

C++ Type	Size in bytes?	Max value? (base 10)	Zero is stored as (in hex)?	One (or 1.0) is stored as (in hex)?
int	4	2,147,483,647	0x00000000	0x00000001
unsigned int	4	4,294,967,295	0x00000000	0x00000001
float	4	3.40282 E38	0x00000000	0x3f800000
double	8	1.79769 E308	0x0000000000000000	0x3ff0000000000000
char	1	127	Char '0' = 0x00000030	Char '1' = 0x00003031
bool	1	1	false = 0x00303100	true = 0x30310001
C++ Type	Size in bytes?	Max value? (base 10)	NULL is stored as?	
int*	4	4,294,967,295	0	
char*	4	4,294,967,295	0	
double*	4	4,294,967,295	0	

Primitive Arrays in C++

How does the compiler determine the address of $\&(\text{IntArray2D}[i][j])$?

The memory address of $\&(\text{IntArray2D}[i][j])$ is 4 bytes larger than its previous memory address, aka its previous indexed spot in memory. For example, $[0][0] \rightarrow [0][1]$ has memory address difference of 4 bytes.

$$\&(\text{IntArray2D}[i][j]) = \underline{\&(\text{IntArray2D}[i][j+1])} + 4$$