## Ch 2: Introduction to C++ Part 2

CS 1428 Fall 2011

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Lecture 3



- Character

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+3.4e38	is equal to	34000000	(with 37 zeros)
-3.4e38	is equal to	-34000000	(with 37 zeros)
+3.4e-38	is equal to	.000034	(with 37 zeros)
-3.4e-38	is equal to	000034	(with 37 zeros)

maximum vs minimum, biggest vs smallest (absolute value)

"~7 digits" number of digits in the mantissa:

-1.234567e-25 is equal to .000...01234567 (with 24 zeros)

This number: 0.1234567890123456789 will get rounded to: 0.1234568 which is the same as: 0.1234568e0

If it is stored as a double, it will get rounded to: 0.123456789012346 because it can store about 15 digits in the mantissa.

Flo	Floating-Point Data Types			
float distance, ti double mass; distance = 1.499 mass = 1.989E3 time = 12.816; Converting betw int i; float f; f = 8.9; i = 8.9; i = 8.9; i = 8; f = 8; f = 7.9; i = f;	me; 5979E11; // how far away the sun is (in meters) 30; // how much the sun weighs (in kilograms) // hours of daylight in San Marcos today, 8/31 ween floating-points and integers: // stores 8 in i (truncates, does not round) // stores 8.0 in f // stores 7 in i	7		



The char Data Type					
<ul> <li>char</li> <li>Literals: 'A' '3' '!' '\n' 'n'</li> </ul>					
char letter; letter = 'A'; cout << letter << endl; letter = '!'; cout << letter << endl; Output: A !	9				



## The string Data Type

- We will not declare variables that contain strings yet.
- A string is a sequence of characters.
- Literals: "Hello again" "Over\nThere" "Y"
- A string is stored sequentially in memory, with the null character ('\0') at the end.
- The null character is not displayed.