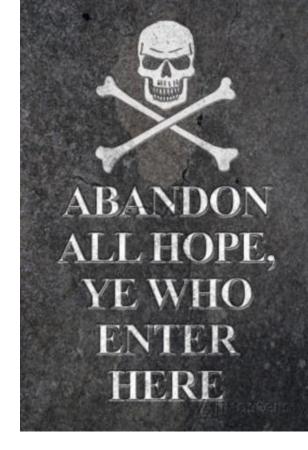
Print Formatting

 Allow different characters or actions to be done within the printf() statement

We've already seen one...

>> \n → newline (equivalent to hitting the enter key)



- Carriage return (\r): Popular with typewriters (but has limited functions in C)
 - Moves cursor to the beginning of the line you are TYPING ON

Example:

>> printf("test1\r123\n");

Output: 123t1



- Backspace (\b): Popular with typewriters (but has limited functions in C)
 - Moves cursor back one space

Example:

>> printf("test1\b23\n");

Output: test23



- Formfeed (\f)
 - Interpreted different ways on different machines
 - On your VM, it goes down exactly one line (spaces included)
 - >> printf("test123\fHello World\n");

Output: test123

Hello World

- Alert (\a)
 - Makes a beep sound from the computer (depend on your machines...)



>> printf("\a\a\a");

Output: /*Nothing to the screen, but will make 4 beeps*/)

- Tabs
 - Horizontal tab (\t)
 - Vertical tab (\v)
 - Does the exact same thing as formfeed (/f)

>> printf("Hello\tWorld\n");

Output: Hello World





- The backslash, single, and double quotes are all meaningful characters in *printf*
 - What if we need to print out a quote or a backslash?

>> printf("Steve Jobs once said "Everyone should learn to code. It teaches you how to think".\n");

Output: ???



- What if we need to print out a quote or a backslash?
 - Use an additional backslash!
 - Quote: \' or \"
 - Backslash: \\

>> printf("Steve Jobs once said \"Everyone should learn to code. It teaches you how to think\".\n");

 By default, %f prints out a decimal number to 6 six decimal places

>> float foo = 6

>> printf("Foo is %f\n", foo);

Output: Foo is 6.000000

lused to hate math, but then I realized decimals have a point.

- By default, %f prints out a decimal number to 6 six decimal places
- To change the default, we can add formatters
 - Go in between the % and the f

I used to hate math, but then I realized decimals have a point.

- To change the default, we can add formatters
 - Written as a decimal number: numbers after the decimal refer to the number of decimals that should be shown
 - >> printf("Foo is %.4f\n");
 - Output: Food is 6.0000

I used to hate math, but then I realized decimals have a point.

- To change the default, we can add formatters
 - Written as a decimal number: numbers BEFORE the decimal refer to the total number of spaces used by the number

>> printf("Foo is %5.2f\n");

Output: Foo is _6.00

lused to hate math, but then I realized decimals have a point.

The underscore is not printed: it is printed as a space character. Combined, the space, the six, the decimal point, and the 2 zeros make up 5 total spaces printed out.

Challenge

 Print the following quote using the printf() function. All formatting rules (tabs, newlines, punctuation) should be kept the same.

"There are 10.00 types of people in this world:

:Those who understand binary...

...and

those who don't."

