Objectives for 8/28/2017 (Mon)

- Strings
- Memory addresses
- Base conversion

If time...
- Call stack

See reference sheet page 2 under "addresses"
The null terminator \0 in memory of strings must end with.

- ASCII value: 0
- Octal: 0100
- Hex: 60
- Decimal: 96

Strings are an array of characters.

Conversion:
- Char: E
- Integer: 69
- Double: 1.234
- String

To see these, inter-changeable are the same.
Write $69$ in base $3$

$69 \mod 3 = 0 \rightarrow 0$

$69 \div 3 = 23$

$23 \mod 3 = 2 \rightarrow 2$

$23 \div 3 = 7$

$7 \mod 3 = 1 \rightarrow 1$

$7 \div 3 = 2$

$2 \mod 3 = 2 \rightarrow 2$

$2 \div 3 = 0$

Result: $2120$

Stop when this is $0$. Don't print this zero for HW 02.
Verify that $2120_{\text{base 3}}$ is the correct representation of $69_{\text{base 10}}$ in base 3.

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2 1 2 0
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"27's place" "9's place" "3's place" "1's place"

$$2 \cdot 3^3 + 1 \cdot 3^2 + 2 \cdot 3^1 + 0 \cdot 3^0$$

$$= 2 \cdot 27 + 1 \cdot 9 + 2 \cdot 3 + 0 \cdot 1$$

$$= 54 + 9 + 6 + 0$$

$$= 69_{\text{base 10}}$$