15-110 recitation 01

Recap

- -syllabus, general policies & resources
- -what is an algorithm? math, strings & chars, booleans, types
- -editors v. interpreters
- -print statements & variables
- -error messages (name, indentation, type)

Reminders!

HW-1 check-in due Monday!

Problems

algorithms

Learning Objectives

-Trace basic algorithms to determine what values are being computed at each step

Problem

```
1. x = x-1
2. print(x**2)
3. x = x % 4
4. ((x * 2) % 4) // 2
```

What is the value of x on line 4 when x = 6 before line 1?

=> run through a couple more inputs if it seems necessary

```
1. n = input
2. d1 = n%10
3. d2 = n//10
4. m = 10 * d1 + d2
5. (m < n)
6. (n < 12)
```

What is the value at line 5 & 6 when the input is 101?

What is the value at line 5 & 6 when the input is 65?

programming basics

Learning Objectives

-Read/Trace/Write basic code (arithmetic: +,-,*,/,//,%, strings and concatenation, boolean: <,>,!=,==, types, converting str() int() float() bool(), printing, syntax, error messages and debugging, variables)

Problem

1. What is the difference between 20 / 3 and 20 // 3 and 20%3?
2. Modulo cases: 5%3, 3%5
3. What is the result of 4 ** 3?
4. Given (x = 1), what will be the value of after we run (x += 2)?
5. What is the result of float(1)?
6. What is the result of bool("False")?

7. What is the result of 10 == “10”?
8. What is the result of 34 > 34?
9. What is the correct way to output “Hello World” from the editor?
10. How do you create a variable named x which is assigned the value 5?
11. What is the difference between == and =?
12. What are the operators that can be used to compare numbers?
13. What is the output of print (x+y) and print (y+” ”+z)? x = “G3” y = “rocks” z = “sucks”

pyzo

Learning Objectives

-Use Pyzo to write simple program files

Problem

Demonstrate

1. Navigate to the Pyzo downloads page, remind students to make sure they download Pyzo asap and that Pyzo is already installed in lab machines
2. Open Pyzo
3. Write some (very minimal) code
4. Run the script
5. Interact with the shell
6. Saving, closing/reopening the same file.

Errors

```
1/0

if a < 3

'2' + 2

print("hello world)

a = 3 + 5 7
```