



CSCI 1300

Intro to Computing

Gabe Johnson

Lecture 5

Jan 25, 2013

Python III: Loops & Functions (for real)

Lecture Goals

1. Announcements
2. Meta: *Learn how to learn*
3. Read and Write files
4. Python Functions
5. Python Flow Control

Upcoming Homework Assignment

HW #2 **Due: Friday, Feb 1**

Simple Functions and Loops

In the next assignment we'll write some functions that do 'interesting' things (at least, for some definition of 'interesting'). For example, one function is to return the sum of two numbers! Fancy Stuff! Another will tell you if a number is evenly divisible by some other number.

I'll have the homework definition up over the weekend.

Geany getting you down?

If you're trying your hand at **C++**,
and Geany isn't running your file:

You have to build it first. Check out the
little brick button at the top, use the
dropdown, and try 'Make all' or just 'Build'.

Learn how to learn



Learn how to learn

When coding, ask yourself what *everything* means.

```
#import <iostream>

using namespace std;

int main() {
    cout << "Hello World" << endl;
    return 0;
}
```

Learn how to learn

When coding, ask yourself *what-if* scenarios.

```
#import <iostream>
```

```
using namespace std;
```

```
int main() {  
    cout << "Hello World" << endl;  
    return 0;  
}
```

Learn how to learn

When coding, don't let lots of new changes stock up before trying things out.

Write some code, run it, look at the output, think *critically* and ask “Is this doing what I think it should be doing?”

... and if not, *fix it right away*.

Learn how to learn

When coding, **the worst thing you can do** is to get stuck, be frustrated, but keep trying the same strategy that obviously is not working.

Be dynamic. Be creative. Develop strategies for

asking enlightened questions

and *teasing out answers to those questions.*

Learn how to learn

Put lots of print statements in your code. If you think the function is obviously returning 42, write a print function to convince yourself it really is. You'd be amazed at how often it returns 41. Or 43.

This can be messy, so do house-keeping once in a while, otherwise you won't be able to read the important stuff.

Python Functions and Loops

Going to dive into the code now.

By the end of this session we'll have covered ways to open, read, and write files.

We'll write some simple functions that act like mini-programs.

We'll write loops---blocks of code that don't go in a straight line.

For next time

Read and work through
Learn Python the Hard Way,
all the way through **Chapter 35**.

They are short chapters :)