Python Programming Basics

1 Control flow

Program execution proceeds from top to bottom, unless you change the *flow* of execution. Today, you will go over `if/elif/else`. We will go over if statments

Lets start out with setting the varibles

```
this = True
that = False
```

A if statment `if`, a `:`, and some argument inbetween. The argument will be True if is anything but a 0. If it is a zero, the statment is false.

If the if statment is True, the tabbed lines beneath will be run, in it is false, the tabbed lines will be skipped till there a none tabbed line is reached. Lets see what happens when we input these into a if statment

```
if this:
    print 'this'
if that:
    print 'that'
```

The output for the lines will be, `this`, because the if statment before it was True while, `that`, will not print beacuse the if statment before it is false

This next set of lines will be using `and` and `or`. These can be read like in a regular sentence. and will only work if both arguments are True, while or will work if either are True

```
if this and that:
    print 'this and that'
if this and this:
    print 'this and this'

if this or that:
    print 'this or that'
if that or that:
    print 'that or that'
```

The output for the lines will be, `this and this` and `this and that`

Another key word that can be used is `not`. It will flip a statment. Making True, Flase, and False, True

```
if not(this):
    print 'this'
if not(that):
    print 'that'
```

The output for the lines will be, `that`

   Now we are going to add `elif` and `else`. `else` is a statment that attaches to the end of `if`. It only iterates if the `if` above is False. `elif` is also a statment that can go after a `if`. It can acts like a `if` statment if the above stament is False

```
if that:
   print 'that
elif that:
   print 'that that'
else:
   print 'that that this'
```

The output for the lines will be, `that that this`

Lastly we will give you a few ideas on was to make make functions really cool.

```
if this:
   if that:
print 'this, that'
   else:
        print 'this, this'
```

```
if that:
   print 'that'
elif that:
   print 'that that'
elif that:
   print 'that that that'
elif that:
   print 'that that that that'
else:
   print 'that that that that this'
```