

# Lecture 1 - Python

Programming for VR I

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## First steps

- ▶ Python runs code in interactive mode and in script mode.
- ▶ From command line, `python` will start interactive mode
- ▶ You get a big old calculator!

```
$ python
```

```
Python 3.5.2 (default, Nov 23 2017, 16:37:01)
```

```
[GCC 5.4.0 20160609] on linux
```

```
Type "help", "copyright", "credits" or "license" for more :
```

```
>>> 1 + 5
```

```
6
```

- ▶ To exit, `Ctrl+D`, or type `quit()`

## Running a script

- ▶ Create a file in your favorite editor (Atom, Notepad++, etc.)
- ▶ Call it “helloworld.py”
- ▶ Write:

```
print("Hello world!")
```

- ▶ Run it in the command line:

```
$ python helloworld.py  
Hello world!
```

# Variables

- ▶ Variables hold values
- ▶ Booleans (False, True)
- ▶ Integers (- 10, 1, 2, 5, ...)
- ▶ Floats (-1010.1, 0.0, 0.3, 1e81, etc.)
- ▶ String ("Hello", "t", "\n()/")
- ▶ Lists, dicts, object instances, etc.

```
a = 10
a *= 2
print(a)
b = 15
b = a + b
print(b)
```

# Numbers

- ▶ Calculator: +, -, \*, /, %, \*\*
- ▶ Compare: >, <, <=, >=, ==
- ▶ Don't forget the parentheses: ()

```
gretzky = 99  
print((10 ** 2) > gretzky)
```

# Strings

- ▶ + concatenates two string pieces

```
h = "Hello"  
w = "world!"  
print(h + " " + w)
```

## If/else

```
if 2 + 2 == 4:  
    print("Everything is right with the world.")  
else:  
    print("Mayhem!")  
print("The end.")
```

- The indentation is critical!

# Challenge

- ▶ I give you a big number,  $a = 650$
- ▶ Write me a program that prints “gotcha” if  $a$  is divisible by 7, otherwise print “nope”