

# Science One CS 2015-2016

## Class 1: variables and types

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Variables: `x=`

`=` means "gets the value of"

Data Types	Examples
Integers (int)	1
Strings (str)	"Hello"

Once the value of a variable is written, new lines of code can **override them**.

**Ex.**

```
x = 5
```

```
print "x" vs print x
```

Then a **new line of code is written**:

```
x = 7
```

The old line of code `x=5` is now overwritten/forgotten

`y` can be set equal to `x`, **but**, what `x =` must be set **before writing `y=x`**

```
my_string = "phrase of data"
```

```
my_integer = 5
```

`my_string` and `my_integer` are variables

a string is a series of characters

a literal means typing in **exactly what is wanted**.

Literal strings are written with double quotes (" ")

Different Types of Data and Their Results:

You can manually **cast** a variable from one type to another like so:

```
integer_turned_string = str(my_integer)
```

```
integer_turned_string
```

```
integer_turned_string + "a"
```

The `str(<thing>)` command attempts to turn `<thing>` into a string

And `int(<thing>)` command attempts to turn `<thing>` into an integer

To anyone reading this: if you want to contribute your notes as well, just email me. In future classes I will save the output of my iPython terminal and paste at the bottom of the notes, so that you have an exact record of what I did in class. Sorry for not saving it this time. -Mike