Python Language Basics, IPython, and Jupyter Notebooks

Python Language Basics

Language Semantics

Indentation, not braces

```
for x in array:
    if x < pivot:
        less_than_pivot.append(x)
    else:
        greater_than_pivot.append(x)
```

```
x = 5
y = 'hello'
z = [1, 2, 3]
q = True
```

```
x = 5
print(x)
```

```
5
```

Everything is an object

Comments

```
results = []
for line in file_handle:
    # keep the newline chars
    line = line.replace('foo', 'bar')
    results.append(line)
msg = "Iterations exceeded tolerance"
raise RuntimeError("Iterations exceeded tolerance")
```

```
x = [1, 2, 3, 4, 5]
x[0] = 'foo'
print(x)
```

```
[1, 2, 3, 4, 5]
```

Dynamic references, strong types

```
a = 5
type(a)
```

```
int
```

```
a = 'foo'
type(a)
```

```
str
```

```
'5' + 5
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
```