Intro to Python

Why Python ?
- ↳ General Purpose
- ↳ Open Source
- ↳ Python package (Easy to build)
- ↳ Many application field

How to Start ?
↳ Just Install python & start using python Interpreator

```
In [1]:
```

Python as a calculator
* perfectly suited to do basic calculations.
  ↳ can do addition, substraction, multiplication & division

Python as Interpretor

```
In [1]: 5+5
Out[1]: 10
```
Add

```
In [2]: 5-5
Out[2]: 0
```
Sub

```
In [3]: 3*5
Out[3]: 15
```
Mul

```
In [4]: 14/2
Out[4]: 7.0
```
Div

Python as Script
* Can add comments to python script to help understand the code
  ↳ # tag to comment

```
script.py
1  # Addition
2  print(4+5)
3
4  # Subtraction
5  print(5-5)
6
7  # Multiplication
8  print(3*5)
9
10 # Division
11 print(10/2)
```

```
script.py
1  # Division
2  print(5 / 8)
3
4  #Addition
5  print(7 + 10)
```

```
import math
[1] ✓ 0.0s

math.log(2.7182)
[2] ✓ 0.0s
... 0.9999698965391098
```

* using Math library for Arithmetic operations & for logarithmic, exponential, square root, pi

```
math.log(100,10)
✓ 0.0s
2.0
```

```
math.exp(10)
[4] ✓ 0.0s
... 22026.465794806718
```

```
math.sqrt(64)
[5] ✓ 0.0s
... 8.0
```

```
abs(-30)
[6] ✓ 0.0s
... 30
```

```
math.pi
[7] ✓ 0.0s
... 3.141592653589793
```

```
round(233.234)
✓ 0.0s
233
```
↳ If upto 1 dec ↳ add it as argument

```
math.floor(233.234)
[11] ✓ 0.0s
... 233
```
↳ Using math method

↳ Issue with math.floor is it rounds it down
↳ To solve it ceil

```
round(233.234, -1)
[10] ✓ 0.0s
... 230.0
```
↳ Similarly, ↳ negative roundoff

```
round(233.234, 1)
[9] ✓ 0.0s
... 233.2
```

```
math.ceil(233.234)
[12] ✓ 0.0s
... 234
```

↳ Issue with math.floor is it rounds it down
↳ To solve it use ceil