

A Quick Tour of Python & Tools

What is Python?

- ▶ High-level, interpreted programming language
- ▶ Emphasizes readability and simplicity
- ▶ Used in data science, web, automation

Python Interpreter

```
>>> 2 + 3
```

```
5
```

```
>>> print("Hello")
```

```
Hello
```

IPython

```
In [1]: x = 10
```

```
In [2]: x * 2
```

```
Out [2]: 20
```

Jupyter Notebook

- ▶ Interactive notebooks (code + text + output)

Comments in Python

```
# This is a comment  
x = 5
```

End-of-Line Terminates a Statement

```
midpoint = 5
```

Line Continuation

```
x = (1 + 2 + 3 + 4 +  
     5 + 6 + 7 + 8)
```

Semicolons in Python

```
lower = []; upper = []
```

Indentation: Whitespace Matters

```
for i in range(10):  
    if i < midpoint:  
        lower.append(i)  
    else:  
        upper.append(i)
```

Effect of Indentation

```
if x < 4:  
    y = x * 2  
    print(x)
```

```
if x < 4:  
    y = x * 2  
print(x)
```