

# Basic Data Types

## Defining a Variable

```
In [1]: x = 5
```

```
In [2]: print(x)
```

```
5
```

```
In [3]: x
```

```
Out[3]: 5
```

```
In [5]: 1x
```

```
Input In [5]
  1x
  ^
SyntaxError: invalid decimal literal
```

```
In [6]: name = 'Ryan'
```

```
In [7]: type(name)
```

```
Out[7]: str
```

```
In [8]: type(x)
```

```
Out[8]: int
```

## Numbers

```
In [9]: type(1.5)
```

```
Out[9]: float
```

```
In [ ]: 1.23456789
```

```
In [ ]: 12345678.9
```

```
In [10]: type(2j)
```

```
Out[10]: complex
```

```
In [11]: 1j * 1j
```

```
Out[11]: (-1+0j)
```

## Strings

```
In [12]: 'String 1 ' + 'String 2'
```

```
Out[12]: 'String 1 String 2'
```

```
In [13]: '1' + '1'
```

```
Out[13]: '11'
```

```
In [14]: '1' + 1
```

```
-----  
TypeError
```

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

```
Input In [14], in <module>
```

```
----> 1 '1' + 1
```

```
TypeError: can only concatenate str (not "int") to str
```

## Booleans

```
In [15]: True
```

```
Out[15]: True
```

```
In [16]: False
```

```
Out[16]: False
```

```
In [18]: true = True
```

```
In [19]: 1 == 1
```

```
Out[19]: True
```

```
In [20]: 1 == 2
```

```
Out[20]: False
```

In [ ]: