

Applied Data Analytics

Python Basics

Boolean Logic

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Boolean logic

- George Boole (1815-1864)
- Basis of all things programming
- Define conditions (True or False) and combine them

Comparisons

```
[1] a = 3  
    b = 3  
    a == b  
[1] True
```

```
[2] a < b  
[2] False
```

```
[3] a >= b  
[3] True
```

```
[4] a != b  
[4] False
```

- Comparison operators are `==` , `<` , `>` , `<=` , `>=` , `!=`
- Remember:
 - `=` is used for assignment
 - Classic error is trying to use it for comparison
- You cannot compare any two variables
 - e.g. `"two" < 3` will return an error

Truth Table

		not a	a and b	a or b
a	b			
✓	✓	✗	✓	✓
✓	✗	✗	✗	✓
✗	✓	✓	✗	✓
✗	✗	✓	✗	✗