
Python #4

Truth and Beauty

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Booleans

- **True, False**
- Constant: **None**
- Every object normally evaluates to `True` unless:
 - It is `False`
 - It is `None`
 - It is a number and is `0`, `0.0`, ...
 - It is a string and empty (`""`)
 - It is a container and is empty (`[]`, `()`, ...)
- Convert to boolean using `bool()`

Comparisons

- ==
- !=
- <
- >
- <=
- >=
- is
- is not

Logical operators

- not
- and
- or

Keep in mind...

- Default operator precedence (and associativity)
 - `()`
 - `**`
 - `-` (negation)
 - `*`, `/`, `//`, `%`
 - `+`, `-`
- Logical short circuit evaluation for `and`, `or`

Conditionals

- `if`
- `else`
- `elif`
- One liners
- Conditional expressions (ternary)
- `pass`

Conditional program flow

```
statements  
if <condition>:  
    statements  
statements
```

```
statements  
if <condition>:  
    statements  
else:  
    statements  
statements
```

```
statements  
if <condition>:  
    statements  
elif <condition>:  
    statements  
statements
```

```
if <condition>: statement
```

```
<var> = <val_if_true> if <condition> else <val_if_false>
```

While loop

- Condition
- `break`
- `continue`

While loop program flow

```
statements  
while <condition>:  
    statements  
statements
```

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<https://goo.gl/5SWpoj>

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