

Python Conditionals

if/elif/else

- No parentheses around condition
- `elif` and `else` are optional
- Use `:` to indicate start of condition block
- Python uses indentation to define blocks and sub-blocks

In [1]:

```
x = 1

if x == 1: # no parens needed around expression
    print('hey, x is 1')
    print('foo')
elif x < 10:
    print('x is less than 10 and not 1')
else:
    print('x >= 10')
```

```
hey, x is 1
foo
```

Comparison operators

Operation	Description
<code>x == y</code>	Equal to
<code>x != y</code>	Not equal to
<code>x < y</code>	Less than
<code>x > y</code>	Greater than
<code>x <= y</code>	Less than or equal to
<code>x >= y</code>	Greater than or equal to

Logical operators

Operation	Description
x or y	If x is false, return y; otherwise, return x
x and y	If x is false, return x; otherwise, return y
not x	If x is false, return True; otherwise, return False

A value is considered False if it is equal to the value False, None, numerically zero, or empty

In [2]:

```
n = None
e = ''
z = 0
f = False
t = True
print(n or f)
print(t or z)
print(n and t)
print(not e)
print(not t)
```

```
False
True
None
True
False
```

Conditional expression

- Shortcut for an if-else conditional
- `result = val1 if val1 < val2 else val2`

In [3]:

```
val1 = 13.88
val2 = -4.99
result = val1 if val1 < val2 else val2
print(result)
if val1 < val2:
    result = val1
else:
```

```
result = val2  
print(result)
```

-4.99

-4.99

"Walrus" operator

- := (cause it looks like a walrus on its side)
- Allows assignment of variable and conditional check in single statement

In [4]:

```
if (x := 100) > 50:  
    print(f'{x} is large')  
else:  
    print(f'{x} is small')
```

100 is large

Exercise One

- Update your Python program for order processing
- Instead of prompting for the discount, use the following algorithm to determine amount of discount:
 - If quantity purchased is greater than or equal to 50 but less than 100, give the customer a 10% discount
 - If quantity purchased is greater than or equal to 100, give the customer a 25% discount
 - Otherwise, the customer will receive no discount
- Using the provided inputs and logic above, calculate subtotal, total including tax, and final total after discount
- Print the formatted order detail to the screen

Exercise Two

- Prompt the user for an integer input
- Print "fizz" if the number is divisible by 3
- Print "buzz" if the number is divisible by 5
- Print "fizzbuzz" if the number is divisible by BOTH 3 and 5
- Otherwise, print the actual number as input by the user