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
x == y	Equal to
x != y	Not equal to
x < y	Less than
x > y	Greater than
x <= y	Less than or equal to
x >= y	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 [2]:
```
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