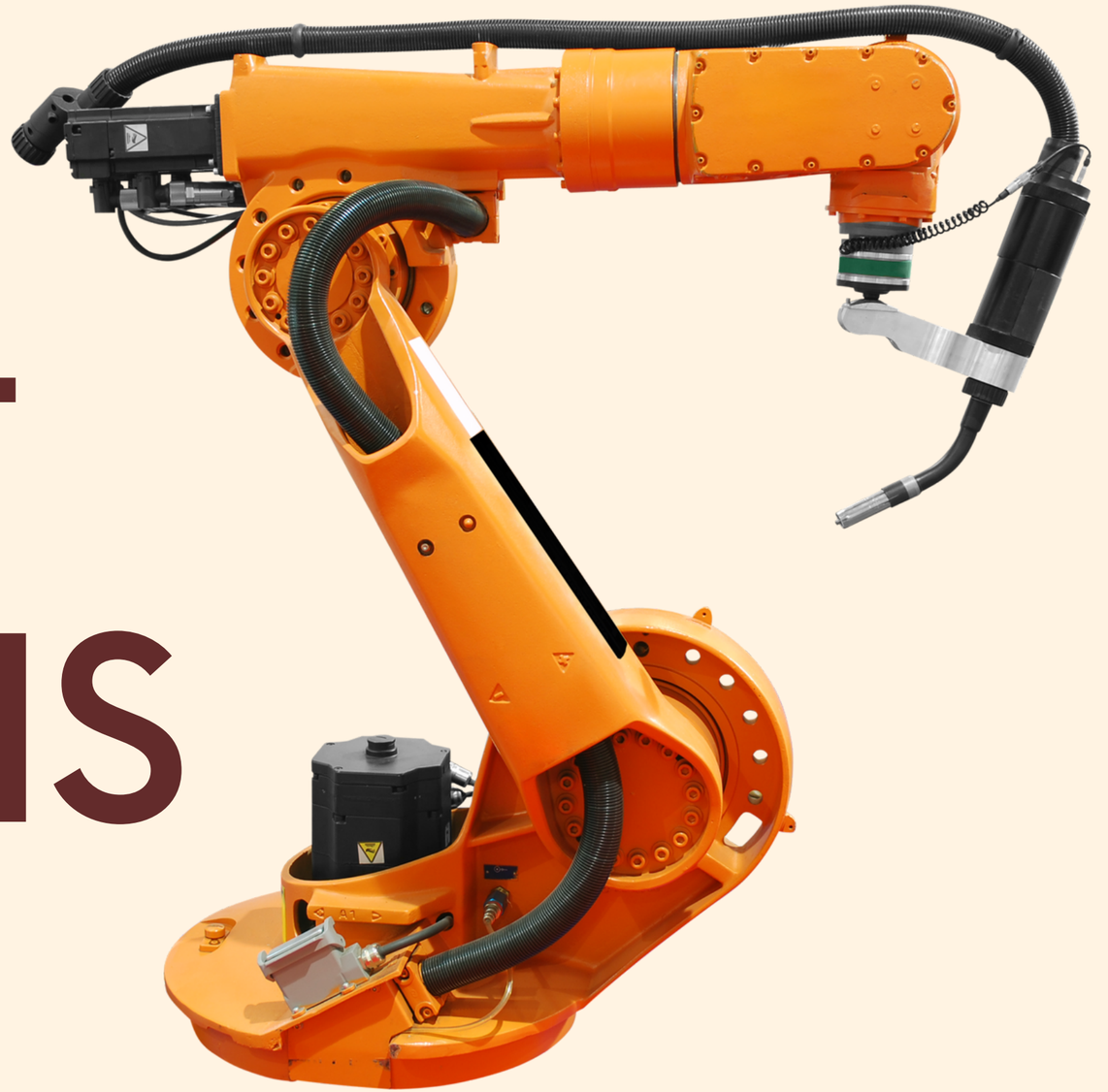
# STRINGS + FUNCTIONS



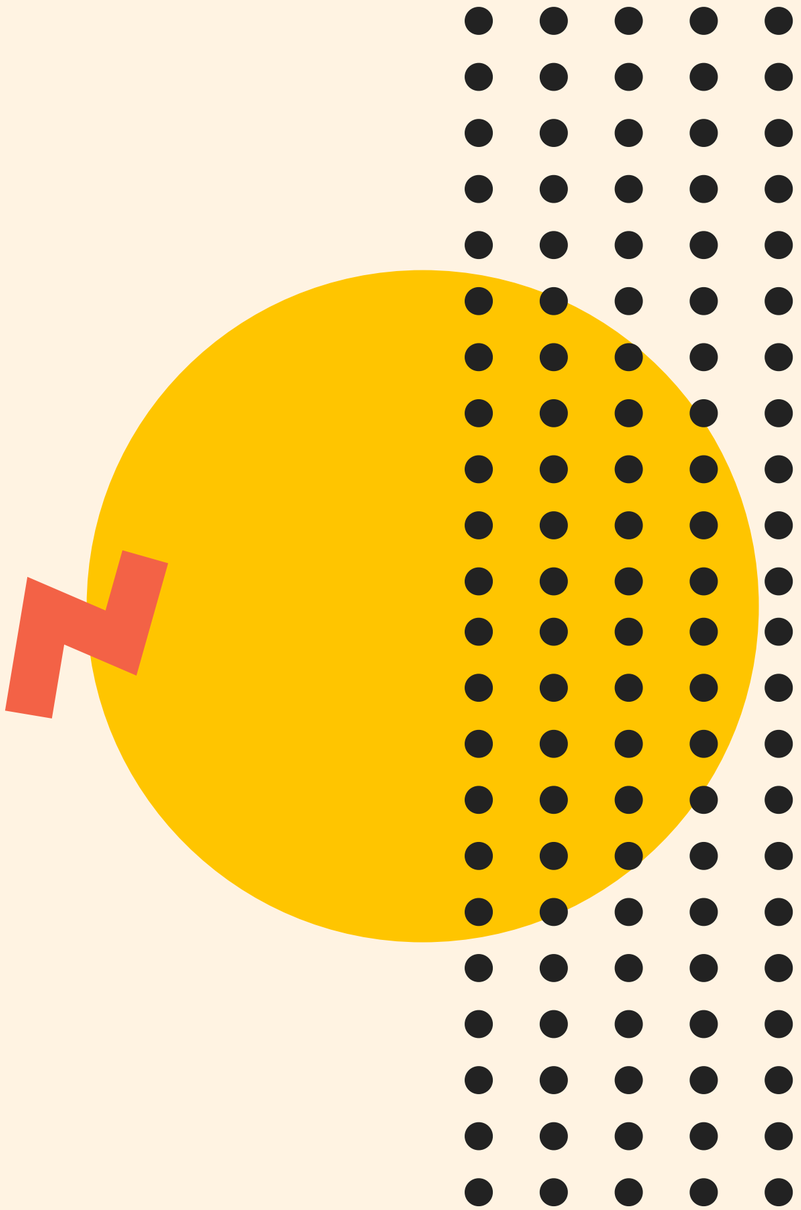
# STRINGS + FUNCTIONS

# Functions

## FUNCTIONS ARE REUSABLE ACTIONS THAT HAVE A NAME

```
func_name()
```

TO EXECUTE A FUNCTION, WE USE PARENS ()

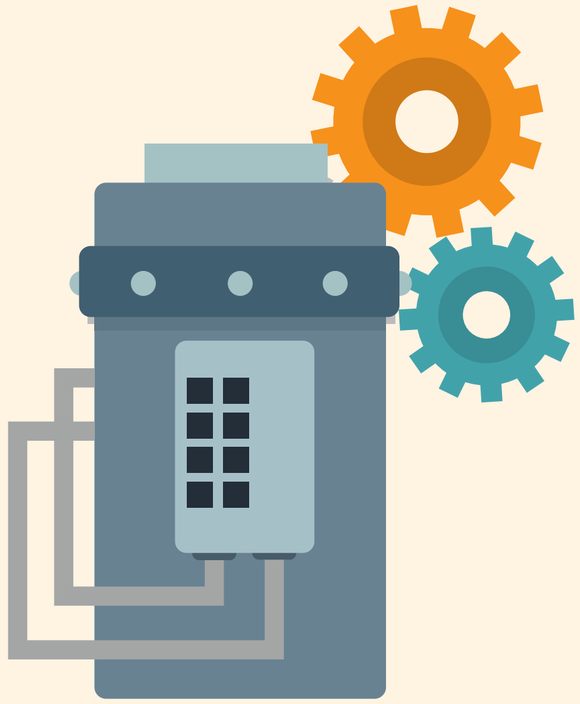


# Inputs

# Output

avg(20,25)

avg(3,2,5,6)



22.5

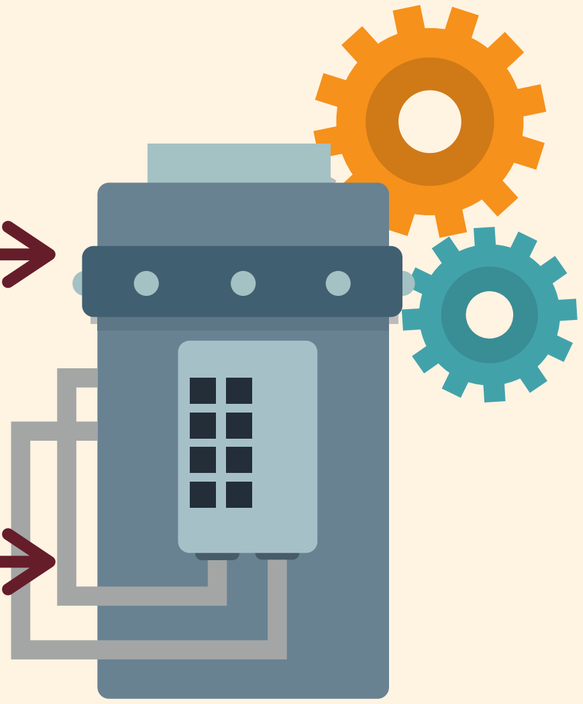
4

# Inputs

# Output

get_weather(10003)

get_weather(92328)



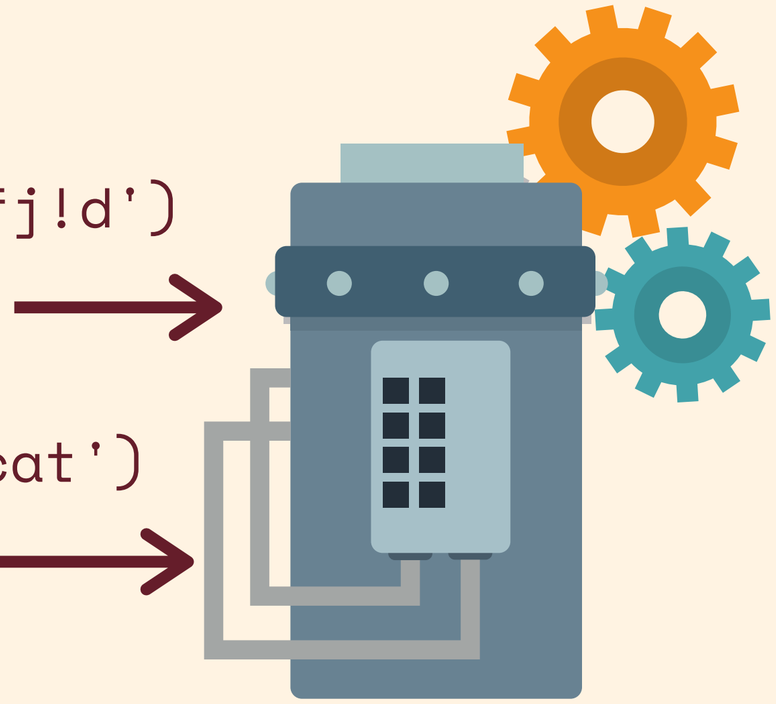
"23 f"

"78 f"

# Inputs

# Output

```
login('todd', 'jjkh2fj!d')
```



False

```
login('todd', 'kittycat')
```

True

# Arguments

(Fancy word for inputs)

```
>>> burger(bun,
secret_sauce, lettuce,
tomato, bacon, cheese,
well_done)
```

# Arguments

(Fancy word for inputs)

```
>>> burger(bun, tomato,
bacon, cheese)
```


>>> burger(sesame_bun,
secret_sauce, lettuce,
tomato, bacon, cheese,
well_done)


>>> burger(sesame_seed_bun,
tomato, bacon, cheese,
well_done)


>>> burger(lettuce_wrap,
ketchup, tomato,
swiss_cheese, well_done)

```
classmethod()    isinstance()     property()
delattr()        issubclass()     range()
dict()           iter()           reversed()
dir()            len()            round()
filter()         locals()         setattr()
getattr()        map()            slice()
globals()        max()            sorted()
help()           object()         sum()
id()             open()           type()
input()          print()          zip()
```

```
classmethod()    isinstance()     property()
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getattr()        map()            slice()
globals()        max()            sorted()
help()           object()         sum()
id()             open()           type()
input()          print()          zip()
```
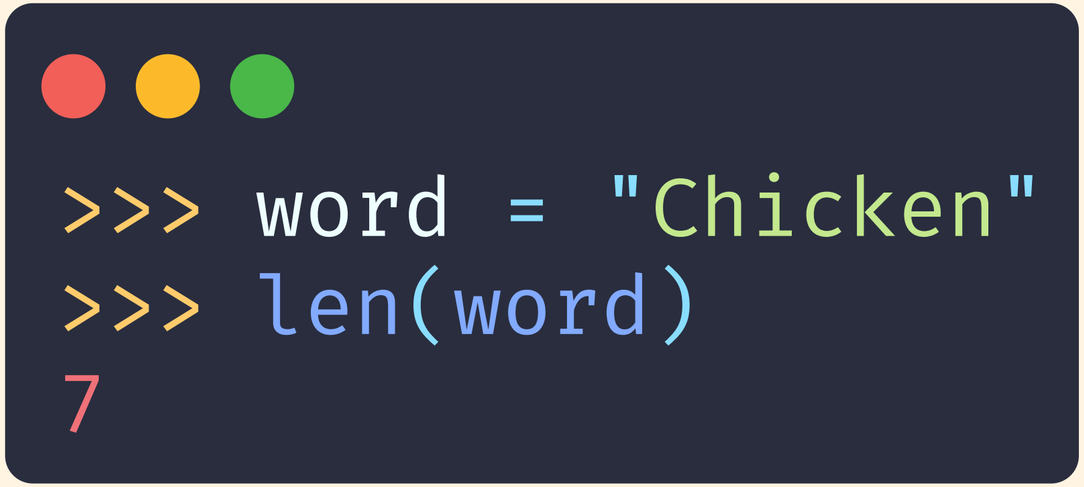
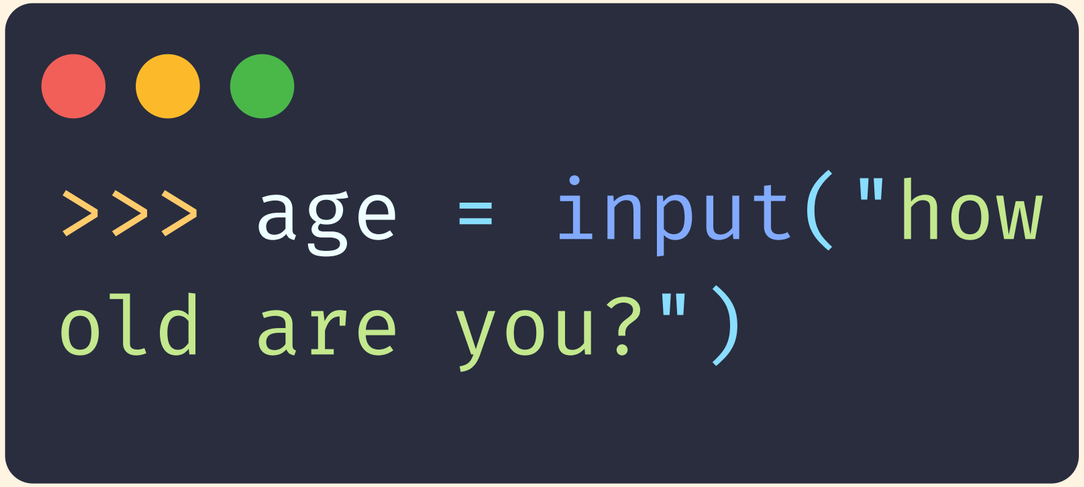

# Length

The **len()** function will return the length of whatever item we pass to it.  So far Strings are the only sequence we've seen, but soon we will see others!



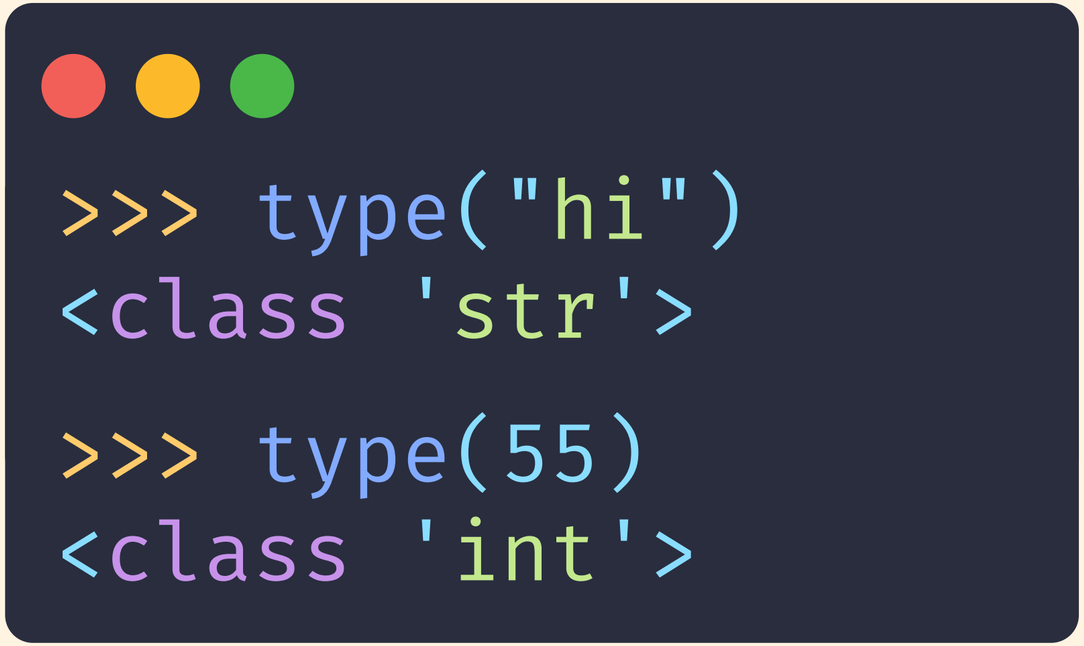
# Input

The **input()** function will prompts a user to enter some input, converts it into a string, and then returns it.  We can use it to gather user input in our programs



# Type

The **type()** function accepts an input object and will return the type of that object



# Casting Types!

```
>>> int("12")
    12
>>> float("3.3")
    3.3
>>> str(44.5)
    '44.5'
```

# Print

The **print()** function prints any arguments we pass to it to "standard output". It does not return anything.

# f strings

f-strings are an easy way to generate strings that contain interpolated expressions.  Any code between curly braces { } will be evaluated and then the result will be turned into a string and inserted into the overall string.

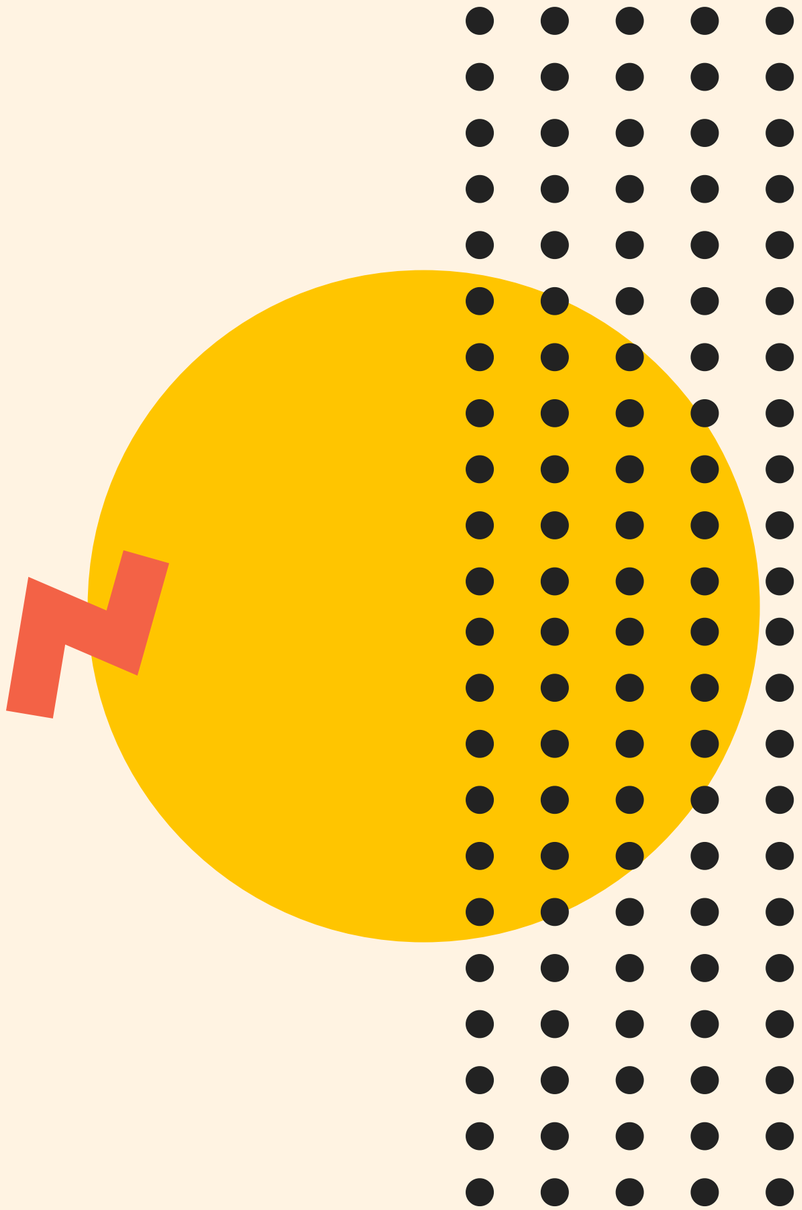
```
>>> f"there are {24*60*60} seconds in a day"
"there are 86400 seconds in a day"
```

# Methods

## METHODS ARE FUNCTIONS THAT "LIVE" ON OBJECTS

```
thing.method()
```

METHODS AUTOMATICALLY HAVE ACCESS TO THE OBJECT THEY ARE CALLED ON.



```
thing.method()
```

# String Methods

str.capitalize()
str.endswith()
str.find()
str.join()
str.lower()
str.lstrip()
str.removeprefix()
str.removesuffix()
str.replace()
str.rfind()
str.rindex()
str.rjust()
str.split()
str.startswith()
str.strip()
str.swapcase()
str.title()
str.upper()

# Capitalization Methods

```
>>> msg = "Hello world"
>>> msg.capitalize()
Hello world
>>> msg.upper()
HELLO WORLD
>>> msg.lower()
hello world
```

```
str.upper( )
```

**accepts no arguments!**

```
str.strip([chars])
```

chars is optional

`strip()` Strips space characters

`strip('-')` Strips '-' characters

`strip('=-')` Strips '=' and '-' characters

```
str.replace(old, new, [count])
```

old and new are required

```
str.replace(old, new, [count])
```

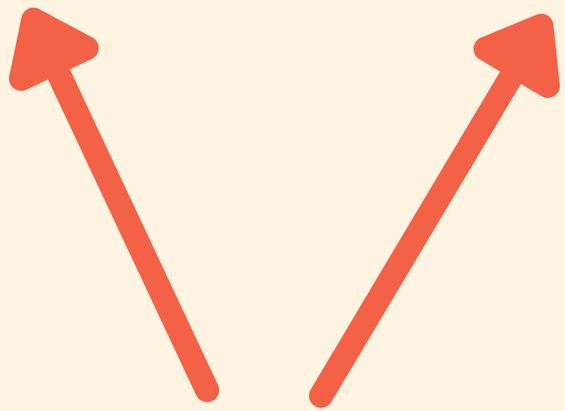
count is optional

```
find(sub[, start[, end]]) -> int
```

```
find(sub[, start[, end]]) -> int
```

sub is a required argument

```
find(sub[, start[, end]]) -> int
```



anything in [] is optional

```
find(sub[, start[, end]]) -> int
```

find returns an integer

`find("c")` returns index where "c" is first found

`find("c", 5)` returns index where "c" is first found, after index 5

`find("c", 5)` returns index where "c" is first found, after index 5

# method chaining

# Strip Methods

```
>>> msg = "...end..."
>>> msg.strip('.')
end
>>> msg.lstrip('.')
end...
>>> msg.rstrip('.')
...end
```

# Find & Index

```
>>> msg = "Cat in a hat"
>>> msg.find('a')
1
>>> msg.rfind('a')
10
>>> msg.index('a')
1
```

# Replace & Count

```
>>> msg = "Hot dog"
>>> msg.replace('o','u')
Hut dug
>>> msg.replace('o','u',1)
Hut dog
>>> msg.count('o')
2
```