

WHAT ARE PYTHON TUPLES?

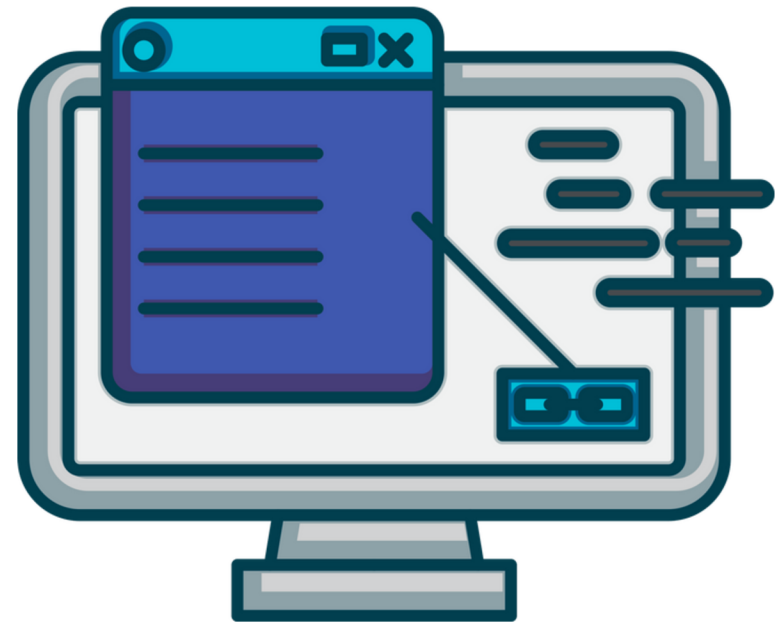


TUPLES ARE SIMILAR TO LISTS BUT WITH A KEY DIFFERENCE: THEY'RE IMMUTABLE, MEANING THEIR CONTENTS CANNOT BE CHANGED ONCE CREATED!



HOW TO CREATE A TUPLE?

TUPLES ARE DEFINED
BY PARENTHESES ()
AND CAN CONTAIN
VARIOUS TYPES OF
ELEMENTS.



```
my_tuple = (1, 2, 3, 'apple', 'banana')
```



ACCESS ELEMENTS

ACCESS ITEMS USING THEIR INDEX, JUST LIKE LISTS, BUT REMEMBER, TUPLES CAN'T BE MODIFIED.

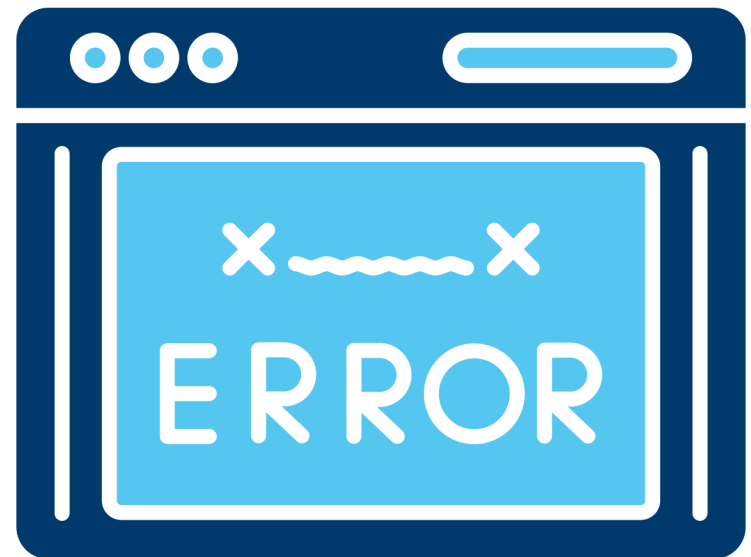


```
first_item = my_tuple[0] # 1
```



TUPLE IMMUTABILITY

ONCE A TUPLE IS
CREATED, YOU CAN'T
CHANGE ITS CONTENT.
TRYING TO MODIFY IT
WILL RESULT IN AN
ERROR.



```
# my_tuple[1] = 'orange' # This will raise an error
```



TUPLE METHODS

TUPLES COME WITH SOME BUILT-IN METHODS, THOUGH THEY'RE MORE LIMITED COMPARED TO LISTS.

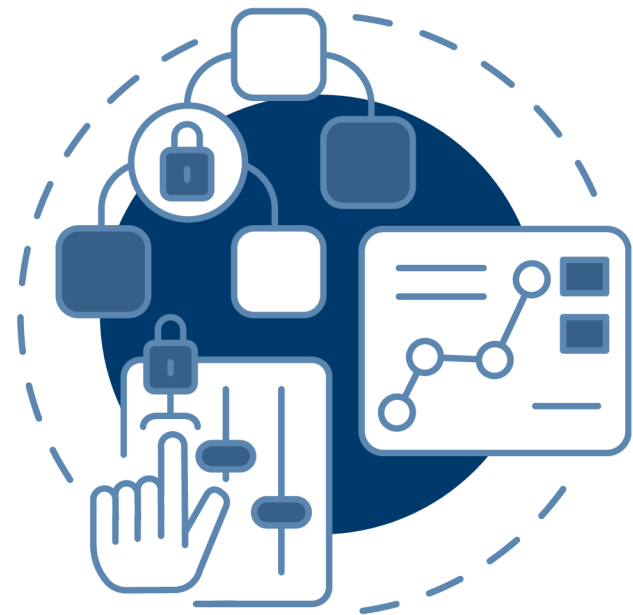


```
count_apple = my_tuple.count('apple') # Count occurrences of 'apple'  
index_banana = my_tuple.index('banana') # Find index of 'banana'
```



UNPACKING TUPLES

ASSIGN TUPLE
ELEMENTS TO
VARIABLES IN A SINGLE
LINE USING
UNPACKING.

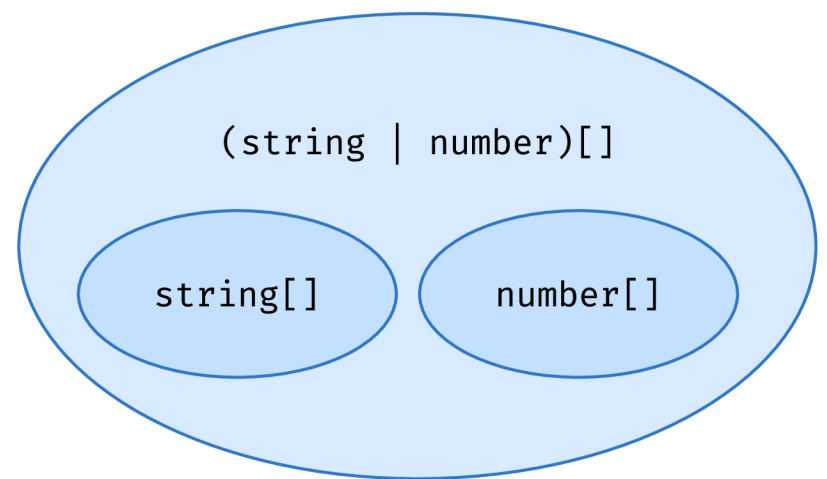


```
a, b, c = (1, 2, 3)
```



NESTED TUPLES

TUPLES CAN CONTAIN
OTHER TUPLES,
CREATING NESTED
STRUCTURES.



```
nested_tuple = ((1, 2), (3, 4))
```



TUPLE VS. LIST

TUPLES ARE IMMUTABLE AND USE PARENTHESES, WHILE LISTS ARE MUTABLE AND USE SQUARE BRACKETS.



```
my_list = [1, 2, 3]  
my_tuple = (1, 2, 3)
```



WRAPPING UP



TUPLES ARE A GREAT WAY TO STORE DATA THAT SHOULDN'T CHANGE. MASTERING THEM WILL ENHANCE YOUR PYTHON SKILLS!



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