## Tuple

A tuple is a collection which is ordered and **unchangeable**. In Python tuples are written with round brackets.

### Example

Create a Tuple:

thistuple = ("apple", "banana", "cherry")

print(thistuple)

## Access Tuple Items

You can access tuple items by referring to the index number, inside square brackets:

### Example

Return the item in position 1:

thistuple = ("apple", "banana", "cherry")

print(thistuple[1])

## Change Tuple Values

Once a tuple is created, you cannot change its values. Tuples are **unchangeable**.

### Example

You cannot change values in a tuple:

thistuple = ("apple", "banana", "cherry")

thistuple[1] = "blackcurrant"

# The values will remain the same:

print(thistuple)

## Loop Through a Tuple

You can loop through the tuple items by using a for loop.

### Example

Iterate through the items and print the values:

thistuple = ("apple", "banana", "cherry")

for x in thistuple:

print(x)

## Check if Item Exists

To determine if a specified item is present in a tuple use the in keyword:

### Example

Check if "apple" is present in the tuple:

thistuple = ("apple", "banana", "cherry")

if "apple" in thistuple:

print("Yes, 'apple' is in the fruits tuple")

## Tuple Length

To determine how many items a tuple has, use the len() method:

### Example

Print the number of items in the tuple:

thistuple = ("apple", "banana", "cherry")

print(len(thistuple))

## Add Items

Once a tuple is created, you cannot add items to it. Tuples are **unchangeable**.

### Example

You cannot add items to a tuple:

thistuple = ("apple", "banana", "cherry")

thistuple[3] = "orange" # This will raise an error

print(thistuple)

## Remove Items

**Note:** You cannot remove items in a tuple.

Tuples are **unchangeable**, so you cannot remove items from it, but you can delete the tuple completely:

### Example

The del keyword can delete the tuple completely:

thistuple = ("apple", "banana", "cherry")

del thistuple

print(thistuple) #this will raise an error because the tuple no longer exists

## The tuple() Constructor

It is also possible to use the tuple() constructor to make a tuple.

### Example

Using the tuple() method to make a tuple:

thistuple = tuple(("apple", "banana", "cherry")) # note the double round-brackets

print(thistuple)

## Tuple Methods

Python has two built-in methods that you can use on tuples.

|  |  |
| --- | --- |
| **Method** | **Description** |
| [count()](https://www.w3schools.com/python/ref_tuple_count.asp) | Returns the number of times a specified value occurs in a tuple |
| [index()](https://www.w3schools.com/python/ref_tuple_index.asp) | Searches the tuple for a specified value and returns the position of where it was found |

## Test Yourself With Exercises

## Exercise:

Print the first item in the fruits tuple.

fruits = ("apple", "banana", "cherry")

print(\_\_\_\_\_)