

Python Collections (Arrays)

There are four collection data types in the Python programming language:

- **List** is a collection which is ordered and changeable. Allows duplicate members.
- **Tuple** is a collection which is ordered and unchangeable. Allows duplicate members.
- **Set** is a collection which is unordered, unchangeable*, and unindexed. No duplicate members.
- **Dictionary** is a collection which is ordered** and changeable. No duplicate members.

List

Lists are used to store multiple items in a single variable.

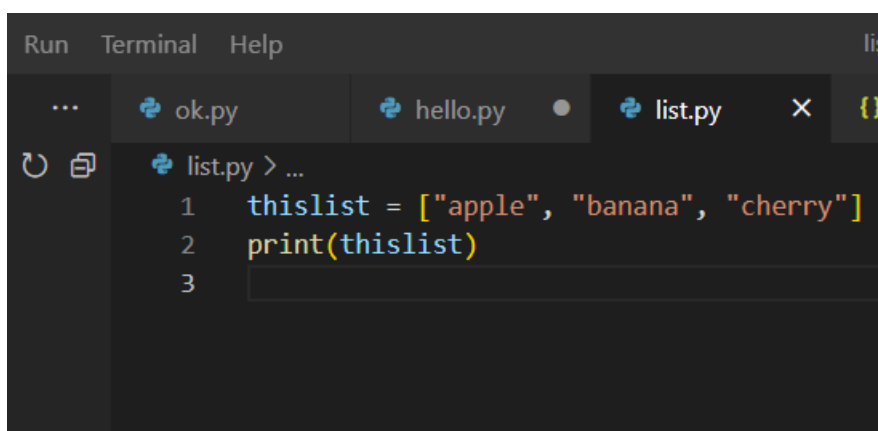
Lists are one of 4 built-in data types in Python used to store collections of data, the other 3 are Tuple, Set, and Dictionary, all with different qualities and usage.

Lists are created using square brackets:

Example

To Create a List:

(save file name list.py)



```
Run Terminal Help list
... ok.py hello.py list.py x {}
list.py > ...
1 thislist = ["apple", "banana", "cherry"]
2 print(thislist)
3
```

Run in terminal by command `python list.py` as shown below and output :-

```
PS D:\view> python list.py
['apple', 'banana', 'cherry']
PS D:\view> █
```

Tuple:-

Tuples are used to store multiple items in a single variable.

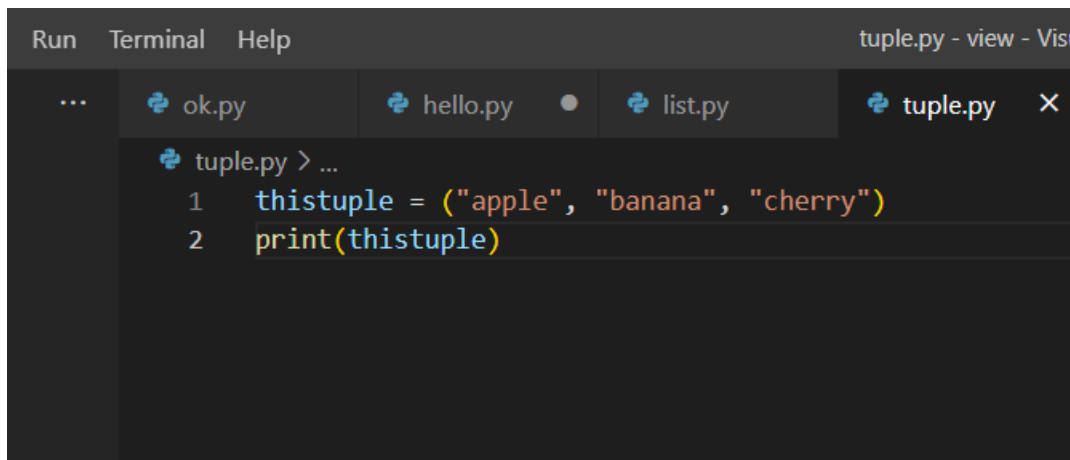
Tuple is one of 4 built-in data types in Python used to store collections of data, the other 3 are List, Set, and Dictionary, all with different qualities and usage.

A tuple is a collection which is ordered and **unchangeable**.

Tuples are written with round brackets.

Example

Create a Tuple (save file name as tuple.py file as shown below)



```
Run Terminal Help tuple.py - view - Vis
... ok.py hello.py list.py tuple.py X
tuple.py > ...
1 thistuple = ("apple", "banana", "cherry")
2 print(thistuple)
```

Run in terminal by command `python tuple.py` as shown below and output :-

Output :-

```
PS D:\view> python tuple.py
('apple', 'banana', 'cherry')
PS D:\view>
```

Set

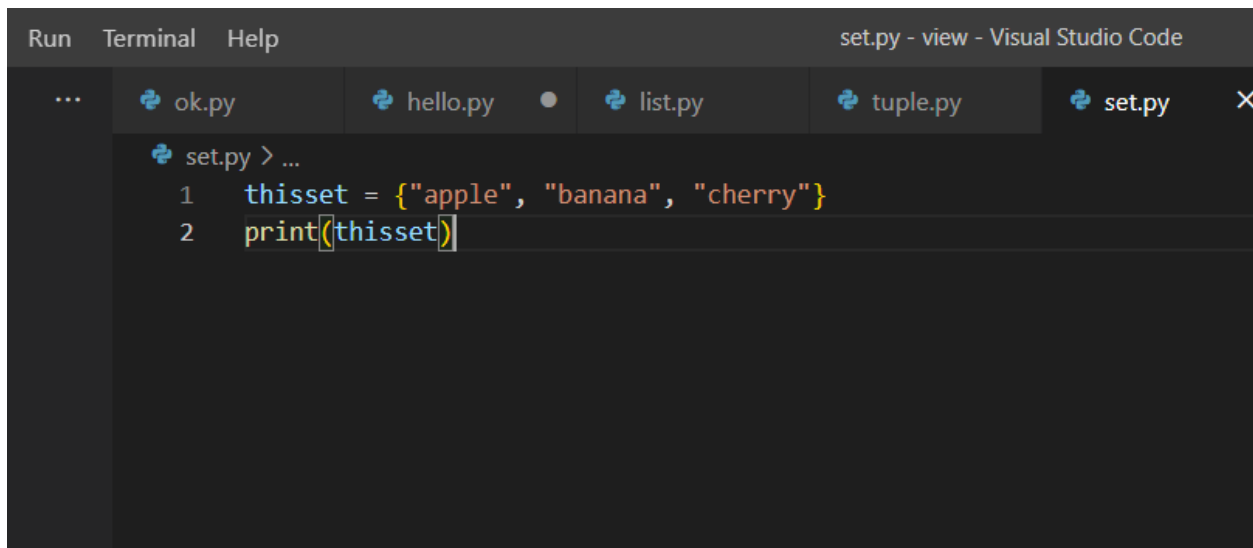
Sets are used to store multiple items in a single variable.

Set is one of 4 built-in data types in Python used to store collections of data, the other 3 are [List](#), Tuple, and Dictionary, all with different qualities and usage.

A set is a collection which is *unordered*, *unchangeable**, and *unindexed*.

Example

Create a Set:(save file set.py as shown below)



```
set.py - view - Visual Studio Code
... ok.py hello.py list.py tuple.py set.py X
set.py > ...
1 thisset = {"apple", "banana", "cherry"}
2 print(thisset)
```

Run in terminal by command `python set.py` as shown below and output :-

Output :-

```
PS D:\view> python set.py
set(['cherry', 'banana', 'apple'])
PS D:\view> |
```

Dictionary

Dictionaries are used to store data values in key:value pairs.

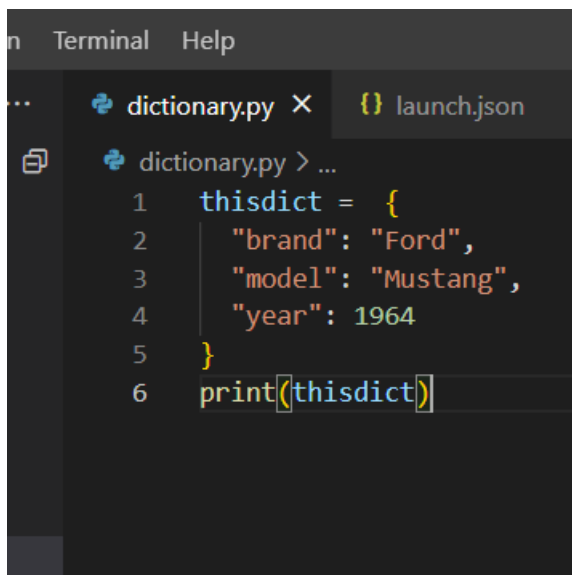
A dictionary is a collection which is ordered*, changeable and do not allow duplicates.

As of Python version 3.7, dictionaries are *ordered*. In Python 3.6 and earlier, dictionaries are *unordered*.

Dictionaries are written with curly brackets, and have keys and values:

Example

Create and print a dictionary(save file dictionary.py) as shown below.



```
n Terminal Help
dictionary.py x {} launch.json
dictionary.py > ...
1 thisdict = {
2     "brand": "Ford",
3     "model": "Mustang",
4     "year": 1964
5 }
6 print(thisdict)
```

Run in terminal by command `python dictionary.py` as shown below and output :-

Output :-

```
PS D:\view> python dictionary.py
{'brand': 'Ford', 'model': 'Mustang', 'year': 1964}
PS D:\view> █
```