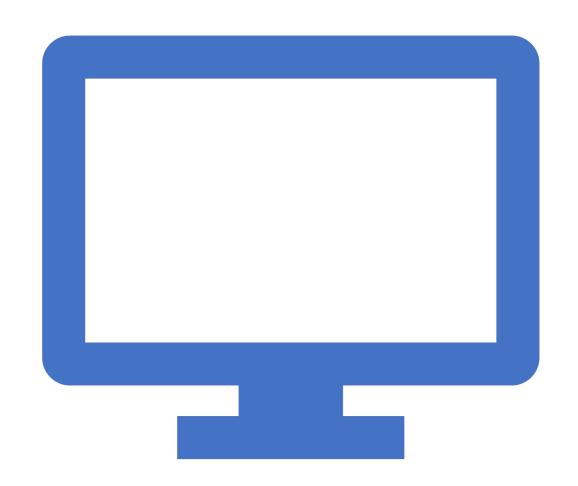


# Python Part C

Part of Future Connect Media's IT Course

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## Topics to be covered:

• List

• Tuple



## Python List

 Python List: Storing multiple items in a single variable. It is denoted by '[]'.List items can be of any data type.

```
list=['bmw', 'mercedes', 'audi']
print(list)
['bmw', 'mercedes', 'audi']
```

List length:

```
list=['bmw','mercedes','audi']
print(len(list))
```



#### Change List item:

```
>>> list=['bmw','mercedes','audi']
>>> list[1]='jaguar'
>>> print(list)
['bmw', 'jaguar', 'audi']
```

#### Append List:

```
>>> list=['bmw','mercedes','audi']
>>> list.append('mercedes')#
>>> print(list)
['bmw', 'mercedes', 'audi', 'mercedes']
```



Insert into List:

Extend List:

```
>>> list=['bmw','mercedes','audi']
>>> list.insert(1,'jaguar')
>>> print(list)
['bmw', 'jaguar', 'mercedes', 'audi']
```

```
>>> list=['bmw','mercedes','audi']
>>> list1=['black','white','silver']
>>> list.extend(list1)
>>> print(list)
['bmw', 'mercedes', 'audi', 'black', 'white', 'silver']
```

#### Removing an item:

```
>>> list=['bmw','mercedes','audi']
>>> list.remove('mercedes')
>>> print(list)
['bmw', 'audi']
```

#### Sort List:

```
>>> list=['bmw','mercedes','audi']
>>> list.sort()
>>> print(list)
['audi', 'bmw', 'mercedes']
```

#### • Sort List (descending):

```
>>> list=['bmw','mercedes','audi']
>>> list.sort(reverse=True)
>>> print(list)
['mercedes', 'bmw', 'audi']
```





Method	Description
<u>append()</u>	Adds an element at the end of the list
<u>clear()</u>	Removes all the elements from the list
<u>copy()</u> .	Returns a copy of the list
<u>count()</u>	Returns the number of elements with the specified value
<u>extend()</u>	Add the elements of a list (or any iterable), to the end of the current list
<u>index()</u>	Returns the index of the first element with the specified value
insert()	Adds an element at the specified position
<u>pop()</u>	Removes the element at the specified position
<u>remove()</u>	Removes the item with the specified value
<u>reverse()</u>	Reverses the order of the list
sort()	Sorts the list

## List Method



## Tuple

Tuple: An ordered and immutable group of things or objects is referred to as a tuple.
 Sequences are what tuples and lists both are. Tuples and lists vary in that tuples cannot be altered, although lists can, and tuple use parentheses while lists use square brackets.
 The index of the first item in the tuple is denoted by [0], index of second item [1] and so on.

```
>>> tuple=('bmw','mercedes','audi','jaguar')
>>> print(tuple);
('bmw', 'mercedes', 'audi', 'jaguar')
>>> tuple=('bmw','mercedes','audi','jaguar')
>>> print(tuple[-3:-1]);
('mercedes', 'audi')
```

#last item has the index [-1].



```
t = ('bmw', 'mercedes', 'audi', 'jaguar')
l = list(t)
l[1] = 'bentley'
t = tuple(l)
print(t)

('bmw', 'bentley', 'audi', 'jaguar')
```

Adding item to a tuple:

```
t = ('bmw', 'mercedes', 'audi', 'jaguar')
l = list(t)
l.append('bentley')
t = tuple(l)
print(t)

('bmw', 'mercedes', 'audi', 'jaguar', 'bentley')
```





Adding tuple to a tuple:

```
t = ('bmw', 'mercedes', 'audi', 'jaguar')
t1 = ('bentley',)
t += t1
print(t)
('bmw', 'mercedes', 'audi', 'jaguar', 'bentley')
```

Joining tuples:

```
t = ('bmw', 'mercedes', 'audi', 'jaguar')
t1 = ('1','2','3','4')
t2= t + t1
print(t2)
('bmw', 'mercedes', 'audi', 'jaguar', '1', '2', '3', '4')
```



## Tuple Method

Method	Description
<u>count()</u>	Returns the number of times a specified value occurs in a tuple
<u>index()</u>	Searches the tuple for a specified value and returns the position of where it was found