Pair_exercise_tuples

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Pair Exercise: Tuples

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For DSE5002

Sources

https://docs.python.org/3/tutorial/datastructures.html

a tuple is a sequence of values separated by commas, they do not need to be immutable

tuples are ordered and can be iterated, but they are immutable

```python
[2]: a=1,2,"bob",3,"cathy"
```

```python
[4]: a
```

```
[4]: (1, 2, 'bob', 3, 'cathy')
```

```python
[6]: # comprehension

     [print(val) for val in a]
```

```
1
2
bob
3
cathy
```

```
[6]: [None, None, None, None, None]
```

```python
[8]: #indexing

     a[1]
```

```
[8]: 2
```

```python
[10]: #tuples are immutable, no changes allowed

      a[1]=3
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[10], line 3
      1 #tuples are immutable, no changes allowed
----> 3 a[1]=3

TypeError: 'tuple' object does not support item assignment
```

[12]:
```
# we can combine tuples

b=a,3,4,5

b
```

[12]: ((1, 2, 'bob', 3, 'cathy'), 3, 4, 5)

[14]:
```
#b is a tuple
# the first item in b is a tuple
b[0]
```

[14]: (1, 2, 'bob', 3, 'cathy')

[16]:
```
len(b)
```

[16]: 4

[18]:
```
#tuple unpacking

w,x,y,z=b

print(w)
print(x)
print(y)
print(z)
```

```
(1, 2, 'bob', 3, 'cathy')
3
4
5
```

Tuples are useful for storing constants, as a sequence of fixed values of known length, in a fixed order

Tuples are faster than lists, which is the only meaningful distinction I can find :)

[ ]: