

15 Tuple Assessments in Python

This document provides 15 tuple assessments in Python, ranging from easy to hard, including their solutions and expected results.

Easy Assessments

1. Access Tuple Elements

Write a function that accesses the elements of a tuple.

```
def access_elements(tpl):  
    return tpl[0], tpl[-1]  
  
# Test  
print(access_elements((1, 2, 3, 4, 5))) # Output: (1, 5)
```

2. Concatenate Tuples

Write a function to concatenate two tuples.

```
def concatenate_tuples(tpl1, tpl2):  
    return tpl1 + tpl2  
  
# Test  
print(concatenate_tuples((1, 2), (3, 4))) # Output: (1, 2, 3, 4)
```

3. Find Length of Tuple

Write a function to find the length of a tuple.

```
def tuple_length(tpl):  
    return len(tpl)  
  
# Test  
print(tuple_length((1, 2, 3, 4, 5))) # Output: 5
```

4. Check Element in Tuple

Write a function to check if an element exists in a tuple.

```
def check_element(tpl, elem):  
    return elem in tpl  
  
# Test  
print(check_element((1, 2, 3, 4, 5), 3)) # Output: True
```

5. Convert List to Tuple

Write a function to convert a list to a tuple.

```
def list_to_tuple(lst):
    return tuple(lst)

# Test
print(list_to_tuple([1, 2, 3, 4, 5])) # Output: (1, 2, 3, 4, 5)
```

Medium Assessments

6. Unpack Tuple

Write a function to unpack the elements of a tuple into variables.

```
def unpack_tuple(tpl):
    a, b, c = tpl
    return a, b, c

# Test
print(unpack_tuple((1, 2, 3))) # Output: (1, 2, 3)
```

7. Find Index of Element

Write a function to find the index of an element in a tuple.

```
def index_of_element(tpl, elem):
    return tpl.index(elem)

# Test
print(index_of_element((1, 2, 3, 4, 5), 3)) # Output: 2
```

8. Count Element in Tuple

Write a function to count the number of times an element appears in a tuple.

```
def count_element(tpl, elem):
    return tpl.count(elem)

# Test
print(count_element((1, 2, 2, 3, 4, 4, 5), 2)) # Output: 2
```

9. Convert Tuple to List

Write a function to convert a tuple to a list.

```
def tuple_to_list(tpl):
    return list(tpl)

# Test
print(tuple_to_list((1, 2, 3, 4, 5))) # Output: [1, 2, 3, 4, 5]
```

10. Multiply Elements in Tuple

Write a function to multiply each element in a tuple by a given number.

```
def multiply_elements(tpl, num):  
    return tuple(x * num for x in tpl)  
  
# Test  
print(multiply_elements((1, 2, 3), 2)) # Output: (2, 4, 6)
```

Hard Assessments

11. Find Min and Max

Write a function to find the minimum and maximum elements in a tuple.

```
def min_max_elements(tpl):  
    return min(tpl), max(tpl)  
  
# Test  
print(min_max_elements((1, 2, 3, 4, 5))) # Output: (1, 5)
```

12. Convert Tuple of Tuples to a Single Tuple

Write a function to convert a tuple of tuples into a single tuple.

```
def flatten_tuple(tpl):  
    return tuple(item for subtuple in tpl for item in subtuple)  
  
# Test  
print(flatten_tuple(((1, 2), (3, 4), (5, 6)))) # Output: (1, 2, 3, 4, 5, 6)
```

13. Sort Tuple

Write a function to sort the elements of a tuple.

```
def sort_tuple(tpl):  
    return tuple(sorted(tpl))  
  
# Test  
print(sort_tuple((3, 1, 2, 5, 4))) # Output: (1, 2, 3, 4, 5)
```

14. Find Duplicates in Tuple

Write a function to find duplicate elements in a tuple.

```
def find_duplicates(tpl):  
    return tuple(x for x in set(tpl) if tpl.count(x) > 1)
```

```
# Test
print(find_duplicates((1, 2, 2, 3, 3, 3, 4))) # Output: (2, 3)
```

15. Merge Tuple Elements into String

Write a function to merge the elements of a tuple into a single string with a separator.

```
def merge_with_separator(tpl, sep):
    return sep.join(map(str, tpl))
```

```
# Test
print(merge_with_separator((1, 2, 3), '-')) # Output: "1-2-3"
```

Stay Updated

Be sure to [subscribe](#) to this repository to stay updated with new examples and enhancements!

License

This project is protected under the MIT License.

Contact

Panagiotis Moschos - pan.moschos86@gmail.com

Note: This is a Python script and requires a Python interpreter to run.

Happy Coding

Made with [love](#) by Panagiotis Moschos (<https://github.com/pmoschos>)