Take-Home (Day 2)

Let's begin with some hands-on practice exercises

1. A text is given below. Write a program to find the character which is at the index position obtained by adding the indices of the character 'o' of the word 'Hello' and 'o' of the word 'welcome'

string = "Hello, welcome to my world."

In [1]:
```
# type your code here
string = "Hello, welcome to my world."
a = list(string.split())
b = a[0].index('o') + a[1].index('o')
print(string[8])
```

```
e
```

1. Create a tuple with single value '5'

In [3]:
```
# type your code here
t = (5)
t
```

Out[3]:
```
5
```

2. Write a program that takes two dictionaries and concatenates them into one dictionary

Use the below dictionaries:

dictionary_1 = {'A':1, 'B':2}

dictionary_2 = {'C':3}

In [4]:
```
# type your code here
dictionary_1 = {'A':1, 'B':2}
dictionary_2 = {'C':3}
dictionary_1.update(dictionary_2)
dictionary_1
```

Out[4]: {'A': 1, 'B': 2, 'C': 3}

3. Check whether the set X and Y are disjoint or not

Use the sets below (or create your own sets):

Set X

X = {4, 5, 11, 34, 4, 56, 44, 67, 67, 5, 12, 34, 16, 9, 22, 23, 56, 34, 33, 89, 78, 45, 33, 78, 34, 45, 12, 45, 56 }

Set Y

Y = {41, 52, 63, 56, 67, 45, 99, 56, 45, 23, 45, 63, 45, 56, 45, 55, 56, 56, 12, 86, 67, 55, 56, 34, 89}

In [5]:
```
# type your code here
X = {4, 5, 11, 34, 4, 56, 44, 67, 67, 5, 12, 34, 16, 9, 22, 23, 56, 34, 33, 89
, 78, 45, 33, 78, 34, 45, 12, 45, 56 }

Y = {41, 52, 63, 56, 67, 45, 99, 56, 45, 23, 45, 63, 45, 56, 45, 55, 56, 56, 1
2, 86, 67, 55, 56, 34, 89}

X.isdisjoint(Y)
```

Out[5]: False

4. Retrieve the third element in the given list

Use the list given below:

num_list = [5, 3, 6, 1, 85, 23, 5, 13]

In [6]:
```
# type your code here
num_list = [5, 3, 6, 1, 85, 23, 5, 13]
num_list[2]
```

Out[6]: 6

5. Count the occurance of number -6 in the given tuple

Use the tuple given below:

num_tuple = (-4, 7, -8, -9, 8, -6, 7, 3, -6, 1, -8, -6)

In [7]:
```
# type your code here
num_tuple = (-4, 7, -8, -9, 8, -6, 7, 3, -6, 1, -8, -6)
num_tuple.count(-6)
```

Out[7]: 3

6. Check whether the number 53 is in the given list or not

Use the list given below:

num_list = [5, 3, 6, 1, 85, 23, 5, 13]

In [8]:
```
# type your code here
num_list = [5, 3, 6, 1, 85, 23, 5, 13]
53 in num_list
```

Out[8]: False

7. Remove number 3 from a given set

Use the set below:

numbers = {2, 3, 4, 5}

In [9]:
```
# type your code here
numbers = {2, 3, 4, 5}
numbers.remove(3)
numbers
```

Out[9]: {2, 4, 5}

8. Write a program to convert a list into tuple

Use the list below:

num_list = [24, 18, 24, 47, 52]

In [10]:
```
# type your code here

num_list = [24, 18, 24, 47, 52]
tuple(num_list)
```

Out[10]: (24, 18, 24, 47, 52)

9. Write a program to retrieve the capital of 'Germany' from a given dictionary

Use the dictionary given below:

europe = { 'Spain': { 'Capital':'Madrid', 'Population':4.77 }, 'France': { 'Capital':'Paris', 'Population':6.7 }, 'Germany': { 'Capital':'Berlin', 'Population':8.28 }, 'Norway': { 'Capital':'Oslo', 'Population':0.533 } }

In [11]:
```
# type your code here
europe = { 'Spain': { 'Capital':'Madrid', 'Population':4.77 }, 'France': { 'Ca
pital':'Paris', 'Population':6.7 }, 'Germany': { 'Capital':'Berlin', 'Populati
on':8.28 }, 'Norway': { 'Capital':'Oslo', 'Population':0.533 } }
europe['Germany']['Capital']
```

Out[11]: 'Berlin'

10. Find maximum and the minimum value from a given set

Use the elements:

5, 10, 3, 15, 2, 20, 10, 5, 4, 3

In [12]:
```
# type your code here
a = [5, 10, 3, 15, 2, 20, 10, 5, 4, 3]
print(min(a))
print(max(a))
```

```
2
20
```

In [ ]:
```

```