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Question:

Create a List using numbers, strings, etc. and accessing

```
my_list = [1, "hey there", 3.14, True]
print(my_list[0])
print(my_list[2])
```

```
1
3.14
```

Question: 2

Creating a list with multiple distinct or duplicate elements

```
distinct = [10, 20, 30, 40, 50]
duplicate = [1, 2, 2, 3, 3, 3, 4]
print(distinct)
print(duplicate)
```

```
[10, 20, 30, 40, 50]
[1, 2, 2, 3, 3, 3, 4]
```

Question: 3

Create a Multi-Dimensional List and display the size of List

```
array_list = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]
print(len(array_list))
print(len(array_list[0]))
```

```
3
3
```

Question: 4

Create a list and use append(), insert(), and extend() method. Also access the elements from list

```
methods = [1, 2, 3]
methods.append(4)
methods.insert(1, 5)
methods.extend([6, 7])
print(methods)
```

```
print(methods[0])
print(methods[3])
```

```
[1, 5, 2, 3, 4, 6, 7]
1
3
```

Question: 5

Create a list and use Negative indexing to print element of list

```
list = [10, 20, 30, 40, 50]
print(list[-1])
print(list[-2])
print(list[-3])
```

```
50
40
30
```

Question: 6

Create a list and remove elements using remove() and pop() method (for single element removal, for list element removal inside list etc.)

```
list = [1,2,3,4.45,[6,7,4],'hello there','Supp!']
list.remove(3)
list.pop()
list.pop(4)
print(list)
```

```
[1, 2, 4.45, [6, 7, 4]]
```

Question: 7

Creating a Dictionary and print dictionary specific elements and all elements. Make use of other methods to add elements in dictionary. Also make use of get method to access an element. Make use of del keyword to Removing Elements from Dictionary by Deleting a Key from dictionary and deleting specific dictionary. Use popitem() and clear () method to delete and clear dictionary

```
my_dict = {
    "a": 1,
    "b": 2,
    "c": 3}
print(my_dict["a"])
my_dict["d"] = 4
print(my_dict)
print(my_dict.get("c"))
```

```
del my_dict["b"]
print("After deleting 'b':", my_dict)

last_item = my_dict.popitem()
print("After popitem():", my_dict)
print("Removed item:", last_item)

my_dict.clear()
print("After clear():", my_dict)
```

```
1
{'a': 1, 'b': 2, 'c': 3, 'd': 4}
3

---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call
last)
/tmp/ipython-input-1975077029.py in <cell line: 0>()
      7 print(my_dict)
      8 print(my_dict.get("c"))
----> 9 my_dict.remove["b"]
     10 print(my_dict)
     11

AttributeError: 'dict' object has no attribute 'remove'
```

Question: 8

Create nested dictionary and access an element of a nested dictionary. Use pop() method to delete element

```
dict = {
    "Member 1": {"name": "Alice", "age": 30},
    "Member 2": {"name": "Bob", "age": 25},
    "Member 3": {"name": "Charlie", "age": 35}
}
print(dict)
print(dict["Member 1"]["name"])
print(dict["Member 2"]["age"])

remove_person = dict.pop("Member 3")
print(remove_person)
print(dict)
```

```
{'Member 1': {'name': 'Alice', 'age': 30}, 'Member 2': {'name': 'Bob',
'age': 25}, 'Member 3': {'name': 'Charlie', 'age': 35}}
Alice
25
{'name': 'Charlie', 'age': 35}
```

```
{'Member 1': {'name': 'Alice', 'age': 30}, 'Member 2': {'name': 'Bob',
'age': 25}}
```