Name :- Suryakant Upadhyay

PRN :- 20220802043

Div :- A1

Exercise 1.1 - List Operation

Q1. a) Write a python code to create a list with all integer values.

In [1]:
```
my_list1=[5,12,13,14]
my_list1
```

Out[1]:
```
[5, 12, 13, 14]
```

b) Write a python code to create a list with all float values.

In [2]:
```
my_list2=[4.5,0.1,10.5]
my_list2
```

Out[2]:
```
[4.5, 0.1, 10.5]
```

c) Write a python code to create a list with all String values.

In [3]:
```
my_list3=["RED","BLUE","BLACK","WHITE"]
my_list3
```

Out[3]:
```
['RED', 'BLUE', 'BLACK', 'WHITE']
```

d) Write a python code to create a list with Boolean values.

In [4]:
```
my_list4=[True,False,False]
my_list4
```

Out[4]:
```
[True, False, False]
```

e) Write a python code to create a list with string, an integer, Boolean and a float values.

In [5]:
```
my_list5=["RED",12,True,112.12]
my_list5
```

Out[5]:
```
['RED', 12, True, 112.12]
```

f) Write a python code to create an empty list.

In [6]:
```
my_list6=[]
my_list6
```

Out[6]:
```
[]
```

2) Write a python code to perform concatenation of two lists.

In [7]:
```
color_list1=["WHITE","YELLOW"]
color_list2=["RED","BLUE"]
color_list1+color_list2
```

Out[7]:
```
['WHITE', 'YELLOW', 'RED', 'BLUE']
```

3) Write a python code to multiply all the items in a list.

In [8]:
```
number=[1,2,3]
number*4
```

Out[8]: [1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3]

4) Write a python code to compare the two list.

In [9]:
```
listx1,listx2=[3,5,7,9],[3,5,7,9]
listx1 == listx2
```

Out[9]: True

5) Write a python code for nested list.

In [10]:
```
my_list=[["Hello","World"],[0,1,2,3,4,5]]
my_list
```

Out[10]: [['Hello', 'World'], [0, 1, 2, 3, 4, 5]]

Exercise 1.2 - List in Built Methods/Function

1) Write a python code to returns the index of the first element with the specified value

In [11]:
```
color_list=["RED","BLUE","GREEN","BLACK"]
color_list.index("RED")
```

Out[11]: 0

2) Write a python code to append a new element at the end of the existing list.

In [12]:
```
color_list=["RED","BLUE","GREEN","BLACK"]
color_list.append("YELLOW")
color_list
```

Out[12]: ['RED', 'BLUE', 'GREEN', 'BLACK', 'YELLOW']

3) Write a python code to add all the elements of a first list to the end of second list.

In [13]:
```
numbers=[1,4]
prime_numbers=[2,3,5]
numbers.extend(prime_numbers)
numbers
```

Out[13]: [1, 4, 2, 3, 5]

4) Write a python code to insert or Adds an element at the specified position.

In [14]:
```
color_list=["RED","BLUE","GREEN","BLACK"]
color_list.insert(3,"WHITE")
color_list
```

Out[14]: ['RED', 'BLUE', 'GREEN', 'WHITE', 'BLACK']

5) Write a python code to remove the first item with the specified value.

In [15]:
```
color_list=["RED","BLUE","GREEN","BLACK"]
color_list.remove("BLACK")
color_list
```

Out[15]: ['RED', 'BLUE', 'GREEN']

6) Write a python code to return the number of elements with the specified value.

In [16]:
```
color_list=["RED","BLUE","GREEN","BLACK"]
color_list.count("BLUE")
```

Out[16]: 1

7) Write a python code to Reverses the order of the list.

In [17]:
```
color_list=["RED","BLUE","GREEN","BLACK"]
color_list.reverse()
color_list
```

Out[17]: ['BLACK', 'GREEN', 'BLUE', 'RED']

8) Write a python code to sort the list.

In [18]:
```
color_list=["RED","BLUE","GREEN","BLACK"]
color_list.sort()
color_list
```

Out[18]: ['BLACK', 'BLUE', 'GREEN', 'RED']

9) Write a python code to return copy the list.

In [19]:
```
color_list=["RED","BLUE","GREEN","BLACK"]
color_list.copy()
```

Out[19]: ['RED', 'BLUE', 'GREEN', 'BLACK']

10) Write a python code to remove all the elements from the list.

In [20]:
```
color_list=["RED","BLUE","GREEN","BLACK"]
color_list.clear()
color_list
```

Out[20]: []

11) Write a python code to remove the element at the specified position

In [21]:
```
color_list=["RED","BLUE","GREEN","BLACK"]
color_list.pop(2)
```

Out[21]: 'GREEN'

12) Write a Python program to sum all the items in a list

In [22]:
```
numbers=[1,2,-8]
sum(numbers)
```

Out[22]: -5

13) Write a Python program to get the largest number from a list.

In [23]:
```
numbers=[5,10,3,25,7,4,15]
max(numbers)
```

Out[23]: 25

14) Write a Python program to get the smallest number from a list.

In [24]:
```
numbers=[5,10,3,25,7,4,15]
min(numbers)
```

Out[24]: 3