

Assignment 5

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1. Write a program to find the sum of all elements of a list.

```
In [ ]: # Akash Duttachowdhury | 21052386
n = int(input("Enter the size of list: "))
lst = []
for i in range(n):
    lst.append(int(input("Enter element: ")))
print(f"The entered list is {lst}")
print(f"Sum of the elements in list is: {sum(lst)}")
```

The entered list is [1, 2, 3]
Sum of the elements in list is: 6

2. Write a program to find the maximum and minimum element of a list.

```
In [ ]: # Akash Duttachowdhury | 21052386
n = int(input("Enter the size of list: "))
lst = []
for i in range(n):
    lst.append(int(input("Enter element: ")))
print(f"The entered list is {lst}")
print(f"Maximum element is {max(lst)}")
print(f"Minimum element is {min(lst)}")
```

The entered list is [1, 2, 3, 4, 5]
Maximum element is 5
Minimum element is 1

3. Write a program to find the position of maximum and minimum element's position in a list.

```
In [ ]: # Akash Duttachowdhury | 21052386
n = int(input("Enter the size of list: "))
lst = []
for i in range(n):
    lst.append(int(input("Enter element: ")))
print(f"The entered list is {lst}")
print(f"Maximum element is {max(lst)}, at index {lst.index(max(lst))}")
print(f"Minimum element is {min(lst)}, at index {lst.index(min(lst))}")
```

The entered list is [1, 2, 3, 4, 5]

Maximum element is 5, at index 4

Minimum element is 1, at index 0

4. Write a program to print all the element in a list that are greater than a given value.

```
In [ ]: # Akash Duttachowdhury | 21052386
n = int(input("Enter the size of list: "))
lst = []
for i in range(n):
    lst.append(int(input("Enter element: ")))
print(f"The entered list is {lst}")
limit = int(input("Value for larger list elements: "))
greater=[]
for num in lst:
    if num>limit:
        greater.append(num)
print(f"The no.s greater than {limit} are: {greater}")
```

The entered list is [1, 2, 3, 4, 5]

The no.s greater than 3 are: [4, 5]

5. Write a program to print all the common elements of 2 list.

```
In [ ]: # Akash Duttachowdhury | 21052386
def create_list(size):
    newList = []
    for i in range(size):
        newList.append(int(input(f"Enter element {i+1}: ")))
    return newList

def common(a, b):
    return list(set(a) & set(b))

m = int(input("Enter the size of 1st list: "))
l1 = create_list(m)
n = int(input("Enter the size of the 2nd list: "))
l2 = create_list(n)
print(f"The common elements of the lists are: {common(l1, l2)}")
```

The common elements of the lists are: [1, 2]

6. Write a program to reverse a list.
7. Write a program to find the second largest and second smallest value from a list.
8. Write a program to find the average of all elements in a list.

9. Write a program to generate random numbers within a given range and store it in a list.
10. Write a program to split the even and odd elements into 2 different lists.
11. Write a Python program to create a tuple
12. Write a Python program to create a tuple with different data types.
13. Write a Python program to unpack a tuple in several variables.
14. Write a Python program to add an item in a tuple.
15. Write a Python program to convert a tuple to a string.
16. Write a Python program to get the 4th element and 4th element from last of a tuple.
17. Write a Python program to find the repeated items of a tuple.
18. Write a Python program to check whether an element exists within a tuple.
19. Write a Python program to slice a tuple.
20. Write a Python program to find the index of an item of a tuple.
21. Write a Python program to find the length of a tuple.
22. Write a Python program to convert a tuple to a dictionary.
23. Write a Python program to unzip a list of tuples into individual lists.
24. Write a Python program to reverse a tuple.
25. Write a Python program to convert a list of tuples into a dictionary.

26. Write a Python program to print a tuple with string formatting. Sample tuple :
(100, 200, 300) Output : This is a tuple (100, 200, 300)
27. Write a Python program to replace last value of tuples in a list. Sample list: [(10, 20, 40), (40, 50, 60), (70, 80, 90)] Expected Output: [(10, 20, 100), (40, 50, 100), (70, 80, 100)]
28. Write a Python program to replace last value of tuples in a list. Sample data: [(), ('), ('a', 'b'), ('a', 'b', 'c'), ('d')] Expected output: [('), ('a', 'b'), ('a', 'b', 'c'), 'd']
29. Write a Python program to sort a tuple by its float element. Sample data: [('item1', '12.20'), ('item2', '15.10'), ('item3', '24.5')] Expected Output: [('item3', '24.5'), ('item2', '15.10'), ('item1', '12.20')]
30. Write a Python program to count the elements in a list until an element is a tuple.