mylist=[]  
print("Blank list:")  
print(mylist)  
list=[1,2,3,4,5,6,7]  
print("\nlist of numbers: ")  
print(list)  
list1=["going","to","school"]  
print("\nlist containing multiple values: ")  
print(list1)  
list2=[["going","to"],["school"]]  
print("\nmulti-Dimensional List: ")  
print(list2)  
list3=[1,2,3,4,5,2,3,4,6,]  
print("\nlist with the dupicate values: ")  
print(list3)  
list4=[1,2,4,5,"apple",7,8]  
print("\nlist with the use of mixed values: ")  
print("Accessing a element from the list")  
print(list[0])  
print(list2[1])  
print("Accessing a element from a Multi-Dimensional list")  
print(list2[0][1])  
print(list2[1][0])  
print("Accessing element using negative indexing")  
print(list[-1])  
print(list4[-3])  
print("length of the list:")  
print(len(list2))  
string = input("Enter elements (Space-Separated): ")  
lst = string.split()  
print('the list is:', lst)  
mylist.append(1)  
mylist.append(5)  
mylist.append(8)  
print("\nlist after Addition of Three elements: ")  
print(mylist)  
for i in range(1, 5):  
 mylist.append(i)  
print("\nlist after Addition of elements from 1-5: ")  
print(mylist)  
mylist.append((5, 6))  
print("\nlist after Addition of a Tuple: ")  
print(mylist)  
mylist.append(list1)  
print("\nlist after Addition of a list: ")  
print(mylist)  
list5= [1,2,3,4]  
print("initial list: ")  
print(list5)  
list5.insert(5,12)  
list5.insert(8, "sasi")  
print("\nlist after performing insert Operation: ")  
print(list5)  
list5.extend([8, "going", "kushi"])  
print("\nList after performing Extend Operation: ")  
print(list5)  
mylist.reverse()  
mylist.remove(5)  
mylist.remove(3)  
print("\nlist after Removal of two elements: ")  
print(mylist)  
list6=[1,2,3,4,5,6,7,8,9]  
for i in range(1, 4):  
 list6.remove(i)  
print("\nlist after Removing a range of elements: ")  
print(list6)  
list6.pop()  
print("\nlist after popping an element: ")  
print(list6)  
list6.pop(2)  
print("\nlist after popping a specific element: ")  
print(list6)  
list7=[10,20,30,40,50,60,70,80]  
print("\nlist index 0:5: ")  
print(list7[0:5])  
print(list7[4:])  
print(list7[:])  
print("\nlist negative index 0:5: ")  
print(list7[-2:])  
print(list7[::-5])

output:

Blank list:

[]

List of numbers:

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

List containing multiple values:

['going', 'to', 'school']

Multi-Dimensional List:

[['going', 'to'], ['school']]

List with the dupicate values:

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

List with the use of mixed values:

Accessing a element from the list

1

['school']

Accessing a element from a Multi-Dimensional list

to

school

Accessing element using negative indexing

7

apple

length of the list:

2

Enter elements (Space-Separated): going to school

The list is: ['going', 'to', 'school']

list after Addition of Three elements:

[1, 5, 8]

list after Addition of elements from 1-5:

[1, 5, 8, 1, 2, 3, 4]

list after Addition of a Tuple:

[1, 5, 8, 1, 2, 3, 4, (5, 6)]

list after Addition of a list:

[1, 5, 8, 1, 2, 3, 4, (5, 6), ['going', 'to', 'school']]

initial list:

[1, 2, 3, 4]

list after performing insert Operation:

[1, 2, 3, 4, 12, 'sasi']

List after performing Extend Operation:

[1, 2, 3, 4, 12, 'sasi', 8, 'going', 'kushi']

list after Removal of two elements:

[['going', 'to', 'school'], (5, 6), 4, 2, 1, 8, 1]

list after Removing a range of elements:

[4, 5, 6, 7, 8, 9]

list after popping an element:

[4, 5, 6, 7, 8]

list after popping a specific element:

[4, 5, 7, 8]

list index 0:5:

[10, 20, 30, 40, 50]

[50, 60, 70, 80]

[10, 20, 30, 40, 50, 60, 70, 80]

list negative index 0:5:

[70, 80]

[80, 30]

**Tuple**

person=('Sasi',45,"hyderabad")  
print (person)  
  
person= "kumar"  
print (person)  
  
  
print(person[0:2])  
  
print(person[:4])  
  
person1=[10,20,30,40,50,60]  
print("Tuple1:",person1)  
dup\_Tuple=[]  
for i in person1:

**output:**

('Sasi', 45, 'hyderabad')

kumar

ku

kuma

Tuple1: [10, 20, 30, 40, 50, 60]

Duplicate List: [10, 20, 30, 40, 50, 60]

**Dictionary:**

Dict = {}  
print("Empty Dictionary: ")  
print(Dict)  
Dict = {1: "going", 2: "to", 3: "school"}  
print(Dict)  
Dict = {'Name': "going", 1: [1, 2, 3, 4]}  
print("\nDictionary with the use of Mixed Keys: ")  
print(Dict)  
Dict = {1: "going", 2: "to",  
 3: {'A': "say hello", 'B': "To", 'C': "sasi"}}  
print(Dict)  
Dict[0] = "going"  
Dict[1]="to"  
Dict[2] = "school"  
Dict[3] = 1  
print("\nDictionary after adding 3 elements: ")  
print(Dict)  
Dict = {1: "going", 'name': 'to', 3: 'school'}  
print("Accessing a element using key:")  
print(Dict['name'])  
print("Accessing a element using key:")  
print(Dict[1])

**Output:**

Empty Dictionary:

{}

{1: 'going', 2: 'to', 3: 'school'}

Dictionary with the use of Mixed Keys:

{'Name': 'going', 1: [1, 2, 3, 4]}

{1: 'going', 2: 'to', 3: {'A': 'say hello', 'B': 'To', 'C': 'sasi'}}

Dictionary after adding 3 elements:

{1: 'to', 2: 'school', 3: 1, 0: 'going'}

Accessing a element using key:

to

Accessing a element using key:

Going

Set:

set={'kumar',20,"hyderabad"}  
set1={'sasi',28,"tirupati"}  
print(set)  
set1.update(set1)  
print(set)  
  
set={1,2,3,4}  
set1={4,5,6,7}  
union\_set=set|set1  
print("union\_set:",union\_set)  
  
set={1,2,3,4}  
set1={4,5,6,7}  
intersection\_set=set&set1  
print("intersection\_set:",intersection\_set)

**Output:**

{'kumar', 'hyderabad', 20}

{'kumar', 'hyderabad', 20}

union\_set: {1, 2, 3, 4, 5, 6, 7}

intersection\_set: {4}