**Python programs executed in Lab:**

Q1) Create a list containing names of students and using appropriate menu options perform the following operations:

1. Add a new student name.
2. Delete a given student
3. Display the total count of the students
4. Print list of students in sorted order.

**Solution:**

n = int(input("Enter the number of names: "))

l1=[]

for i in range(1,n+1,1) :

name = input("Enter name: ")

l1.append(name)

print (l1)

choice = int(input("Select your choice"))

while(choice!=5) :

print ("1. Add a student name")

print ("2. Delete a given student")

print ("3. Display total count of students")

print ("4. Print the student list in ascending order")

print ("5. Exit")

choice = int(input("Select your choice"))

if(choice==1):

name=input("Enter name to be added")

l1.append(name)

elif(choice==2) :

name=input("Enter name to be deleted")

l1.remove(name)

elif(choice==3) :

print("Total count of students = ",len(l1))

elif(choice==4) :

l1.sort()

print("Sorted student list =",l1)

else :

break

Output:

Q2).Create a tuple of words from a given text and perform the following operations:

1. Print the total number of words
2. Print a sub tuplr using slicing operator.
3. Find whether a given tuple is present in the tuple or not.

**Solution:**

s = input("Enter a string: ")

a = s.split(" ")

print(a)

t = tuple(a)

print("Tuples are: ")

print(t)

option = 0

while (option !=4):

print("Choose an option:")

print("1. Display the total number of tuples")

print("2. Print a sub tuple using slicing operation")

print("3. Find whether a given word is available in the tuple or not")

print("4. EXIT")

option = int(input())

if (option == 1):

length = len(t)

print("Total number of tuples = ", length)

elif (option == 2):

a = int(input("Enter start of sub tuple: "))

b = int(input("Enter end of sub tuple: "))

c = int(input("Enter step size of sub tuple: "))

print("The sub tuple is: ")

for i in range(a,b,c):

print(t[i])

elif (option == 3):

word = input("Enter the word to be searched for: ")

if word in t:

print("Word was found")

else:

print("Word was not found")

elif(option == 4):

print("Exit successful")

break

else:

print("Invalid Input")

Q3)Create a phonebook containing name and phone number of people where telephone number is the key and name of the person is the value. Perform the following:

1. Add new entries.
2. Removing or deleting entries from the phonebook.
3. Display name when phone number is given.
4. Display list of names in sorted order.

**Solution:**

phonebook={222:'girish',666:'sushant',777:'chiren'}

yes=1

print(phonebook)

while yes==1:

print('press 1 to add new entry \npress 2 to remove the entry \npress 3 to display phonebook when key is given\npress 4 to display the phonebook in sorted order according to value\npress 5 to display the phonebbok in sorted order according to keys')

choice=int(input("enter your choice="))

if choice==1:

name=input("enter the name")

no=int(input("enter the phone number"))

phonebook.update({no:name})

print("phonebook updated")

print(phonebook)

elif choice==2:

no=int(input("enter the phone number which has to be deleted="))

del phonebook[no]

print("phonebook updated")

print(phonebook)

elif choice==3:

no=int(input("enter the key value for which the value to be displyed="))

print("corresponding value of key is={0}".format(phonebook[no]))

elif choice==4:

print("displaying the list in sorted order accordinng to the values=")

print("number \t name")

# l1=list(phonebook.values())

for key,value in sorted(phonebook.items(),key=lambda x:x[1]):

print("{0}\t {1}".format(key,value))

elif choice==5:

print("displaying the the list according to the keys=")

l1=list(phonebook)

l1.sort()

print("number\t name")

for i in l1:

print(i,"\t",phonebook[i])

yes = int(input("enter 1 to contine and 0 to stop"))