**1a. “List1” is a list that contains the “N” different SRN of students read using a user defined function with the help of input(). SRN of “M” more students are to be appended or inserted into “List1” at the appropriate place and also return the index of the SRN entered by user.**

**Coding:**

list1 = []

n = int(input("Enter number of elements : "))

for i in range(0, n):

ele = int(input())

list1.append(ele) # adding the element

print(list1)

m = int(input("Enter number of elements : "))

for i in range(0, m):

ele1 = int(input())

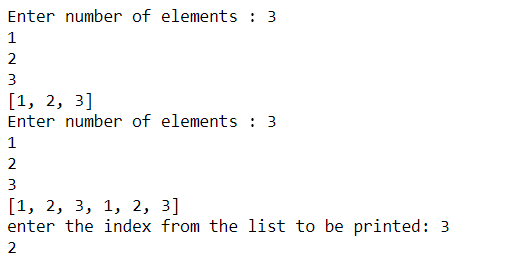
list1.append(ele1) # adding the element

print(list1)

p=int(input("enter the index from the list to be printed: "))

print(list1.index(p))

**Output**



**1b. “Tuple1” and “Tuple2” are two tuples that contain “N” different data type read using the user defined function “READ” with the help of input(). Elements of “Tuple1” and “Tuple2”are to be read one at a time and the “larger” value among them should be put into “Tuple3”.**

**Coding:**

tuple1 = ()

tuple2 = ()

l1=list(tuple1)

l2=list(tuple2)

count = int(input("Enter the total count of elements :"))

print("enetr elements tuple1")

for i in range(0,count):

l1.append(int(input()))

print("enter elemets tuple2")

for i in range(0,count):

l2.append(str(input()))

tuple1=tuple(l1)

tuple2=tuple(l2)

print("tuple1:",tuple1)

print("tuple2:",tuple2)

tuple3 = (max(tuple1),max(tuple2))

print("Max of tuple1 & tuple2",tuple3)

**Output**

Enter the total count of elements: 4

Enetr elements tuple1: 10,20,40,60

Enter elements tuple1: ‘a’,’b’,’c’

Max of tuple1 & tuple2 (60, c)

**2a. Set1 and Set2 are the two sets that contain unique integers. Set3 is to be created by taking the union or intersection of Set1 and Set2using the user defined function Operation(). Perform either union or intersection by reading choice from user. Do not use built in functions union() and intersection() and also the operators “|” and “&“.**

**Coding:**

**#Union Function**

def uni():

for i in s2:

if i in s1:

pass

else:

s1.add(i)

print("Union of S1 and S2:",s1)

**#Intersection Function**

def inter():

s3=set()

for i in s2:

if i in s1:

s3.add(i)

else:

pass

print("Intersection of S1 and S2:",s3)

s1=set()

s2=set()

n1=int(input("Enter length of set1"))

for i in range(n1):

s1.add(int(input()))

n2=int(input("Enter length of set2"))

for i in range(n2):

s2.add(int(input()))

print("S1:",s1)

print("S2:",s2)

**#Code to give choice for user**

print("ENTER YOUR CHOICE: 1. UNION 2. INTERSECTION")

ch=int(input())

if ch==1:

uni()

elif:

inter()

else:

print(“INVALID CHOICE”)

**Output**

**Union:**

Enter length of set1 3

1

2

3

Enter length of set2 3

2

3

2

S1: {1, 2, 3}

S2: {2, 3}

ENTER YOUR CHOICE: 1. UNION 2. INTERSECTION

1

Union of S1 and S2: {1, 2, 3}

**Intersection:**

Enter length of set1 3

1

2

3

Enter length of set2 3

2

3

2

S1: {1, 2, 3}

S2: {2, 3}

ENTER YOUR CHOICE: 1. UNION 2. INTERSECTION

2

Intersection of S1 and S2: {2, 3}

**Invalid Choice:**

Enter length of set1 2

1

2

Enter length of set2 2

2

3

S1: {1, 2}

S2: {2, 3}

ENTER YOUR CHOICE: 1. UNION 2. INTERSECTION

6

INVALID CHOICE

**2b. The Dictionary “Dict1” contains N Elements and each element has the operator as the key and operands as values. User reads two operands and an operator and performs the operation on the elements of “Dict1” based on the operator using a user defined function and displays the results.**

**Coding:**

dict1={"+":[100,200], "-":[50,40], "\*":[30,78],"/":[10,2]}

x =str(input("enter an operator:"))

print(x)

def add():

a=dict1["+"]

print (a)

i=0

for t in a:

b=a[i]+a[i+1]

print(b)

def sub():

a=dict1["-"]

print (a)

i=0

for t in a:

b=a[i]-a[i+1]

print(b)

def mul():

a=dict1["\*"]

print (a)

i=0

for t in a:

b=a[i]\*a[i+1]

print(b)

def div():

a=dict1["/"]

print (a)

i=0

for t in a:

b=a[i]/a[i+1]

print(b)

if x=="+":

add()

elif x=="-":

sub()

elif x=="\*":

mul()

elif x=="/":

div()

else:

print("Invalid operator")

**Output**

enter an operator:+

[100, 200]

300

enter an operator:-

-

[50, 40]

10

enter an operator:\*

[30, 78]

2340

enter an operator:/

[10, 2]

5.0

enter an operator:\

\

Invalid operator

**3a. A substring “Substr” between index1 and index2 is to be extracted from the given input string, “Str1”, which is read using input() and display the substring “Substr” using a user defined function.**

**Coding:**

Str1=input(“enter your string\n”)

def substr1():

index1=int(input(“enter index1: ”))

index2=int(input(“enter index2: ”))

substring=Str1[index1:index2]

print(“Substring extracted from {} to {} is {}”.format(index1,index2,substring))

substr1()

**Output**

enter your string

reva university

enter index1: 1

enter index2: 4

Substring extracted from 1 to 4 is eva

**3b) A string containing multiple words is to be read from the user one at a time and**

1. **convert all the strings to uppercase**

s=input("Tell me about yourself\n")

print("You Told:",s.upper())

**Output**

Tell me about yourself

i am ramu from bangalore

You Told: I AM RAMU FROM BANGALORE

1. **Split the words of a string using space as the separation character.**

s=input("Tell me about yourself\n")

print("You Told:",s.upper())

print("Elements of your string:",s.split()) print(chars\_mix\_up('abc', 'xyz'))

**Output**

Tell me about yourself

i am ramu from bangalore

You Told: I AM RAMU FROM BANGALORE

Elements of your string: ['i', 'am', 'ramu', 'from', 'bangalore']