1.

lst = []

while(True):

val=input("Enter list element : ")

if(val!='exit'):

lst.append(int(val))

else:

break

search=int(input("\nEnter Element to search : "))

for i in lst:

if(i==search):

print("\nElement found : ",i)

lst.remove(i)

print("\nNew List: ",lst)

break

Output:

Enter list element : 1

Enter list element : 2

Enter list element : 3

Enter list element : exit

Enter Element to search : 2

Element found : 2

New List: [1, 3]

2.

TOP = -1

stack = []

while(True):

print("----STACK OPERATIONS-----\n1.Display\n2.Peek\n3.Pop\n4.Push")

choice=int(input("Enter Choice : "))

if(choice!=00):

if(choice==1):

print(stack)

elif(choice==2):

if(TOP<0):

print("Stack Empty")

else:

print(stack[TOP])

elif(choice==3):

if(TOP<0):

print("Stack Empty")

else:

TOP=TOP-1

stack.pop()

elif(choice==4):

TOP=TOP+1

ele=int(input("Enter Stack Element : "))

stack.append(ele)

else:

break

Output:

----STACK OPERATIONS-----

1.Display

2.Peek

3.Pop

4.Push

Enter Choice : 4

Enter Stack Element : 1

----STACK OPERATIONS-----

1.Display

2.Peek

3.Pop

4.Push

Enter Choice : 4

Enter Stack Element : 2

----STACK OPERATIONS-----

1.Display

2.Peek

3.Pop

4.Push

Enter Choice : 4

Enter Stack Element : 3

----STACK OPERATIONS-----

1.Display

2.Peek

3.Pop

4.Push

Enter Choice : 4

Enter Stack Element : 4

----STACK OPERATIONS-----

1.Display

2.Peek

3.Pop

4.Push

Enter Choice : 1

[1, 2, 3, 4]

----STACK OPERATIONS-----

1.Display

2.Peek

3.Pop

4.Push

Enter Choice : 2

4

----STACK OPERATIONS-----

1.Display

2.Peek

3.Pop

4.Push

Enter Choice : 3

----STACK OPERATIONS-----

1.Display

2.Peek

3.Pop

4.Push

Enter Choice : 4

Enter Stack Element : 3

----STACK OPERATIONS-----

1.Display

2.Peek

3.Pop

4.Push

Enter Choice : 1

[1, 2, 3, 3]

----STACK OPERATIONS-----

1.Display

2.Peek

3.Pop

4.Push

3.

que=[1,2,3,4]

print("Original Que is : ", que)

que.append(5)

print("Insert Que: 5",que)

print("Deletion Que : ",que.pop(0))

print(que)

Output:

Original Que is : [1, 2, 3, 4]

Insert Que: 5 [1, 2, 3, 4, 5]

Deletion Que : 1

[2, 3, 4, 5]

6.

from statistics import mean

frenz = ["Rohit","Rahul","Rohan","Rini","Ronit","Rakesh","Roshan","Rupert"]

height = [1.56,2.0,1.65,1.87,1.43,1.98,1.66]

maxheight=max(height)

maxheightindex=height.index(maxheight)

name=frenz[maxheightindex]

print("Max Height : ",name,maxheight)

minheight=min(height)

minheightindex=height.index(minheight)

name2=frenz[minheightindex]

print("Min Height : ",name2,minheight)

avg=mean(height)

print("Average Height : ",avg)

Output:

Max Height : Rahul 2.0

Min Height : Ronit 1.43

Average Height : 1.7357142857142858

7.

saarc = ["India","Pakistan","Bhutan","SriLanka","Afghanistan","Nepal","Maldives","Bangladesh"]

while(True):

country=str(input("Enter Country : "))

if(country!='exit'):

if country in saarc:

print("It is a Saarc Country")

else:

print("Not a saarc Country")

else:

break

Output:

Enter Country : Afghanistan

It is a Saarc Country

9.

list1=["CSE","CIEM"]

list2=["IT","DEPT"]

list3=[]

for i in list1:

for j in list2:

k=i+" "+j

list3.append(k)

print(list3)

Output:

['CSE IT', 'CSE DEPT', 'CIEM IT', 'CIEM DEPT']

10.

def pstv(num):

if(num>=0):

return 1

else:

return 0

list1=[-1,2,3,-5,-8,10]

print("Original list: ",list1)

list2=list(filter(pstv,list1))

print("Filtered list: ",list2)

Output:

Original list: [-1, 2, 3, -5, -8, 10]

Filtered list: [2, 3, 10]

11.

def sqr(num):

return num\*\*2

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

print("Original list: ",l)

l2=list(map(sqr,l))

print("New list: ",l2)

Output:

Original list: [1, 2, 3, 4, 5, 6]

New list: [1, 4, 9, 16, 25, 36]

12.

def fibo(i):

if(i==0):

return 0;

if(i==1):

return 1;

else:

return fibo(i-1)+fibo(i-2)

def even(elem):

if(elem%2==0):

return 1

else:

return 0

l=[]

n=int(input("Enter no. of terms: "))

print("FIBONACCI SERIES: ",end="")

for i in range(n):

val=fibo(i)

l.append(val)

print(l)

l2=list(filter(even,l))

print("Even terms: ",l2)

print("Sum of even terms= ",sum(l2))

Output:

Enter no. of terms: 9

FIBONACCI SERIES: [0, 1, 1, 2, 3, 5, 8, 13, 21]

Even terms: [0, 2, 8]

Sum of even terms= 10