**#WRITE A PROGRAM TO CREATE A CIRCULAR LINKED LIST**

list = []

n = (int)(input("Enter the length of the list = "))

for i in range(n):

num = (int)(input("Enter a number = "))

list.append(num)

print()

print("The list is :-\n")

print(list)

**OUTPUT:-**

Enter the length of the list = 4

Enter a number = 12

Enter a number = 23

Enter a number = 34

Enter a number = 45

The list is :-

[12, 23, 34, 45]

**#WITTE A PROGRAM TO DISPLAY THE ELEMENTS OF A CIRCULAR LINKED LIST**

list2 = []

n = (int)(input("Enter the length of the list = "))

for i in range(n):

num = (int)(input("Enter a number = "))

list.append(num)

print()

print("The list is :-\n")

print(list)

**OUTPUT:-**

Enter the length of the list = 4

Enter a number = 12

Enter a number = 23

Enter a number = 34

Enter a number = 45

The list is :-

[12, 23, 34, 45, 12, 23, 34, 45]

**#WRITE A PROGRAM TO SEARCH A USER GIVEN ELEMENT IN A CIRCULAR LINKED LIST**

list = []

flag=1

n = (int)(input("Enter the length of the list = "))

for i in range(n):

num = (int)(input("Enter a number = "))

list.append(num)

print()

print("The list is :-\n")

print(list)

print()

item = (int)(input("Enter the item you want to search = "))

for e in list:

if e == item:

flag=0;

break;

if flag==0:

print("Search Successful")

else:

print("Not Found")

**OUTPUT:-**

Enter the length of the list = 4

Enter a number = 12

Enter a number = 23

Enter a number = 34

Enter a number = 45

The list is :-

[12, 23, 34, 45]

Enter the item you want to search = 34

Search Successful

**#WRITE A PROGRAM TO ADD AN ELEMENT IN THE BEGINNING OF A CIRCULAR LINKED LIST**

list1 = [1,3,5,7,'a','z',8,10]

n = (int)(input("Enter the element you want to insert at the beginning = = "))

list1.insert(0,n)

print(list1)

**OUTPUT:-**

Enter the element you want to insert at the beginning = = 100

[100, 1, 3, 5, 7, 'a', 'z', 8, 10]

**#WRITE A PROGRAM TO ADD AN ELEMENT AT THE END OF A CIRCULAR LINKED LIST**

list2 = []

n = (int)(input("Enter the length of the list = "))

for i in range(n):

num = (int)(input("Enter a number = "))

list2.append(num)

print(list2)

item = (int)(input("Enter the element you want to enter at the end of the list = "))

list2.append(item)

print(list2)

**OUTPUT:-**

Enter the length of the list = 4

Enter a number = 12

Enter a number = 23

Enter a number = 34

Enter a number = 45

[12, 23, 34, 45]

Enter the element you want to enter at the end of the list = 22

[12, 23, 34, 45, 22]

**#WRITE A PROGRAM TO INSERT AN ELEMENT AT ANY USER GIVEN POSITION OF A CIRCULAR LINKED LIST**

list3 = []

n = (int)(input("Enter the length of the list = "))

for i in range(n):

num = (int)(input("Enter a number = "))

list3.append(num)

print(list3)

print()

pos = (int)(input("Enter the position where you want to enter the element = "))

val =(int)(input("Enter the element that you want to insert = "))

list3.insert(pos-1,val)

print(list3)

**OUTPUT:-**

Enter the length of the list = 5

Enter a number = 1

Enter a number = 2

Enter a number = 3

Enter a number = 4

Enter a number = 5

[1, 2, 3, 4, 5]

Enter the position where you want to enter the element = 3

Enter the element that you want to insert = 22

[1, 2, 22, 3, 4, 5]

**#WRITE A PROGRAM TO COUNT THE NUMBER OF NODES IN A CIRCULAR LINKED LIST**

list4 = []

c=0

n = (int)(input("Enter the length of the list = "))

for i in range(n):

c+=1

num = (int)(input("Enter a number = "))

list4.append(num)

print(list4)

print()

print("No. of Nodes = ",c)

**OUTPUT:-**

Enter the length of the list = 4

Enter a number = 12

Enter a number = 23

Enter a number = 34

Enter a number = 45

[12, 23, 34, 45]

No. of Nodes = 4

**#WRITE A PROGRAM TO DELETE AN ELEMENT AT THE BEGINNING OF A CIRCULAR LINKED LIST**

**list5 = []**

n = (int)(input("Enter the length of the list = "))

for i in range(n):

num = (int)(input("Enter a number = "))

list5.append(num)

print(list5)

ch = input("Do you want to delete an element from beginning ?")

if ch=='y' or ch=='Y':

del list5[0]

print()

print(list5)

**OUTPUT:-**

Enter the length of the list = 4

Enter a number = 12

Enter a number = 23

Enter a number = 34

Enter a number = 45

[12, 23, 34, 45]

Do you want to delete an element from beginning ?y

[23, 34, 45]

**#WRITE A PROGRAM TO DELETE AN ELEMENT FROM THE END OF A CIRCULAR LINKED LIST**

list6 = []

n = (int)(input("Enter the length of the list = "))

for i in range(n):

num = (int)(input("Enter a number = "))

list6.append(num)

print(list6)

ch = input("Do you want to delete an element from the end ?")

if ch=='y' or ch=='Y':

del list6[len(list6)-1]

print()

print(list6)

**OUTPUT:-**

Enter the length of the list = 5

Enter a number = 12

Enter a number = 23

Enter a number = 34

Enter a number = 45

Enter a number = 56

[12, 23, 34, 45, 56]

Do you want to delete an element from the end ?y

[12, 23, 34, 45]

**#WRITE A PROGRAM TO REVERSE A CIRCULAR LINKED LIST**

list7 = []

n = (int)(input("Enter the length of the list = "))

for i in range(n):

num = (int)(input("Enter a number = "))

list7.append(num)

print(list7)

ch = input("Do you want to reverse the list ?")

if ch=='y' or ch=='Y':

list7.reverse()

print()

print(list7)

**OUTPUT:-**

Enter the length of the list = 4

Enter a number = 12

Enter a number = 23

Enter a number = 34

Enter a number = 45

[12, 23, 34, 45]

Do you want to reverse the list ?y

[45, 34, 23, 12]

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