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Computer Science (3rd Sem)

Question 8 (From Practical List ) :

Solution 🡪

def menu():

print("\n \t\t\t PROGRAM 8")

print("\t\t =========================")

print("\t THIS PROGRAM PERFORMS FOLLOWING TASKS : ")

print("\t1- Check if all elements in list are numbers or not")

print("\t -> If it is a numeric list, then count number of odd values in it ")

print("\t -> If list contains all strings, then display largest String in the list")

print("\t2- Display list in reverse form")

print("\t3- Find a specified element in list")

print("\t4- Remove the specified element from the list")

print("\t5- Sort the list in descending order")

print("\t6- Accept 2 lists and find the common members in them")

print("\t\t =========================")

def commonListMembers(lst1, lst2):

min=len(lst1)

l2=len(lst2)

if (l2<min):

min=l2

commonList=[]

for i in lst1:

for j in lst2:

if i==j:

commonList.append(i)

return commonList

def listType(lst):

for i in lst:

if (i.isdigit()==False):

return False

return True

def oddValCount(lst):

count=0

for i in lst:

if (float(i)%2!=0):

count+=1

return count

def maxString(lst):

maxLen=0

for i in lst:

if (len(i)>=maxLen):

maxLen=len(i)

result=i

return result

def listReverse(a):

a.reverse()

return a

def listSort(a):

a.sort()

a.reverse()

return a

def listSearch(num, lst):

flag=0

for i in range(len(lst)):

if (lst[i]==num):

flag+=1

index=i

if (flag>0):

print("--> ", num, " found at " , index, " index in the list! " )

else:

print("--> ", num, " not found in the given list")

def listRemove(num,lst):

flag=0

for i in lst:

if (i==num):

lst.remove(i)

index=i

flag+=1

if (flag>0):

print("--> ", num, " removed from the list at index " , index, "\n THE NEW LIST : ", lst )

else:

print("--> ERROR REMOVING THE ELEMENT :: \t", num, " not found in the given list.")

ch="y"

while(ch=='y' or ch=="Y"):

menu()

lst\_input1=list(map(str, input("Enter the list elements here : ").split()))

print("- The list entered : ", lst\_input1)

lst\_input=[x for x in lst\_input1]

choice=int(input("\n -> Enter your choice from the menu : "))

if (choice==1):

print("\n\t OPERATION CHOOSEN : CHECK LIST ELEMENT TYPE \n")

result=listType(lst\_input)

if (result==True):

print("--> The List is numerical !")

oddCount=oddValCount(lst\_input)

print("--> The total number of odd values in list are : ", oddCount)

else:

print("--> The List is not numerical !")

max\_string=maxString(lst\_input)

print("--> The maximum/largest string from the list is : ", max\_string)

elif (choice==2):

print("\n\t OPERATION CHOOSEN : LIST IN REVERSE FORM \n")

lst\_rev=listReverse(lst\_input)

print("--> The Reversed List is : ", lst\_rev)

elif (choice==3):

print("\n\t OPERATION CHOOSEN : SEARCH SPECIFIED ELEMENT \n")

num=input("Enter the element to be searched : ")

listSearch(num, lst\_input)

elif (choice==4):

print("\n\t OPERATION CHOOSEN : REMOVE SPECIFIED ELEMENT \n")

num=input("Enter the element to be removed : ")

listRemove(num, lst\_input)

elif (choice==5):

print("\n\t OPERATION CHOOSEN : SORT LIST IN DESCENDING ORDER \n")

rev=listSort(lst\_input)

print("--> The List in Descending order is : ", rev)

elif (choice==6):

print("\n\t OPERATION CHOOSEN : COMMON MEMBERS FROM 2 LISTS \n")

lst\_input2=list(map(str, input("Enter the 2nd list elements here : ").split()))

print("- The 2nd list entered : ", lst\_input1)

commonList=commonListMembers(lst\_input1, lst\_input2)

print("\n--> The Common Members of the lists are ", commonList)

else:

print("\n \*\* ERROR : ENTER A VALID CHOICE \*\*\*\n")

ch=input("\n -> Do you want to continue (y/n) : ")

print(" \t \t PROGRAM ENDS HERE ")

