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{"id": "11GZBLaR-7qJKY7\_JoZsxt-ize0COdlaX", "title": "Luhn Algorithm.py", "mimeType": "text\/x-python"}

def validate\_credit\_card\_number(card\_number):

#Step 1

#defining variables

temp\_list=list(str(card\_number))

my\_list=[]

list1 = temp\_list[-2::-2]

list2=temp\_list[::-2]

list2 = [int (n) for n in list2]

#print(list2)

my\_list=[int(n) for n in list1]

#print(my\_list)

list1 = [int(n)\*2 for n in list1]

t\_list=list1

for el in list1:

sum\_res=0

if el>9:

idx = list1.index(el)

t\_list.pop(idx)

while el:

rem = el%10

sum\_res+=rem

el = el//10

t\_list.insert(idx, sum\_res)

#print(t\_list)

#step 1b

list1\_sum = sum(t\_list)

list2\_sum = sum(list2)

#print(b\_list)

final\_sum = list1\_sum+ list2\_sum

#print(final\_sum)

if final\_sum%10 == 0:

return True

return False

# Prompting the user to enter the card number

card\_number = input("Enter card number")

result = validate\_credit\_card\_number(card\_number)

if(result):

print("credit card number is valid")

else:

print("credit card number is invalid")

#a) 4137 8947 1175 5904 is a valid credit card number

#b) 6499 8024 5027 3568 is an invalid credit card number

#c) 8504 1721 9127 3888 is a valid credit card number

#d) 0043 6687 8348 5480 is an invalid credit card number