Challenge 1:  Write a function that takes a natural number as input and outputs the number of digit in it. Conversion of number to string is not allowed

**def** SanscountDg(n):  
 **if** n // 10 == 0:  
 **return** 1  
 **return** 1 + SanscountDg(n // 10)

Challenge 2:  Write a function that takes a natural number as input and outputs the reverse of that number. Conversion of number to string is not allowed

**def** SansRev(n):  
 rev = 0  
 reminder = 0  
 **while**(n != 0):  
 rem = n % 10  
 rev = rev \* 10 + rem  
 n = int(n / 10)  
 **return** rev

Write a function where user will enter a natural number as input and output returns the number of zeroes in the end of the factorial of that number. Conversion of number to string is not allowed

**def** SansfindFactorialZeros(num):  
 **if** (num < 0):  
 **return** -1  
 count = 0  
 **while** (num >= 5):  
 num //= 5  
 count += num  
 **return** count

Challenge 4 : list1 = ["India" , "England", "Spain"]

list2 = ["Delhi","London","Madrid"]

Write your own function that takes list1 and list2 as inputs and returns a dictionary like

  dict1 = {“India” : “Delhi” , “England”:”London”, “Spain”:”Madrid”}

list1 = [**"India"** , **"England"**, **"Spain"**]  
list2 = [**"Delhi"**,**"London"**,**"Madrid"**]  
  
print (**"list1 : "** + str(list1))  
print (**"list2 : "** + str(list2))  
  
res = {}  
**for** key **in** list1:  
 **for** value **in** list2:  
 res[key] = value  
 list2.remove(value)  
 **break**print (**"Output : "** + str(res))

Challenge 5 :

Given

places = {(“19.07'53.2”, “72.54'51.0”): "Mumbai",

                 (“28.33'34.1”, “77.06'16.6”): "Delhi"}

Write code to create a new dictionary using given dictionary

city = {"Mumbai": {“Latitude”: “19.07'53.2” , “Longitude”: “72.54'51.0”},

             “Delhi” : {“Latitude”: “28.33'34.1” , “Longitude”: “77.06'16.6”} }

*# dictionary containing longitude and latitude of places*places = {(**"19.07'53.2"**, **"72.54'51.0"**): **"Mumbai"**, (**"28.33'34.1"**, **"77.06'16.6"**): **"Delhi"**}  
  
print(places)  
print(**'\n'**)  
  
city =[]  
**for** i **in** places:  
 print(**"city = "**+str(**"{"**)+str(places[i[0]]) +str(**":{Latitude:"**) + str(i[0])+ str(**", Longitude:"**) +str(places[i[1]]) +str(**"},: {Latitude: "**)+ str(i[0])+ str(**" , Longitude:"**)+str( i[1])+str(**"}}"**))

# Need some more time

Challnege 6 : Given mylist  =  [3, 5 ,4 , 6, 9, 10 , 2 , 8, 7 ,1]

Using for loop find the sum of all even numbers in mylist

mylist = [3, 5 ,4 , 6, 9, 10 , 2 , 8, 7 ,1]  
  
sum=0  
**for** i **in** range(10):  
 **if** mylist[i]%2 == 0:  
 sum = sum + mylist[i]  
  
print(**"\nSum of Even Numbers is"**, sum)