Given a sequence of n values x1, x2, ..., xn and a window size k>0, the k-th moving

average of the given sequence is defined as follows:

The moving average sequence has n-k+1 elements as shown below.

The moving averages with k=4 of a ten-value sequence (n=10) is shown below

i 1 2 3 4 5 6 7 8 9 10

===== == == == == == == == == == ==

Input 10 20 30 40 50 60 70 80 90 100

y1 25 = (10+20+30+40)/4

y2 35 = (20+30+40+50)/4

y3 45 = (30+40+50+60)/4

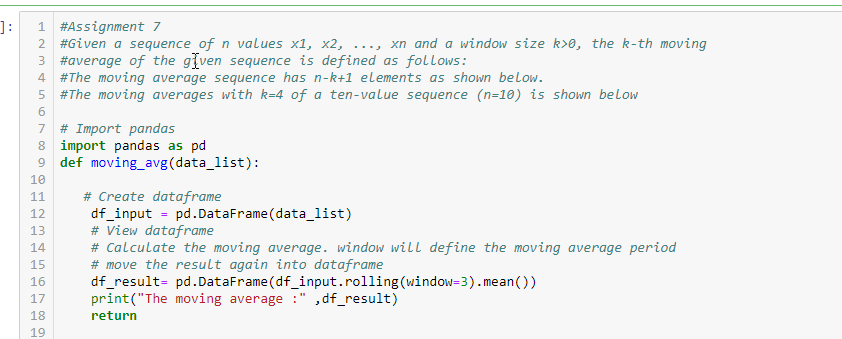
y4 55 = (40+50+60+70)/4

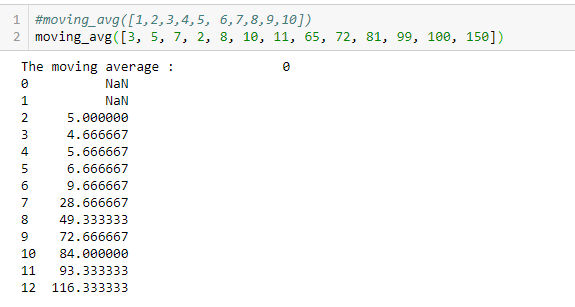
y5 65 = (50+60+70+80)/4

y6 75 = (60+70+80+90)/4

y7 85 = (70+80+90+100)/4

Thus, the moving average sequence has n-k+1=10-4+1=7 values.





**Source**:

#Assignment 7

#Given a sequence of n values x1, x2, ..., xn and a window size k>0, the k-th moving

#average of the given sequence is defined as follows:

#The moving average sequence has n-k+1 elements as shown below.

#The moving averages with k=4 of a ten-value sequence (n=10) is shown below

# Import pandas

import pandas as pd

def moving\_avg(data\_list):

# Create dataframe

df\_input = pd.DataFrame(data\_list)

# View dataframe

# Calculate the moving average. window will define the moving average period

# move the result again into dataframe

df\_result= pd.DataFrame(df\_input.rolling(window=3).mean())

print("The moving average :" ,df\_result)

return