**Problem Statement 1:**

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 belowi 1 2 3 4 5 6 7 8 9 10

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Input

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.

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Test it over [3, 5, 7, 2, 8, 10, 11, 65, 72, 81, 99, 100, 150] and window of 3.

Note: Solution submitted via github must contain all the detailed steps.

**Solution**

k=3

Input Sequence [3, 5, 7, 2, 8, 10, 11, 65, 72, 81, 99, 100, 150]

Length of Input Sequence, n = 13

n-k+1 = 13-3+1 = 11 values should be present in the output

Expected output

Y1 = 3+5+7/3 = 5

Y2 = 5+7+2/3 = 4.66666667

Y3 = 7+2+8/3 = 5.66666667

Y4 = 2+8+10/3 = 6.66666667

Y5 = 8+10+11/3 = 9.66666667

Y6 = 10+11+65/3 = 28.66666667

Y7 = 11+65+72/3 = 49.33333333

Y8 = 65+72+81/3 = 72.66666667

Y9 = 72+81+99/3 = 84

Y10 = 81+99+100/3 = 93.33333333

Y11 = 99+100+150/3 = 116.33333333

**Code and output screenshot**

