ALL

1. Moving average

Given a stream of integer data, provided one sample at a time, compute a moving average of the previous W samples. The data is supplied one integer at a time; the total number of samples is unbounded.
You may not use existing container classes (such as STL).

Here is an example stream of 8-bit integers, represented in hexadecimal, which could be provided to your code via AddSample:
08 0A 06 08 07 09 08 12 14 13 15 12 0E 0D 0F 07 36 2E 2F 28 35 2D 2F 30 2E 31 2D 1D 30 30 30 30

If GetAverage were called after each call to AddSample above, it would be expected to return the following output (again, the data is represented in hexadecimal):
08 09 08 08 07 08 08 09 0A 0B 0C 0D 0E 0E 0F 0F 13 16 19 1B 1E 21 24 28 2B 2F 2E 2C 2D 2D 2D 2D

For actual use cases, assume AddSample will be called much more frequently than GetAverage.

Fill in the members used by your implementation in the class declaration below.

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