Quiz: Incremental Mean

In the previous video, we learned about an algorithm that can keep a running estimate of the mean of a sequence of numbers $(x_1, x_2, \ldots, x_n)$. The algorithm looked at each number in the sequence in order, and successively updated the mean μ.

$$
\begin{aligned}
&\mu \leftarrow 0 \\
&k \leftarrow 0 \\
&\textbf{While } k < n \\
&\quad k \leftarrow k + 1 \\
&\quad \mu \leftarrow \mu + \frac{1}{k}(x_k - \mu)
\end{aligned}
$$

Use the pseudocode to complete the `running_mean` function below. Your function should accept a list of numbers `x` as input. It should return a list `mean_values`, where `mean_values[k]` is the mean of `x[:k+1]`.

Note: Pay careful attention to indexing! Here, x_k corresponds to `x[k-1]` (so x_1 = `x[0]`, x_2 = `x[1]`, etc).

Use the **[Test Run]** button to check the accuracy of your code. When you are ready to move on to the next concept, click on **[Submit Answer]**.

⚠ This programming quiz is no longer available

This programming quiz is unavailable because the Nanodegree program has come to an end, however your code and all the files can still be downloaded.

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