Proof of Reaching out to Teaching Team

SYDE 121: Assignment 1 Questions

N Niharika .
Wed 10/20/2021 9:51 AM
To: Parsa Ashrafi Fashi <pashrafifashi@uwaterloo.ca>

Hello,

I'm Niharika from SYDE 121. I had a few questions about the assignment/general content I wanted to clarify and help understanding.

1) For Standard Deviation, are we allowed to use the formula below. This formula is just the one I am more familiar with and understand.

$$s = \sqrt{\frac{\sum_{i=1}^{N}(x_i - \overline{x})^2}{N-1}}$$

I am aware that in the piazza this question was raised, and the answer was that we were allowed but to consider runtime efficiency. I am bit confused on what this exactly means and how to calculate it.

2) In C++ I am aware that we must specify the variable type. What exactly does the "auto" type mean? I was under impression that it gave type that was declared when initializing the variable but that does not seem to be what is happening. For example, if try to calculate the average I say:

auto avg = sum / counter
*sum and counter were also declared as auto. This the first time avg is being initialized.

This does not give a float value which is what I am looking for. Hence I am bit a confused on how exactly 'auto' works?

Thank you,
Niharika

Abubakr Shafique <abubakr.shafique@uwaterloo.ca>
Thu 10/21/2021 12:40 PM
To: Niharika .

Hi Niharika,

For Q1, let me make it more clear before I answer you in detail.

For Q2, auto will automatically assign the variable type and form that point onwards it should be dealt with according to that specific variable type. In your example, if it is a whole number, it would probably assign it as integer because it get's memory efficient. If you get your answer in fractions it is most likely to be float type.

I hope this answers your question.
For the Q1, I will get back to you as soon as possible.

If you have any other question, please let me know.

Yours Sincerely,
Abubakr Shafique

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Abubakr Shafique <abubakr.shafique@uwaterloo.ca>
Thu 10/21/2021 5:05 PM
To: Niharika .

Hi Neharika,

For Q1, what you have to do is to read the numbers from the file, and then apply the formulae given. So it is like you are reading from line 1 to N and then apply that formulae.
I hope it clarifies your confusion.

If you still have questions please let me know.

Yours Sincerely,
Abubakr Shafique

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