**7) what is the need of variance when we already have Standard Deviation ?**

**Ans 7 :-** Variance is a method to find or obtain the measure between the variables that how are they different from one another, whereas standard deviation shows us how the data set or the variables differ from the mean or the average value from the data set.

But the need of variance is because Variance weights outliers more heavily than data very near the mean due to the square. A higher variance helps you spot that more easily. Also, mathematically /theoretically speaking, dealing with variance is easier.

The key differences are as follows –

* The variance gives an approximate idea of data volatility. 68% of values are between +1 and -1 standard deviation from the mean. That means Standard Deviation gives more details.
* Variance is used to know about the planned and actual behavior with a certain degree of uncertainty. Standard deviation is used for the statistical test to know about the relationship exist between two sets of variable
* Variance measures the distribution of data in a population around the central value. Standard deviation measures the distribution of data relative to the central value