In the previous video

- Variance is the average squared deviations from the mean
- $\sigma^2 = \frac{\sum(x-\bar{x})^2}{n}$

Analytics Vidhya
Learn everything about analytics

Possible methods to calculate spread

ID	Marks	Teacher feedback	Gender	Distance (Marks - Mean)	Squared Distance
X001	80	good	Male	12	149
X002	40	bad	Female	-28	773
X003	75	good	Male	7	52
X004	90	excellent	Female	22	493
X005	40	bad	Female	-28	773
X006	69	good	Female	1	1
X007	72	good	Male	4	18
X008	34	bad	Male	-34	1142
X009	99	excellent	Male	31	973
X010	79	good	Female	11	125
Sum				0	4500

So, in this case average of squared distances is 450, which is variance

Possible methods to calculate spread

ID	Marks	Teacher feedback	Gender	Distance (Marks - Mean)	Squared Distance
X001	80	good	Male	12	149
X002	40	bad	Female	-28	773
X003	75	good	Male	7	52
X004	90	excellent	Female	22	493
X005	40	bad	Female	-28	773
X006	69	good	Female	1	1
X007	72	good	Male	4	18
X008	34	bad	Male	-34	1142
X009	99	excellent	Male	31	973
X010	79	good	Female	11	125
Sum				0	4500

So, in this case average of squared distances is 450, which is variance.

Here Standard Deviation = ~21.21