**Qus1 : What is the definition of covariance? Create the formula for it.**

It’s use to finding the relationship b/w two variables

Exp- Height(increase)===> Weight(increase) Means Positive Co-Variance

Drinking (Increase) ====> Age(Decrease) Means Negative Co-Variance

Cov(x,y)= [Σ (x-x\_bar) \* (y- y\_bar)]/n-1

**Qus2 : What makes Correlations better than Covariance?**

There was a problem with Covariance that it’s not binding the value means some time we get 1 sometime 2, 50,34 so we will never get to know exactly what is level of relationship

For removing this disadvantage Correlations come into the picture, It’s bind the value from -1 to 1.

**Qus3: Explain the process as well as Pearson and Spearman Correlation.**

Both have the advantage over covariance as both restrict the limit from -1 to 1

But in pearson we get 1 only when this feature’data follows the straight line whereas in spearman we get one whenever it always increase mean solwy increase also considered as 1

**Qus4 :What are the advantages of Spearman Correlation over Pearson Correlation?**

In pearson we get 1 only when this feature’data follows the straight line whereas in spearman we get one whenever it always increase mean solwy increase also considered as 1

**Qus5 : Describe the Central Limit Theorem.**

Central Limit theorem says, whenever we take a Random variable X which may or may not belong to Gaussian dist with some mean & std, so if you take multiple sample and size atleast n>=30 and then take mean&std then it will definitely follow a Gaussian Distribution.