**Explanation: Assign 3 Q2**

We are going to conduct  ANOVA Test on 4 Independent samples with Numerical Data

We need to check whether the mean of any of these samples are different or the same?

Step 1

Make two Hypothesis one contradicting to other

Null Hypothesis is what we want to prove

* Null Hypothesis(HO): µ1=µ2 = µ3 = µ4
* Alternative Hypothesis(H1): At least One of them is Different

## Step 2

### Decide a cut-off value

* **Significance 5%**
* **alpha = 0.05**

Step 3 : PYTHON CODE

## Step 4

### Compare Evidences with Hypothesis using t-statistic

### Compare p\_value with 'µ '(Significance Level)

### If p\_value is < 'µ ' we failed to reject Null Hypothesis because of lack of evidence

### If p\_value is > 'µ ' we reject Null Hypothesis

**ANSWER**

Significance=0.050, p=0.000

## Since, pvalue < Alpha, Null Hypothesis(Ho) isrejected and hence, there is significant difference between the average TAT.