**Hypothesis test on cluster data**

**1. Normality test on unit A**

H0 = Unit A data is normal

Ha = Unit A data is not normal

p-value = 0.32 > alpha = 0.05 🡪 p high 🡺 H­0 fly🡺 fail to reject H­0

conclusion 🡪 Unit A data assumed to be normal

**Normality test on unit B**

H0 = Unit B data is normal

Ha = Unit B data is not normal

p-value = 0.5225 > alpha = 0.05 🡪 p high🡺 H­0 fly 🡺 fail to reject H­0

conclusion 🡪 Unit B data assumed to be normal

Are external conditions the same? No

**2. Equality of Variance test?**

H0 🡺 var(unit A) = var(Unit B) 🡺 var(Unit A)/var(Unit B) = 1

Ha 🡺 var(unit A) ≠ var(Unit B) 🡺 var(Unit A)/var(Unit B) ≠ 1

p-value = 0.3136 > alpha (0.05)

p high 🡺 Ho fly 🡺 fail to reject Ho

Conclusion: accept Ho 🡺 variances are assumed to be equal

**3. Final 2 sample T test**

H0 🡺 avg.diameter (Unit A) <= avg.diameter (Unit B ) 🡺 dia(Unit A) – dia(Unit B) <= 0

Ha 🡺 diameter (Unit A) > diameter (Unit B ) 🡺 dia(Unit A) – dia(Unit B) > 0

p-value = 0.4723

p high 🡺 Ho fly 🡺 fail to reject Ho

Conclusion: Inference is that **there is no significant difference in the diameters of Unit A and Unit B**

**Hypothesis test on labTAT data**

**1. Normality test**

H0 🡺 Data is normal

Ha  🡺 Data is not normal

p-value = 0.1175

p high 🡺 Ho fly 🡺 fail to reject Ho 🡺 Data is normal

**2. Equality of Variance test**

**H0 🡺 Variance is equal**

**Ha 🡺 Variance is not equal**

p-value = 0.05161

p high 🡺 Ho fly 🡺 fail to reject Ho 🡺 variances are equal

**3. one – way ANOVA test**

H0 🡺 Average TAT for all the samples is same

Ha 🡺 Average TAT for all the samples is not same

P low 🡺 H0 go 🡺 reject H0

Conclusion 🡺 Avg TAT for all the samples is not same

**Hypothesis test for BuyerRatio data**

**We proceed with chi-square test**

**Create hypothesis**

Ho= Proportions of Male and Female are same

Ha= Proportions of Male and Female are not same

**Hypothesis test for Fantaloons data**

***Inputs***are **2 discrete variables**.

***Output***is **Discrete**as we are trying to find out if proportions of male and female walking in to the store is same or not

We proceed with **2-proportion test**

Create hypothesis

Ho= Proportions of Male and Female are same

Ha= Proportions of Male and Female are not same