

Probability and Statistics - IT2120

Lab 10

Faldano Pinghe F.T.K.

IT24103676

```
IT24103676.R
1 setwd('C:\\Users\\IT24103676\\Desktop\\IT24103676')
2 getwd()
3
4 #i.
5 #Null hypothesis: Probability of number of purchase for each snack type is 0.25
6 #Alternative hypothesis: There exists at least one type of snack with the probability for number of purchase for each snack type not being 0.25
7
8 #ii.
9 observed<-c(120,95,85,100)
10 probability<-c(.25, .25, .25, .25)
11 chisq.test(x=observed, p=probability)
12
13 #iii.
14 #Conclusion: Since the p-value(0.08966) is greater than 0.05, do not reject null hypothesis at 5% level of significance.
15 #Therefore we can conclude that number of purchases for each snack type during one week will be same which is 0.25
```

```
> setwd('C:\\Users\\IT24103676\\Desktop\\IT24103676')
> getwd()
[1] "C:/Users/IT24103676/Desktop/IT24103676"
> #i.
> #Null hypothesis: Probability of customers choosing each snack type is 0.25
> #Alternative hypothesis: There exists at least one type of snack with the probability of being selected not being 0.25
>
> #ii.
> observed<-c(120,95,85,100)
> probability<-c(.25, .25, .25, .25)
> chisq.test(x=observed, p=probability)

      Chi-squared test for given probabilities

data:  observed
X-squared = 6.5, df = 3, p-value = 0.08966

> #iii.
> #Conclusion: Since the p-value(0.08966) is greater than 0.05, do not reject null hypothesis at 5% level of significance.
> #Therefore we can conclude that number of purchases for each snack type during one week will be same which is 0.25
~|
```