IT24103917

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IT2120- Probability and Statistics

Lab – 10

```
setwd("C:\\Users\\Asus\\Desktop\\IT24103917")

##Q1

observed <- c(120, 95, 85, 100)
prob <- c(.25, .25, .25, .25)
chisq.test(x=observed, p=prob)
```

```
> setwd("C:\\Users\\Asus\\Desktop\\IT24103917")
> observed <- c(120, 95, 85, 100)
> prob <- c(.25, .25, .25, .25)
> chisq.test(x=observed, p=prob)

        Chi-squared test for given probabilities

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

```
##Q2

file_path <-  "http://www.sthda.com/sthda/RDoc/data/housetasks.txt"

housetasks <- read.delim(file_path, row.names =  1)
housetasks

chisq <- chisq.test(housetasks)
chisq
```

```
> file_path <-  "http://www.sthda.com/sthda/RDoc/data/housetasks.txt"
>
> housetasks <- read.delim(file_path, row.names =  1)
> housetasks
           Wife Alternating Husband Jointly
Laundry     156          14       2       4
Main_meal   124          20       5       4
Dinner       77          11       7      13
Breakfeast   82          36      15       7
Tidying      53          11       1      57
Dishes       32          24       4      53
Shopping     33          23       9      55
Official     12          46      23      15
Driving      10          51      75       3
Finances     13          13      21      66
Insurance     8           1      53      77
Repairs       0           3     160       2
Holidays      0           1       6     153
>
> chisq <- chisq.test(housetasks)
> chisq

        Pearson's Chi-squared test

data:  housetasks
X-squared = 1944.5, df = 36, p-value < 2.2e-16
```

```
##Q3
#Consider 25% level of significant for the class
#Rejection Region: if the p value for the test is less than 0.25,
#Reject the null hypothesis at 25%  level of significant
#P value for the test got as 2.2e-16
```