Fantaloons Sales managers commented that % of males versus females walking in to the store differ based on day of the week. Analyze the data and determine whether there is evidence at 5 % significance level to support this hypothesis.

**Ans :**

**R Code :**

## Hypothesis Testing

########## Faltoons Data Set #########

faltoons <- read.csv('D:\\Data Science\\Excelr\\Assignments\\Assignment\\Hypothesis Testing\\Faltoons.csv')

View(faltoons)

table(Weekdays)

table(Weekend)

a <- prop.table(table(Weekdays))

b <- prop.table(table(Weekend))

t <- data.frame(a,b)

t1 <- t[-c(1),-c(1,3,5,7)]

chisq.test(t1)

t.test(t1)

**Results :**

> table(Weekdays)

Weekdays

Female Male

287 113

> table(Weekend)

Weekend

Female Male

233 167

> chisq.test(t1)

Chi-squared test for given probabilities

data: t1

X-squared = 0.026036, df = 1, p-value = 0.8718

Warning message:

In chisq.test(t1) : Chi-squared approximation may be incorrect

> t.test(t1)

One Sample t-test

data: t1

t = 5.1852, df = 1, p-value = 0.1213

alternative hypothesis: true mean is not equal to 0

95 percent confidence interval:

-0.5076688 1.2076688

sample estimates:

mean of x

0.35

**Inference :**

The assumptions were as below :

Ho = % of male versus female does not differ based on day of week.

Ha = % of male versus female differ based on day of week.

From both the tests we got p-value greater than 0.05.

Hence, we accept the null Hypothesis.