

# PS Lab 10 – IT24100356

The screenshot displays the RStudio interface. The top toolbar includes icons for file operations and a search bar. The file explorer shows several open R scripts, with 'Untitled1\*' selected. The editor window contains an R script performing a chi-squared test. The console at the bottom shows the execution of the script, including the test results and a summary of the chi-squared test.

```
1 setwd("//Users//poornarajapakshe//Documents//R")
2
3 # H0: All snack types are chosen with equal probability.
4 # H1: At least one snack type is chosen with a different probability.
5
6 observed <- c(120, 95, 85, 100)
7
8
9 prob <- c(0.25, 0.25, 0.25, 0.25)
10
11 test_result <- chisq.test(x = observed, p = prob)
12
13 print(test_result)
14
15 # At  $\alpha = 0.05$ :
16 # p-value  $\approx 0.089 > 0.05 \rightarrow$  Fail to reject  $H_0$ 
17 # Conclusion:
18 # There is no significant difference among the snack type choices.
19 # Customers appear to choose snacks equally.
```

13:1 (Top Level)  $\updownarrow$  R Script  $\updownarrow$

Console Terminal Background Jobs

```
R - R 4.5.1 - ~/Documents/R/
> setwd("//Users//poornarajapakshe//Documents//R")
> observed <- c(120, 95, 85, 100)
> prob <- c(0.25, 0.25, 0.25, 0.25)
> test_result <- chisq.test(x = observed, p = prob)
> print(test_result)

      Chi-squared test for given probabilities

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

> |
```