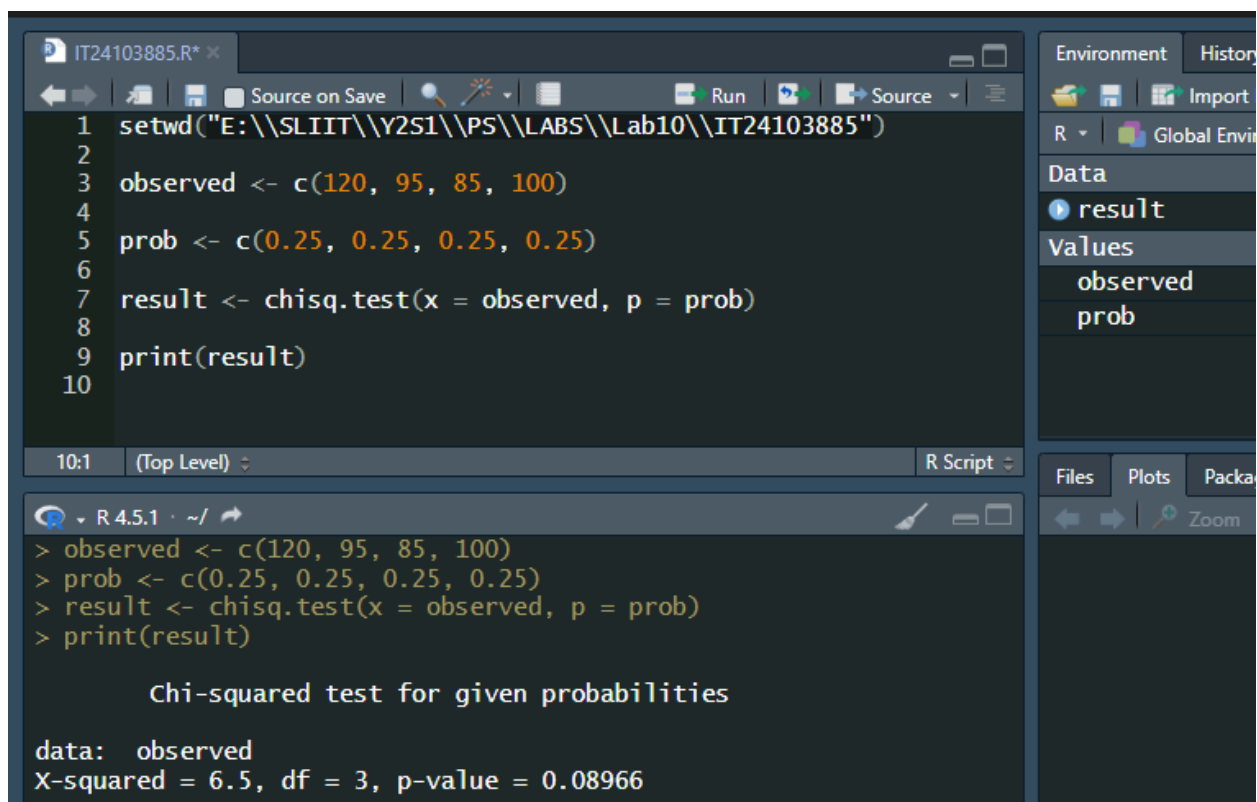


IT2120 - Probability and Statistics
Lab Sheet 10
IT24103885 - Senarathna Y.M.C.S

1. A vending machine owner claims that customers choose the four snack types (A, B, C, D) with equal probability. To test this claim, a researcher records the number of purchases for each snack type during one week and results are given below.

Snack_Type	Count
A	120
B	95
C	85
D	100

- i. State the null and alternative hypotheses for the test.
- ii. Perform a suitable chi-squared test to test the null hypothesis.
- iii. Give your conclusions based on the results.



```
IT24103885.R* x
Source on Save Run Source
1 setwd("E:\\SLIIT\\Y2S1\\PS\\LABS\\Lab10\\IT24103885")
2
3 observed <- c(120, 95, 85, 100)
4
5 prob <- c(0.25, 0.25, 0.25, 0.25)
6
7 result <- chisq.test(x = observed, p = prob)
8
9 print(result)
10
```

10:1 (Top Level) R Script

```
> observed <- c(120, 95, 85, 100)
> prob <- c(0.25, 0.25, 0.25, 0.25)
> result <- chisq.test(x = observed, p = prob)
> print(result)
```

Chi-squared test for given probabilities

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

Environment History
Import
R Global Environment
Data
result
Values
observed
prob
Files Plots Packa
Zoom