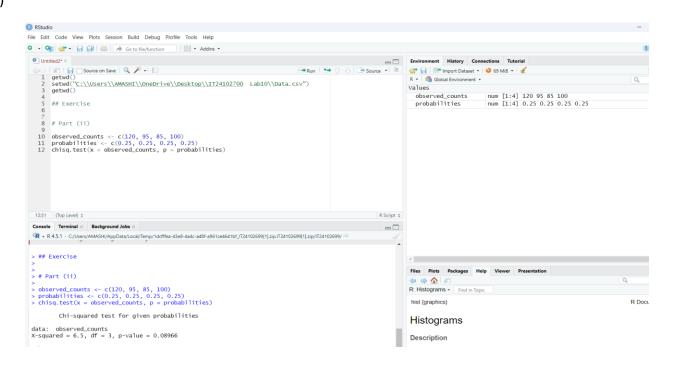IT24102700- PS LAB10

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Exercise 2

1)

Null Hypothesis (H$_0$): Customers choose the four snack types with equal probability.
P(A) = P(B) = P(C) = P(D) = 0.25

Alternative Hypothesis (H$_1$): At least one snack type has a probability of being chosen that is not 0.25.

2)

3)

- Significance Level: 5%

- Rejection Region: If the p-value for the test is less than 0.05, reject the null hypothesis.

- P-value: The p-value obtained from the test is 0.08966

- Decision: Since the p-value (0.08966) is more than the significance level (0.05), we accept the null hypothesis.

- Conclusion: There is sufficient statistical evidence to conclude that customers choose the four snack types with equal probability. The vending machine owner's claim is supported by the data.