# Load the necessary libraries

library(ggplot2)

# Read the data (replace 'choose.exam\_scores.csv' with your actual file path)

data <- read.csv(file.choose())

View(data)

# Set the threshold for passing

threshold <- 70

# Calculate the observed proportion of students who passed

observed\_proportion <- mean(data$TargetTB > threshold)

# Set the hypothesized proportion

hypothesized\_proportion <- 0.7 # 70%

# Create a data frame for plotting

proportions <- data.frame(

Group = c("Observed", "Hypothesized"),

Proportion = c(observed\_proportion, hypothesized\_proportion)

)

# Create a bar chart

p <- ggplot(proportions, aes(x = Group, y = Proportion, fill = Group)) +

geom\_bar(stat = "identity") +

labs(title = "Proportion Test Results",

y = "Proportion",

fill = "Group") +

theme\_minimal() +

theme(plot.title = element\_text(hjust = 0.5))

# Print the plot

print(p)

# Perform the proportion test

test\_result <- prop.test(x = round(observed\_proportion \* nrow(data)), n = nrow(data), p = hypothesized\_proportion, alternative = "two.sided")

# Print the test result

print(test\_result)

Output:

