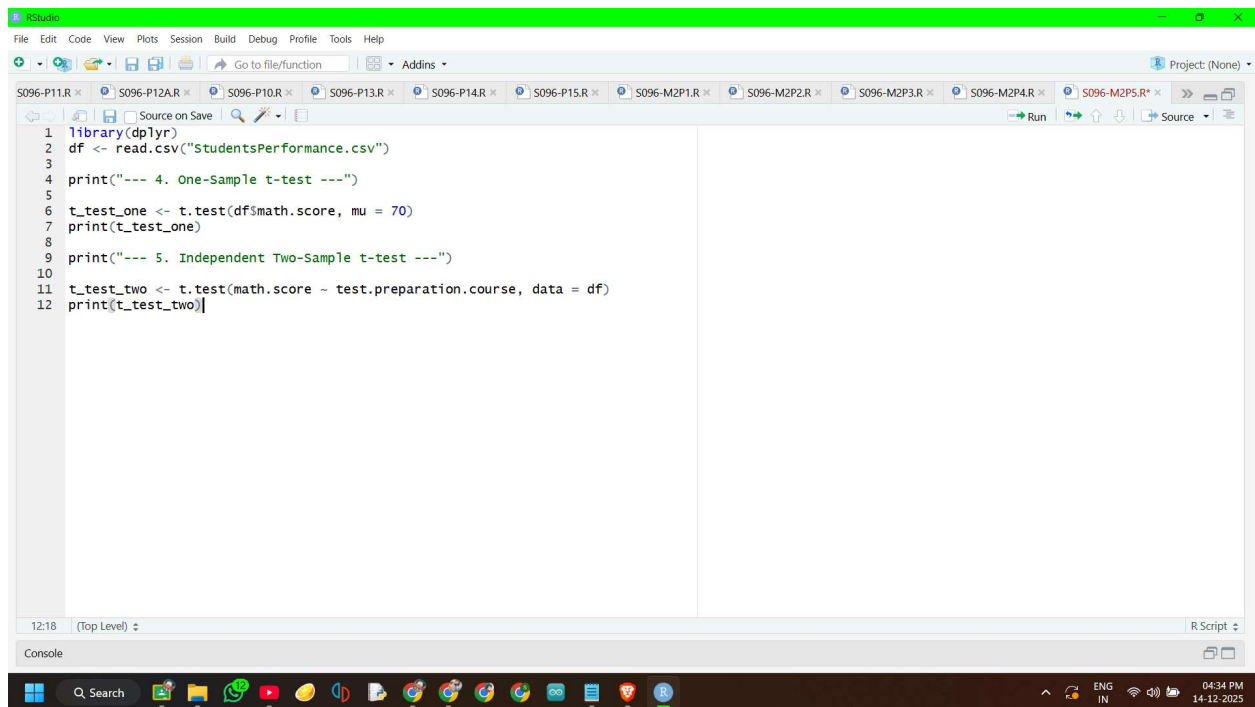


SHETH L.U.J. AND SIR M.V. COLLEGE DATA ANALYSIS WITH R

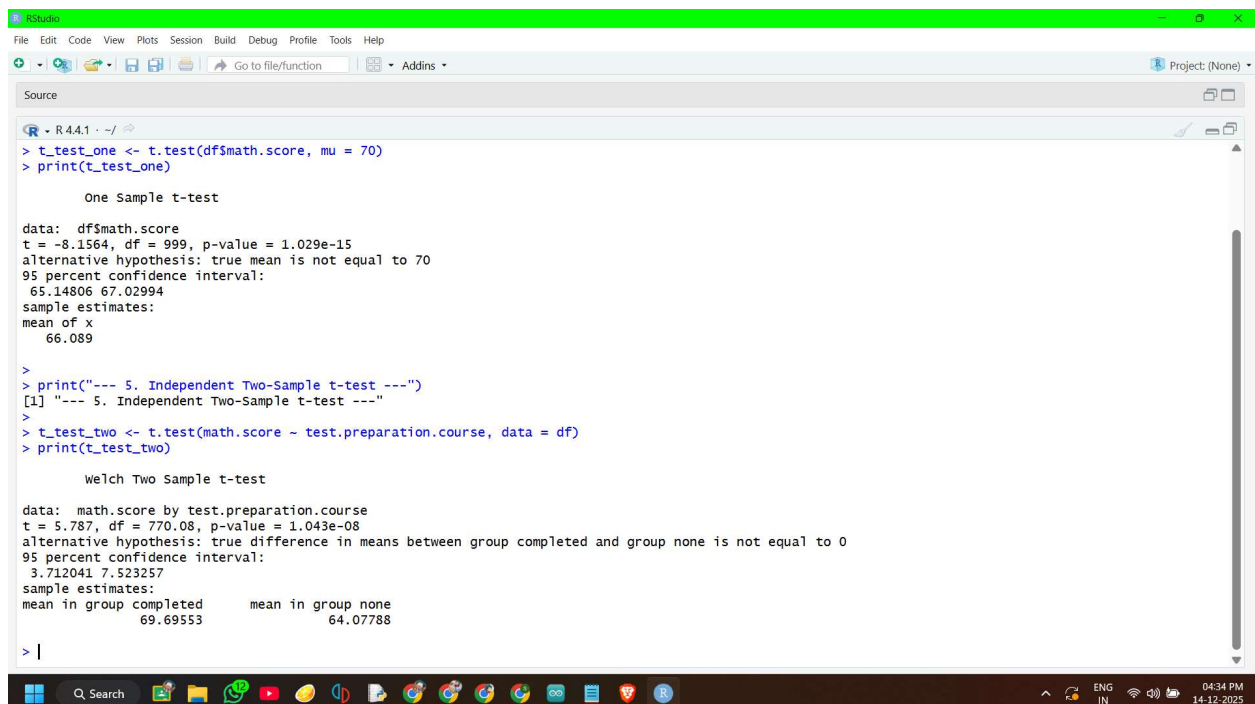
AIM: Performing independent two-sample t-tests using t.test() with grouping.

CODE:



```
1 library(dplyr)
2 df <- read.csv("StudentsPerformance.csv")
3
4 print("--- 4. One-Sample t-test ---")
5
6 t_test_one <- t.test(df$math.score, mu = 70)
7 print(t_test_one)
8
9 print("--- 5. Independent Two-Sample t-test ---")
10
11 t_test_two <- t.test(math.score ~ test.preparation.course, data = df)
12 print(t_test_two)
```

OUTPUT:



```
> t_test_one <- t.test(df$math.score, mu = 70)
> print(t_test_one)

One Sample t-test

data: df$math.score
t = -8.1564, df = 999, p-value = 1.029e-15
alternative hypothesis: true mean is not equal to 70
95 percent confidence interval:
 65.14806 67.02994
sample estimates:
mean of x
 66.089

> print("--- 5. Independent Two-Sample t-test ---")
[1] "--- 5. Independent Two-Sample t-test ---"
>
> t_test_two <- t.test(math.score ~ test.preparation.course, data = df)
> print(t_test_two)

Welch Two Sample t-test

data: math.score by test.preparation.course
t = 5.787, df = 770.08, p-value = 1.043e-08
alternative hypothesis: true difference in means between group completed and group none is not equal to 0
95 percent confidence interval:
 3.712041 7.523257
sample estimates:
mean in group completed      mean in group none
 69.69553                  64.07788

> |
```