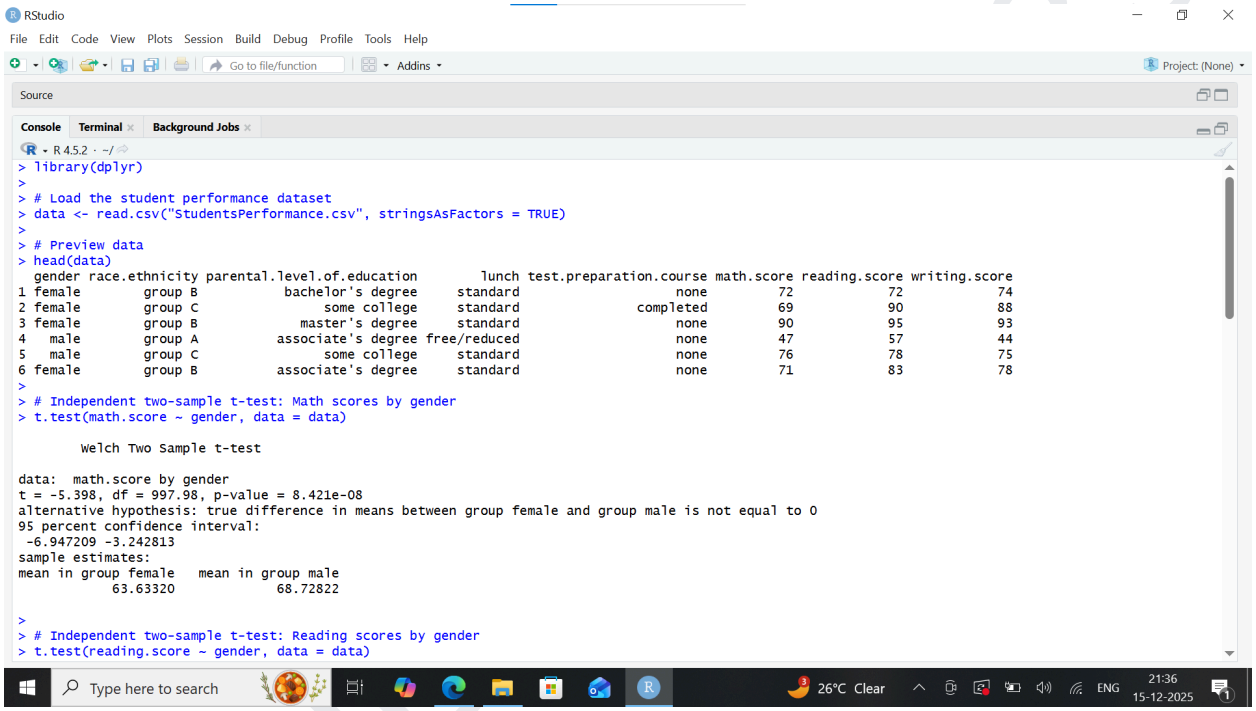
SHETH L.U.J. AND SIR M.V. COLLEGE OF ARTS SCIENCE AND COMMERCE

SUBJECT : R Programming

Practical No 5 Module II

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

Output :



NAME : SHUBHAM SANJAY KARAPE
ROLL NO : S085

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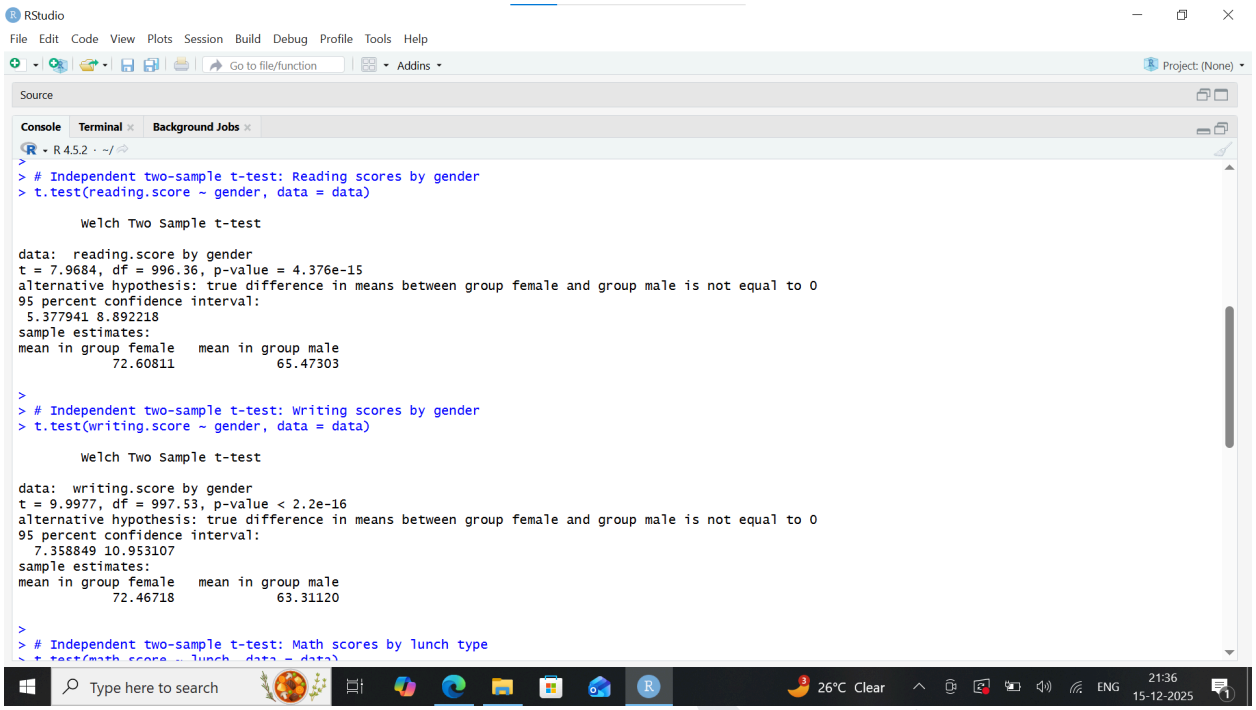
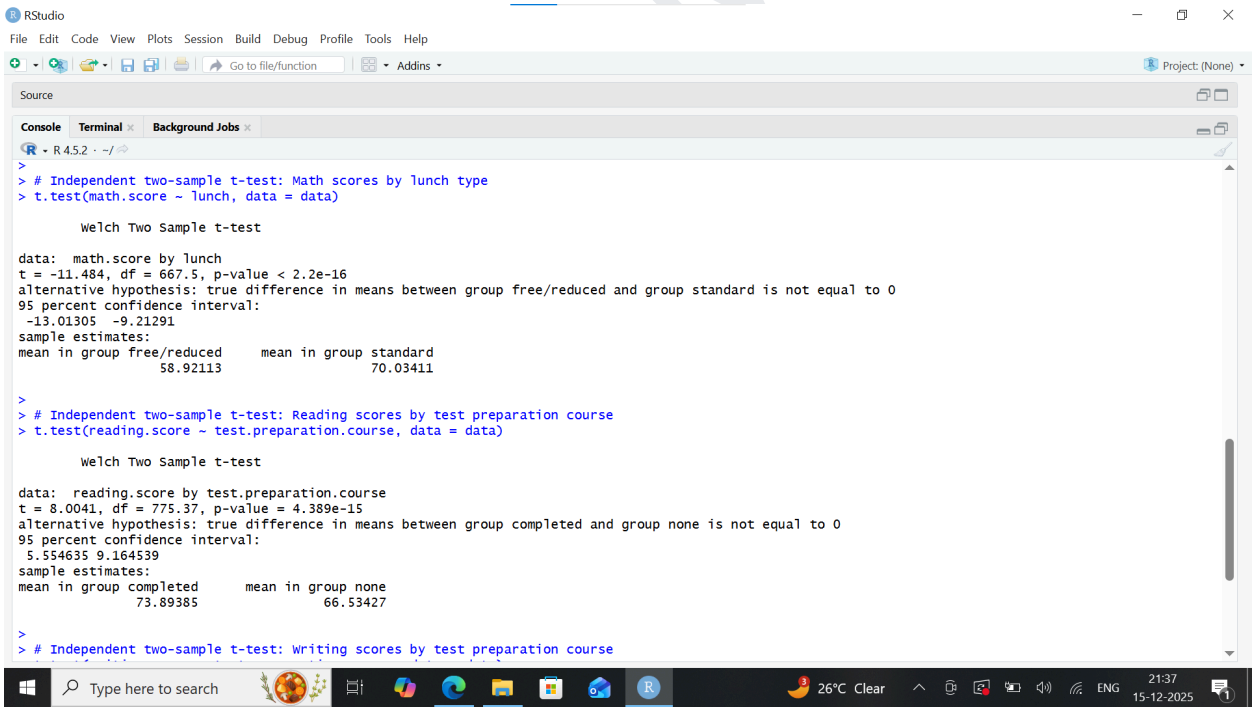


```
> # Independent two-sample t-test: Reading scores by gender
> t.test(reading.score ~ gender, data = data)

        Welch Two Sample t-test

data:  reading.score by gender
t = 7.9684, df = 996.36, p-value = 4.376e-15
alternative hypothesis: true difference in means between group female and group male is not equal to 0
95 percent confidence interval:
 5.377941 8.892218
sample estimates:
mean in group female   mean in group male
            72.60811             65.47303

>
> # Independent two-sample t-test: Writing scores by gender
> t.test(writing.score ~ gender, data = data)

        Welch Two Sample t-test

data:  writing.score by gender
t = 9.9977, df = 997.53, p-value < 2.2e-16
alternative hypothesis: true difference in means between group female and group male is not equal to 0
95 percent confidence interval:
  7.358849 10.953107
sample estimates:
mean in group female   mean in group male
            72.46718             63.31120

>
> # Independent two-sample t-test: Math scores by lunch type
```



```
> # Independent two-sample t-test: Math scores by lunch type
> t.test(math.score ~ lunch, data = data)

        Welch Two Sample t-test

data:  math.score by lunch
t = -11.484, df = 667.5, p-value < 2.2e-16
alternative hypothesis: true difference in means between group free/reduced and group standard is not equal to 0
95 percent confidence interval:
 -13.01305  -9.21291
sample estimates:
mean in group free/reduced     mean in group standard
                  58.92113                   70.03411

>
> # Independent two-sample t-test: Reading scores by test preparation course
> t.test(reading.score ~ test.preparation.course, data = data)

        Welch Two Sample t-test

data:  reading.score by test.preparation.course
t = 8.0041, df = 775.37, p-value = 4.389e-15
alternative hypothesis: true difference in means between group completed and group none is not equal to 0
95 percent confidence interval:
 5.554635 9.164539
sample estimates:
mean in group completed      mean in group none
               73.89385                66.53427

>
> # Independent two-sample t-test: Writing scores by test preparation course
```

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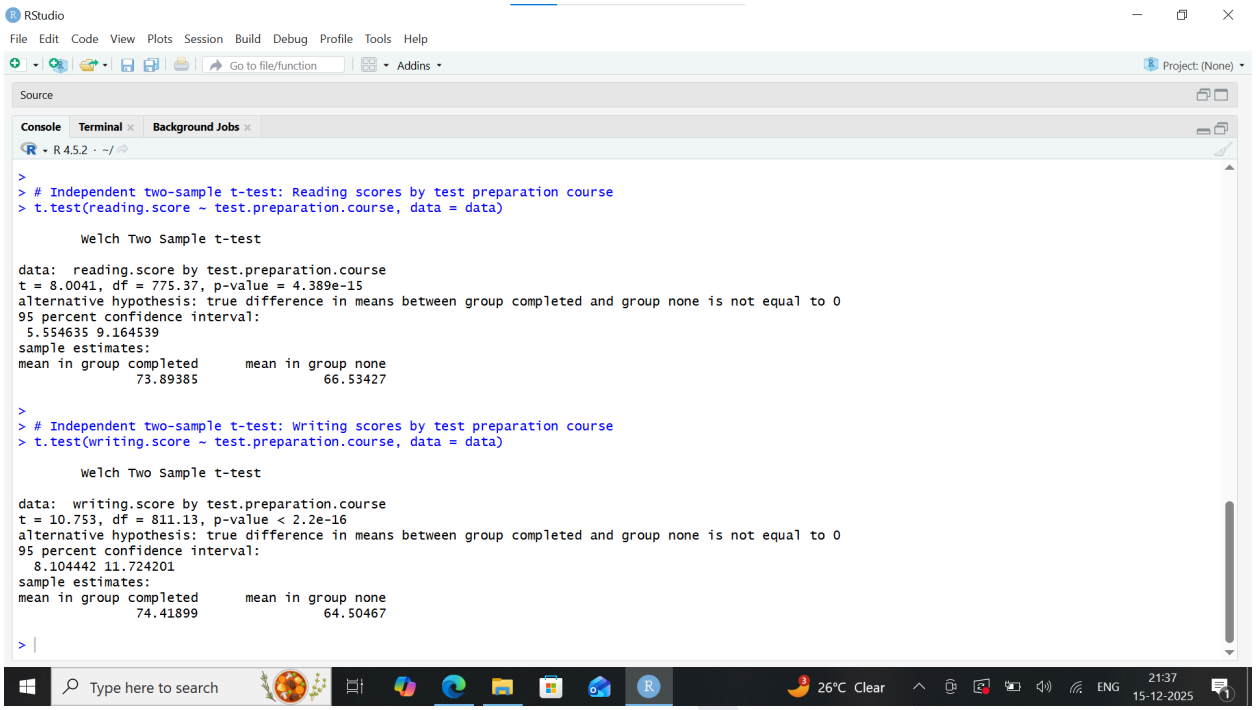

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