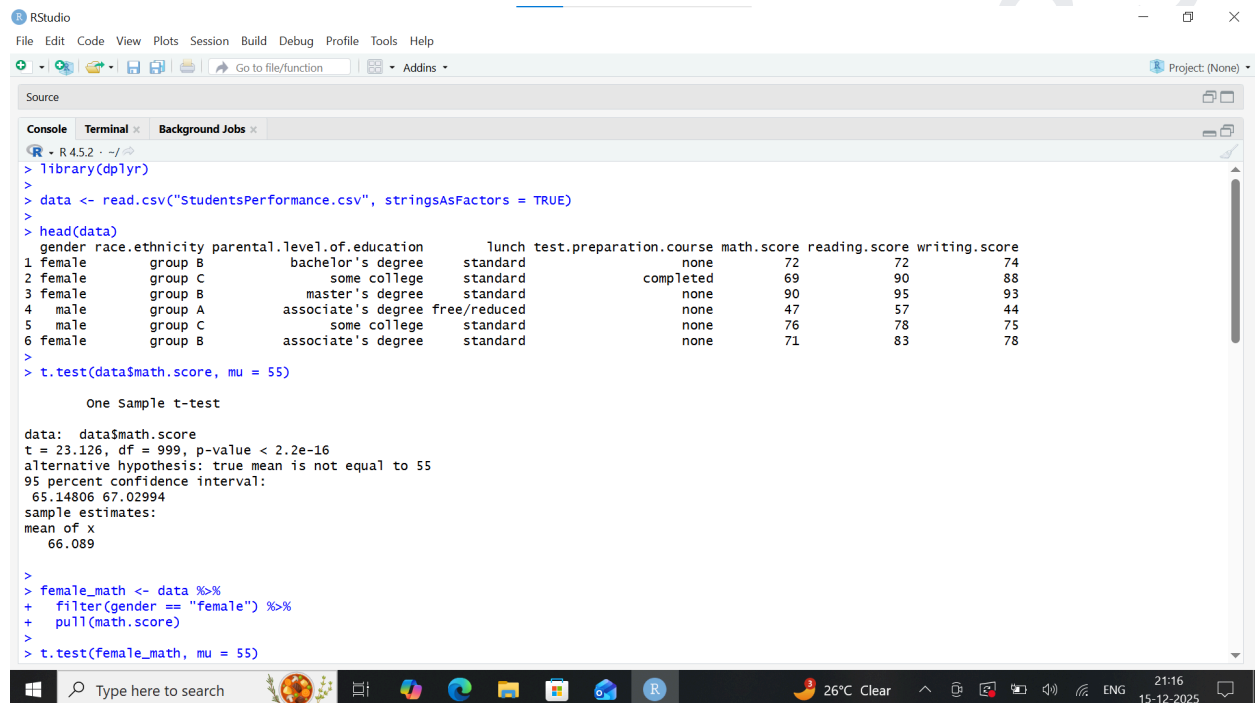


Practical No 4 Module II

Aim : Performing one-sample t-tests using `t.test()` (R).

Output :



```
R - R 4.5.2 - ~/R
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins Project: (None)
Source
Console Terminal Background Jobs
> library(dplyr)
> data <- read.csv("StudentsPerformance.csv", stringsAsFactors = TRUE)
> head(data)
  gender race.ethnicity parental.level.of.education lunch test.preparation.course math.score reading.score writing.score
1 female      group B      bachelor's degree      standard              none              72              72              74
2 female      group C          some college      standard              completed              69              90              88
3 female      group B      master's degree      standard              none              90              95              93
4 male        group A      associate's degree free/reduced              none              47              57              44
5 male        group C          some college      standard              none              76              78              75
6 female      group B      associate's degree      standard              none              71              83              78
>
> t.test(data$math.score, mu = 55)

    One Sample t-test

data:  data$math.score
t = 23.126, df = 999, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 55
95 percent confidence interval:
 65.14806 67.02994
sample estimates:
mean of x
 66.089

>
> female_math <- data %>%
+   filter(gender == "female") %>%
+   pull(math.score)
>
> t.test(female_math, mu = 55)
```

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

SUBJECT : R Programming

```
RStudio
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Go to file/function Addins Project: (None)

Source
Console Terminal Background Jobs
R - R 4.5.2 - ~/
> t.test(female_math, mu = 55)

One Sample t-test

data: female_math
t = 12.684, df = 517, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 55
95 percent confidence interval:
 62.29601 64.97040
sample estimates:
mean of x
 63.6332

>
> male_math <- data %>%
+   filter(gender == "male") %>%
+   pull(math.score)
> t.test(male_math, mu = 55)

One Sample t-test

data: male_math
t = 20.994, df = 481, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 55
95 percent confidence interval:
 67.44334 70.01309
sample estimates:
mean of x
 68.72822

>
```

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins Project: (None)

Source
Console Terminal Background Jobs
R - R 4.5.2 - ~/
mean of x
68.72822

>
> t.test(data$reading.score, mu = 55)

One Sample t-test

data: data$reading.score
t = 30.689, df = 999, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 55
95 percent confidence interval:
 68.26299 70.07501
sample estimates:
mean of x
 69.169

>
> t.test(data$writing.score, mu = 55)

One Sample t-test

data: data$writing.score
t = 27.166, df = 999, p-value < 2.2e-16
alternative hypothesis: true mean is not equal to 55
95 percent confidence interval:
 67.11104 68.99696
sample estimates:
mean of x
 68.054

>
```

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