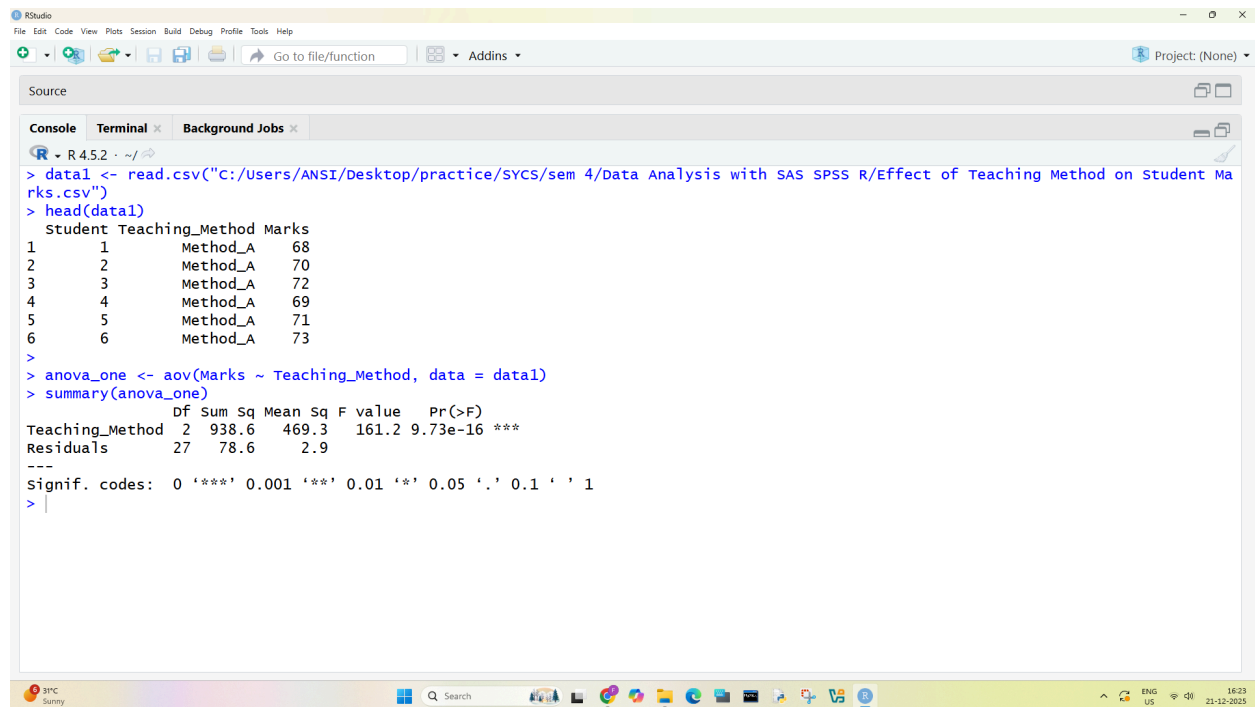


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AIM:

7 Performing one-way ANOVA using aov() (R).



```
R - R 4.5.2 - ~/
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins Project: (None)

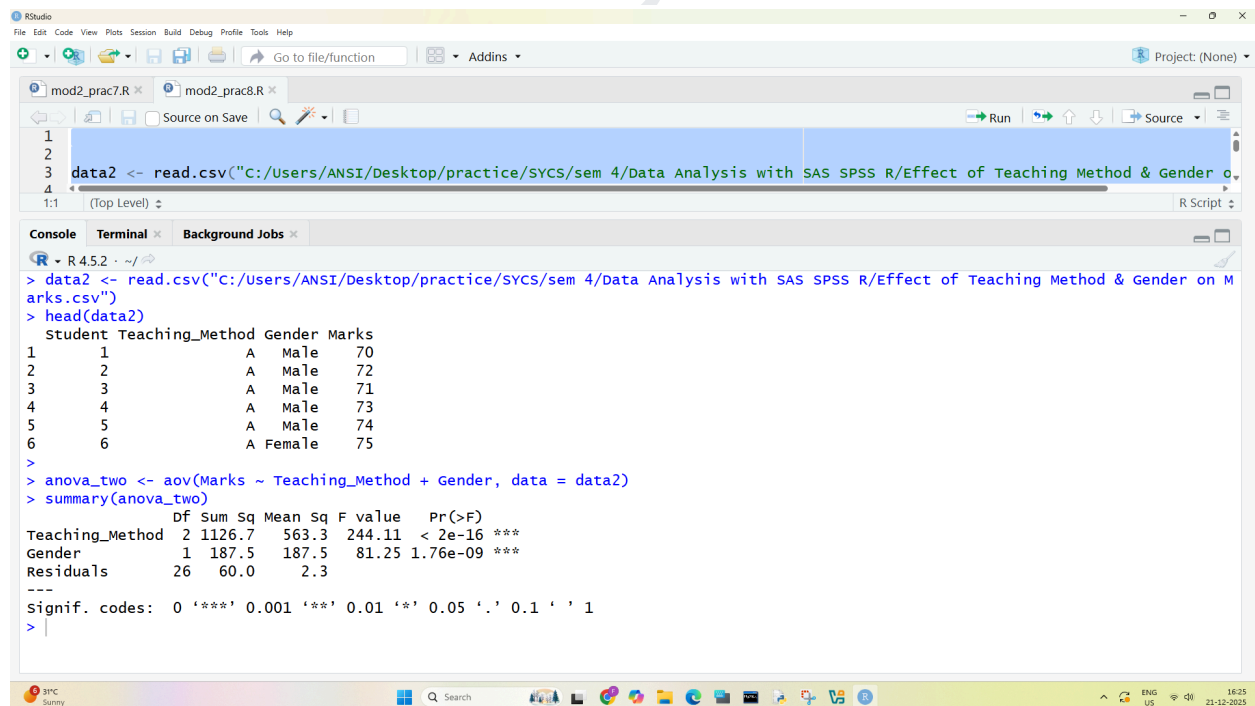
Source

Console Terminal Background Jobs

> data1 <- read.csv("C:/Users/ANSI/Desktop/practice/SYCS/sem 4/Data Analysis with SAS SPSS R/Effect of Teaching Method on Student Marks.csv")
> head(data1)
  Student Teaching_Method Marks
1       1             Method_A 68
2       2             Method_A 70
3       3             Method_A 72
4       4             Method_A 69
5       5             Method_A 71
6       6             Method_A 73
>
> anova_one <- aov(Marks ~ Teaching_Method, data = data1)
> summary(anova_one)
              Df Sum Sq Mean Sq F value    Pr(>F)
Teaching_Method  2  938.6    469.3   161.2 9.73e-16 ***
Residuals       27   78.6      2.9
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

>
```

8 Performing two-way ANOVA using aov() (R).



```
mod2_prac7.R mod2_prac8.R
1
2
3 data2 <- read.csv("C:/Users/ANSI/Desktop/practice/SYCS/sem 4/Data Analysis with SAS SPSS R/Effect of Teaching Method & Gender on Marks.csv")
4
1:1 (Top Level) R Script

Console Terminal Background Jobs

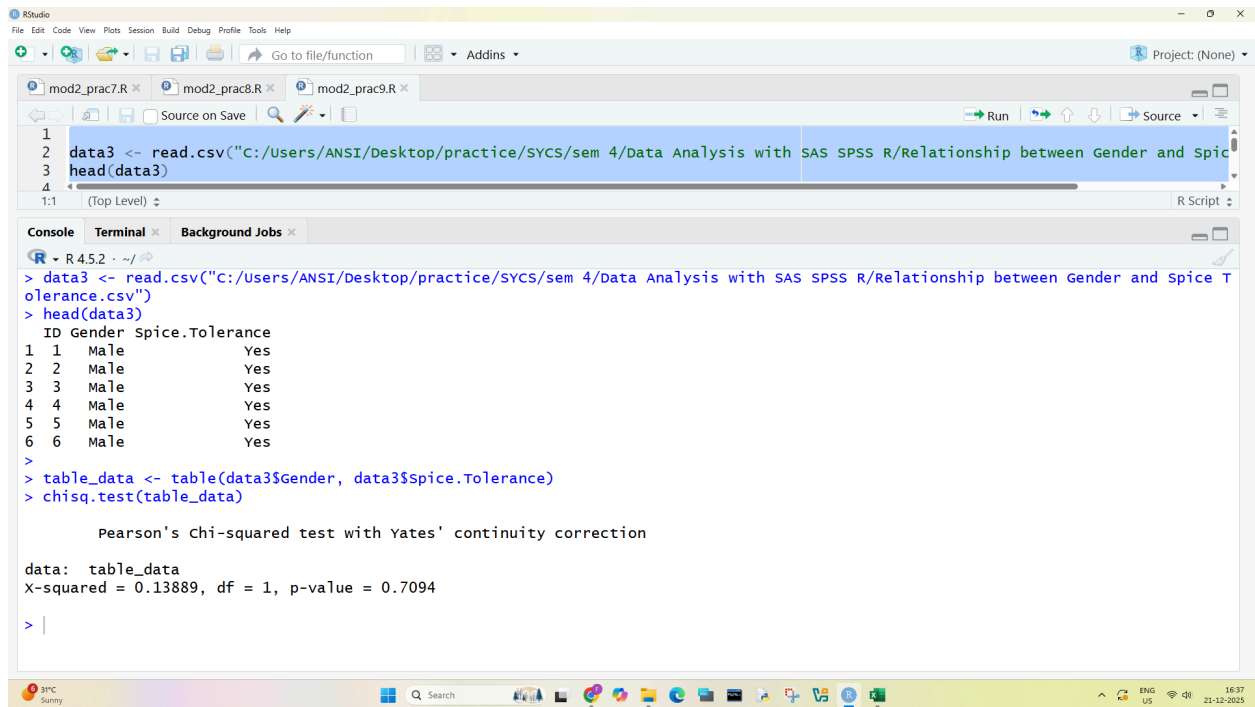
> data2 <- read.csv("C:/Users/ANSI/Desktop/practice/SYCS/sem 4/Data Analysis with SAS SPSS R/Effect of Teaching Method & Gender on Marks.csv")
> head(data2)
  Student Teaching_Method Gender Marks
1       1             A Male      70
2       2             A Male      72
3       3             A Male      71
4       4             A Male      73
5       5             A Male      74
6       6             A Female    75
>
> anova_two <- aov(Marks ~ Teaching_Method + Gender, data = data2)
> summary(anova_two)
              Df Sum Sq Mean Sq F value    Pr(>F)
Teaching_Method  2 1126.7    563.3   244.11 < 2e-16 ***
Gender           1  187.5    187.5   81.25 1.76e-09 ***
Residuals       26   60.0      2.3
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

>
```

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9 Conducting Chi-square tests using chisq.test() (R)



The screenshot shows the RStudio interface with the following content:

Source Editor:

```
1 data3 <- read.csv("C:/Users/ANSI/Desktop/practice/SYCS/sem 4/Data Analysis with SAS SPSS R/Relationship between Gender and Spice Tolerance.csv")
2 head(data3)
```

Console:

```
> data3 <- read.csv("C:/Users/ANSI/Desktop/practice/SYCS/sem 4/Data Analysis with SAS SPSS R/Relationship between Gender and Spice Tolerance.csv")
> head(data3)
  ID Gender Spice.Tolerance
1  1  Male             Yes
2  2  Male             Yes
3  3  Male             Yes
4  4  Male             Yes
5  5  Male             Yes
6  6  Male             Yes
> 
> table_data <- table(data3$Gender, data3$Spice.Tolerance)
> chisq.test(table_data)

Pearson's Chi-squared test with Yates' continuity correction

data: table_data
X-squared = 0.13889, df = 1, p-value = 0.7094
> |
```

A large diagonal watermark "ANSHRAH SHAIKH" is visible across the lower half of the image.

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