

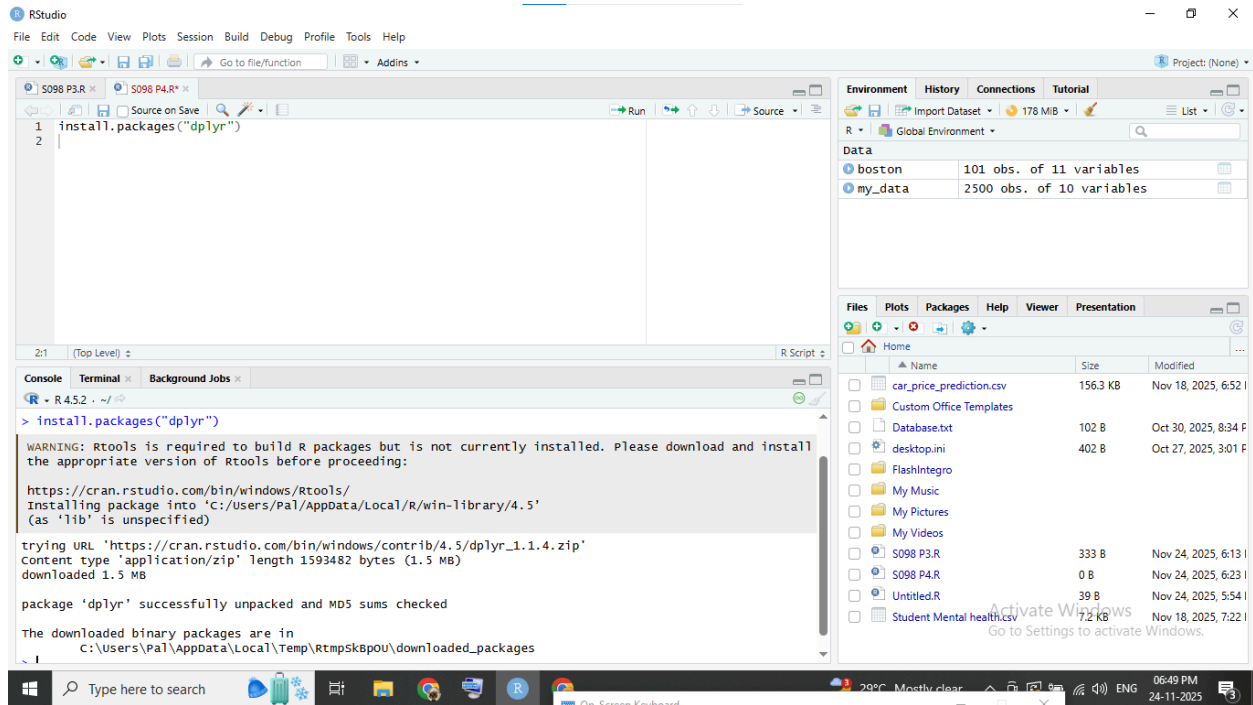
MVLU COLLEGE

Subject:-Data Analysis with SAS / SPSS /R

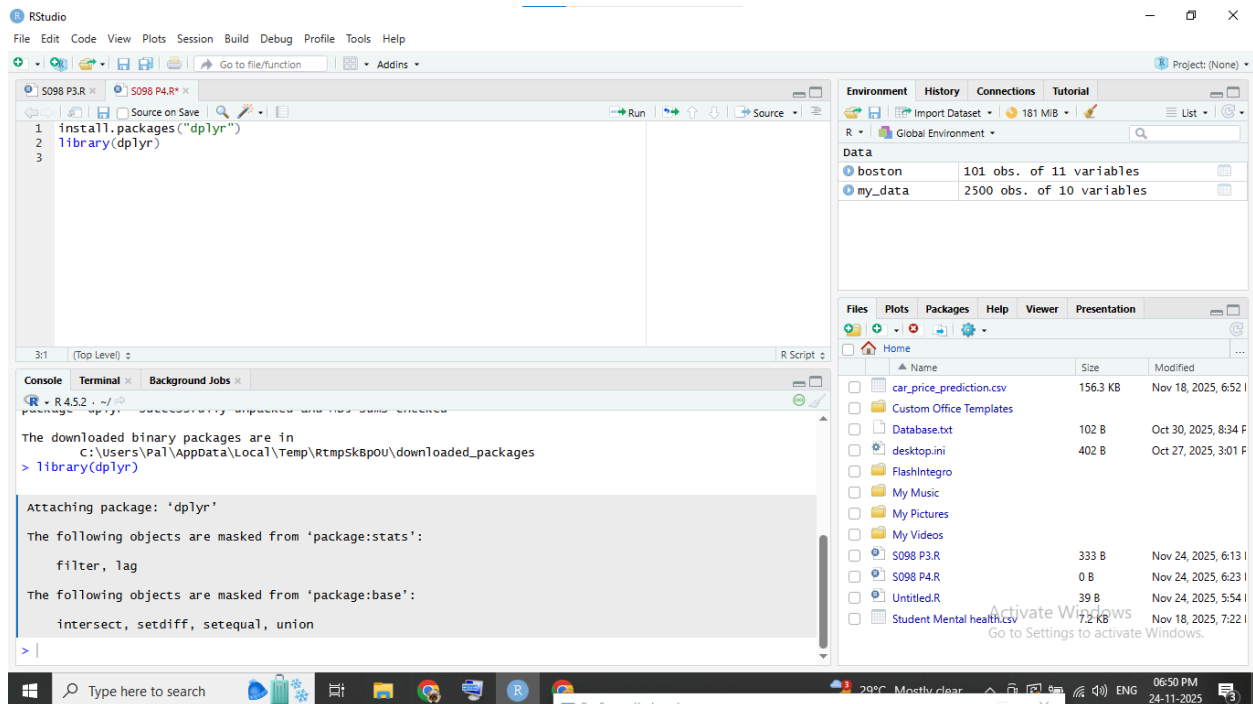
Practical no.:-4

Aim:-Applying conditional filters subset() or filter() in R.

install.packages("dplyr")



library(dplyr)

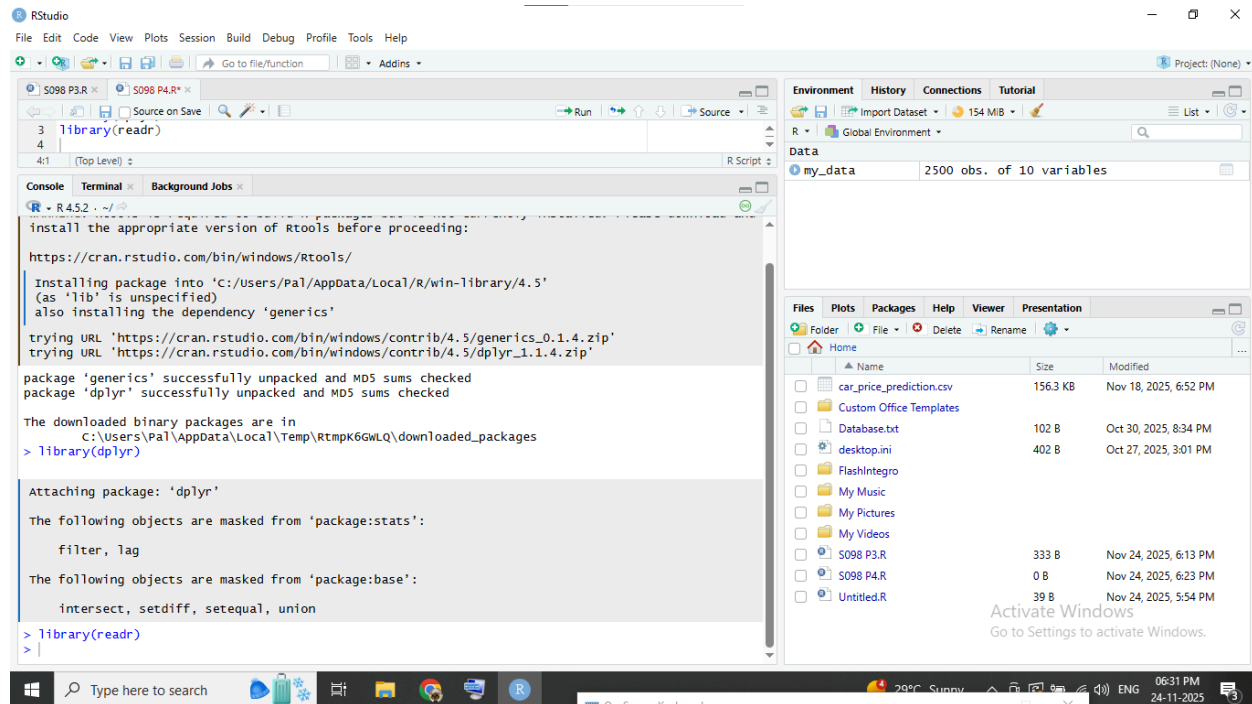


Vikas Pal
S098

MVLU COLLEGE

Subject:-Data Analysis with SAS / SPSS /R

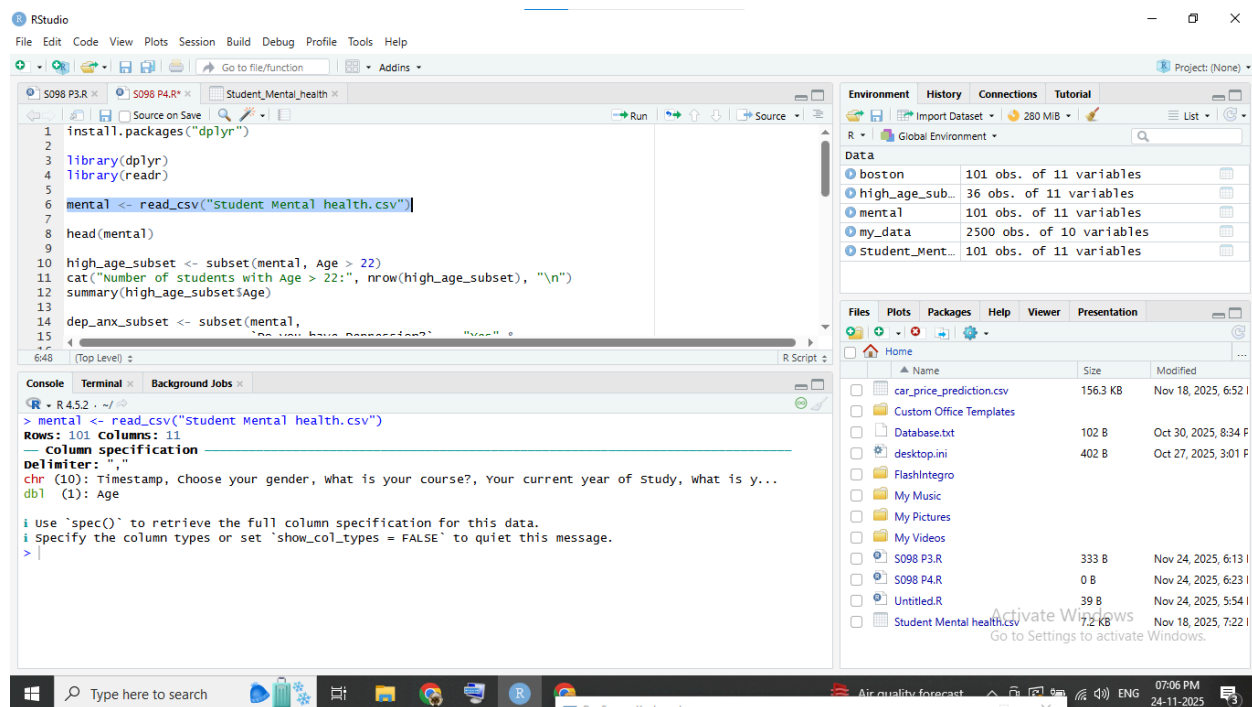
library(readr)



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RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins
S098 P3.R S098 P4.R
library(readr)
install the appropriate version of Rtools before proceeding:
https://cran.rstudio.com/bin/windows/Rtools/
Installing package into 'C:/Users/Pal/AppData/Local/R/win-library/4.5'
(as 'lib' is unspecified)
also installing the dependency 'generics'
trying URL 'https://cran.rstudio.com/bin/windows/contrib/4.5/generics_0.1.4.zip'
trying URL 'https://cran.rstudio.com/bin/windows/contrib/4.5/dplyr_1.1.4.zip'
package 'generics' successfully unpacked and MD5 sums checked
package 'dplyr' successfully unpacked and MD5 sums checked
The downloaded binary packages are in
C:/Users/Pal/AppData/Local/Temp/RtmpK6WLQ/downloaded_packages
> library(dplyr)
Attaching package: 'dplyr'
The following objects are masked from 'package:stats':
  filter, lag
The following objects are masked from 'package:base':
  intersect, setdiff, setequal, union
> library(readr)
>
```

Environment History Connections Tutorial
R Global Environment
Data
my_data 2500 obs. of 10 variables
Files Plots Packages Help Viewer Presentation
Home
Name Size Modified
car_price_prediction.csv 156.3 KB Nov 18, 2025, 6:52 PM
Custom Office Templates
Database.txt 102 B Oct 30, 2025, 8:34 PM
desktop.ini 402 B Oct 27, 2025, 3:01 PM
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S098 P3.R 333 B Nov 24, 2025, 6:13 PM
S098 P4.R 0 B Nov 24, 2025, 6:23 PM
Untitled.R 39 B Nov 24, 2025, 5:54 PM
Activate Windows
Go to Settings to activate Windows.

mental <- read_csv("Student Mental health.csv")



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RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins
S098 P3.R S098 P4.R Student_Mental_health.R
1 install.packages("dplyr")
2
3 library(dplyr)
4 library(readr)
5
6 mental <- read_csv("Student Mental health.csv")
7
8 head(mental)
9
10 high_age_subset <- subset(mental, Age > 22)
11 cat("Number of students with Age > 22:", nrow(high_age_subset), "\n")
12 summary(high_age_subset$Age)
13
14 dep_anx_subset <- subset(mental,
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```

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Subject:-Data Analysis with SAS / SPSS /R

head(mental)

The screenshot shows the RStudio interface. The script editor contains the following code:

```
1 install.packages("dplyr")
2
3 library(dplyr)
4 library(readr)
5
6 mental <- read_csv("Student Mental health.csv")
7
8 head(mental)
9
10 high_age_subset <- subset(mental, Age > 22)
11 cat("Number of students with Age > 22:", nrow(high_age_subset), "\n")
12 summary(high_age_subset$Age)
13
14 dep_anx_subset <- subset(mental,
15   "do you have Depression?" ~ "Yes" &
16   "do you have Anxiety?" ~ "Yes")
```

The console output shows the result of the `head(mental)` command:

```
# A tibble: 6 x 11
#   Timestamp      "Choose your gender" Age "what is your course?" "Your current year of study"
#   <chr>          <chr>          <dbl> <chr>          <chr>
1 8/7/2020 12:02 Female          18 Engineering          year 1
2 8/7/2020 12:04 Male          21 Islamic education    year 2
3 8/7/2020 12:05 Male          19 BIT                  year 1
4 8/7/2020 12:06 Female        22 Laws                 year 3
5 8/7/2020 12:13 Male          23 Mathematics          year 4
6 8/7/2020 12:31 Male          19 Engineering          year 2
```

The Environment pane on the right shows the loaded data objects:

Object	Size	Modified
boston	101 obs. of 11 variables	
high_age_sub...	36 obs. of 11 variables	
mental	101 obs. of 11 variables	
my_data	2500 obs. of 10 variables	
Student_Ment...	101 obs. of 11 variables	

high_age_subset <- subset(mental, Age > 22)

The screenshot shows the RStudio interface. The script editor contains the following code:

```
1 install.packages("dplyr")
2
3 library(dplyr)
4 library(readr)
5
6 mental <- read_csv("Student Mental health.csv")
7
8 head(mental)
9
10 high_age_subset <- subset(mental, Age > 22)
11 cat("Number of students with Age > 22:", nrow(high_age_subset), "\n")
12 summary(high_age_subset$Age)
13
14 dep_anx_subset <- subset(mental,
15   "do you have Depression?" ~ "Yes" &
16   "do you have Anxiety?" ~ "Yes")
17
18 high_age_subset <- subset(mental, Age > 22)
```

The console output shows the result of the `high_age_subset <- subset(mental, Age > 22)` command:

```
# A tibble: 6 x 11
#   Timestamp      "Choose your gender" Age "what is your course?" "Your current year of study"
#   <chr>          <chr>          <dbl> <chr>          <chr>
1 8/7/2020 12:02 Female          18 Engineering          year 1
2 8/7/2020 12:04 Male          21 Islamic education    year 2
3 8/7/2020 12:05 Male          19 BIT                  year 1
4 8/7/2020 12:06 Female        22 Laws                 year 3
5 8/7/2020 12:13 Male          23 Mathematics          year 4
6 8/7/2020 12:31 Male          19 Engineering          year 2
```

The Environment pane on the right shows the loaded data objects:

Object	Size	Modified
boston	101 obs. of 11 variables	
high_age_sub...	36 obs. of 11 variables	
mental	101 obs. of 11 variables	
my_data	2500 obs. of 10 variables	
Student_Ment...	101 obs. of 11 variables	

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Subject:-Data Analysis with SAS / SPSS /R

```
cat("Number of students with Age > 22:", nrow(high_age_subset), "\n")
```

The screenshot shows the RStudio interface with the following components:

- Source Editor:** Contains R code for installing dplyr, reading a CSV file, and filtering data where Age > 22.
- Console:** Displays the output of the code, including the head of the 'mental' dataset and the result of the count operation.
- Environment:** Lists loaded data objects: boston, high_age_sub, mental, my_data, and Student_Ment.
- Files:** Shows a list of files in the project directory, including car_price_prediction.csv, Database.txt, and various desktop files.

```
1 install.packages("dplyr")
2
3 library(dplyr)
4 library(readr)
5
6 mental <- read_csv("Student Mental health.csv")
7
8 head(mental)
9
10 high_age_subset <- subset(mental, Age > 22)
11 cat("Number of students with Age > 22:", nrow(high_age_subset), "\n")
12 summary(high_age_subset$Age)
13
14 dep_anx_subset <- subset(mental,
15   "Do you have Depression?" ~ "Yes")
```

Console Output:

```
R - R 4.5.2 - ~/R
> head(mental)
# A tibble: 6 x 11
  Timestamp      "choose your gender" Age "what is your course?" "Your current year of study"
  <chr>          <chr>                <dbl> <chr>                <chr>
1 8/7/2020 12:02 Female              18 Engineering          year 1
2 8/7/2020 12:04 Male                21 Islamic education    year 2
3 8/7/2020 12:05 Male                19 BIT                 Year 1
4 8/7/2020 12:06 Female              22 Laws                year 3
5 8/7/2020 12:13 Male                23 Mathematics         year 4
6 8/7/2020 12:31 Male                19 Engineering        Year 2
# 6 more variables: "what is your CGPA?" <chr>, "Marital status" <chr>,
# "Do you have Depression?" <chr>, "Do you have Anxiety?" <chr>, "Do you have Panic attack?" <chr>,
# "Did you seek any specialist for a treatment?" <chr>
> high_age_subset <- subset(mental, Age > 22)
> cat("Number of students with Age > 22:", nrow(high_age_subset), "\n")
Number of students with Age > 22: 36
>
```

```
summary(high_age_subset$Age)
```

The screenshot shows the RStudio interface with the following components:

- Source Editor:** Contains R code for installing dplyr, reading a CSV file, filtering data where Age > 22, and summarizing the filtered data.
- Console:** Displays the output of the code, including the head of the 'mental' dataset and the summary statistics for the filtered age group.
- Environment:** Lists loaded data objects: boston, high_age_sub, mental, my_data, and Student_Ment.
- Files:** Shows a list of files in the project directory, including car_price_prediction.csv, Database.txt, and various desktop files.

```
1 install.packages("dplyr")
2
3 library(dplyr)
4 library(readr)
5
6 mental <- read_csv("Student Mental health.csv")
7
8 head(mental)
9
10 high_age_subset <- subset(mental, Age > 22)
11 cat("Number of students with Age > 22:", nrow(high_age_subset), "\n")
12 summary(high_age_subset$Age)
13
14 dep_anx_subset <- subset(mental,
15   "Do you have Depression?" ~ "Yes")
```

Console Output:

```
R - R 4.5.2 - ~/R
> head(mental)
# A tibble: 6 x 11
  Timestamp      "choose your gender" Age "what is your course?" "Your current year of study"
  <chr>          <chr>                <dbl> <chr>                <chr>
1 8/7/2020 12:02 Female              18 Engineering          year 1
2 8/7/2020 12:04 Male                21 Islamic education    year 2
3 8/7/2020 12:05 Male                19 BIT                 Year 1
4 8/7/2020 12:06 Female              22 Laws                year 3
5 8/7/2020 12:13 Male                23 Mathematics         year 4
6 8/7/2020 12:31 Male                19 Engineering        Year 2
# 6 more variables: "what is your CGPA?" <chr>, "Marital status" <chr>,
# "Do you have Depression?" <chr>, "Do you have Anxiety?" <chr>, "Do you have Panic attack?" <chr>,
# "Did you seek any specialist for a treatment?" <chr>
> high_age_subset <- subset(mental, Age > 22)
> cat("Number of students with Age > 22:", nrow(high_age_subset), "\n")
Number of students with Age > 22: 36
> summary(high_age_subset$Age)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
 23.00  23.00   24.00  23.64  24.00   24.00
>
```

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```
dep_anx_subset <- subset(mental,  
  `Do you have Depression?` == "Yes" &  
  `Do you have Anxiety?` == "Yes")
```

The screenshot shows the RStudio interface with the following components:

- Source Editor:** Contains R code for creating a subset of the 'mental' dataset based on 'Do you have Depression?' and 'Do you have Anxiety?' both being 'Yes'. It also includes code to print the number of students with both conditions and to create another subset for panic attack treatment.
- Console:** Displays the output of the code, showing the creation of 'dep_anx_subset' and the summary of 'high_age_subset'.
- Environment:** Lists the objects in the global environment, including 'boston', 'dep_anx_subset', 'high_age_subset', 'mental', 'my_data', and 'Student_Mental_health.csv'.
- Files:** Shows the file explorer with various files and folders.

```
cat("Number of students with both Depression and Anxiety:", nrow(dep_anx_subset), "\n")
```

The screenshot shows the RStudio interface with the following components:

- Source Editor:** Contains R code for creating a subset of the 'mental' dataset based on depression and anxiety status, and for printing the number of students with both conditions.
- Console:** Displays the output of the code, showing the creation of 'dep_anx_subset' and the summary of 'high_age_subset'.
- Environment:** Lists the objects in the global environment, including 'boston', 'dep_anx_subset', 'high_age_subset', 'mental', 'my_data', and 'Student_Mental_health.csv'.
- Files:** Shows the file explorer with various files and folders.

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head(dep_anx_subset)

The screenshot shows an RStudio session. The script editor contains the following code:

```
11 cat("Number of students with Age > 22:", nrow(high_age_subset), "\n")
12 summary(high_age_subset$Age)
13
14 dep_anx_subset <- subset(mental,
15   'do you have Depression?' == "Yes" &
16   'do you have Anxiety?' == "Yes")
17
18 cat("Number of students with both Depression and Anxiety:", nrow(dep_anx_subset), "\n")
19 head(dep_anx_subset)
20
21 panic_or_treated_subset <- subset(mental,
22   'do you have Panic attack?' == "Yes" |
23   'did you seek any specialist for a treatment?' == "Yes")
24
25
```

The console shows the output of the code:

```
R - R 4.5.2 ~\
> cat("Number of students with both Depression and Anxiety:", nrow(dep_anx_subset), "\n")
Number of students with both Depression and Anxiety: 18
> head(dep_anx_subset)
# A tibble: 6 x 11
  Timestamp      "Choose your gender" Age `what is your course?` `Your current year of Study`
  <chr>          <chr>          <dbl> <chr>          <chr>
1 8/7/2020 12:05 Male          19 BIT          Year 1
2 8/7/2020 12:52 Female        24 ENM          year 4
3 8/7/2020 13:07 Female        18 Marine science year 2
4 8/7/2020 13:17 Female        23 BCS          Year 3
5 8/7/2020 13:41 Male          18 Engineering   Year 2
6 8/7/2020 13:58 Female        24 BIT          Year 3
# 6 more variables: `What is your CGPA?` <chr>, `Marital status` <chr>,
# `do you have Depression?` <chr>, `do you have Anxiety?` <chr>, `do you have Panic attack?` <chr>,
# `did you seek any specialist for a treatment?` <chr>
>
```

The Environment pane on the right shows the following data objects:

Object	Size	Modified
boston	101 obs. of 11 variables	
dep_anx_subset	18 obs. of 11 variables	
high_age_subset	36 obs. of 11 variables	
mental	101 obs. of 11 variables	
my_data	2500 obs. of 10 variables	
Student_Ment...	101 obs. of 11 variables	

panic_or_treated_subset <- subset(mental,
`Do you have Panic attack?` == "Yes" |
`Did you seek any specialist for a treatment?` == "Yes")

The screenshot shows an RStudio session. The script editor contains the following code:

```
16   'do you have Anxiety?' == "Yes")
17
18 cat("Number of students with both Depression and Anxiety:", nrow(dep_anx_subset), "\n")
19 head(dep_anx_subset)
20
21 panic_or_treated_subset <- subset(mental,
22   'do you have Panic attack?' == "Yes" |
23   'did you seek any specialist for a treatment?' == "Yes")
24
25 cat("Number of students with Panic attack or who took treatment:", nrow(panic_or_treated_subset), "\n")
26 head(panic_or_treated_subset)
27
28 young_students_filter <- mental |>
29   filter(Age < 20)
30
31
```

The console shows the output of the code:

```
R - R 4.5.2 ~\
> head(dep_anx_subset)
# A tibble: 6 x 11
  Timestamp      "Choose your gender" Age `what is your course?` `Your current year of Study`
  <chr>          <chr>          <dbl> <chr>          <chr>
1 8/7/2020 12:05 Male          19 BIT          Year 1
2 8/7/2020 12:52 Female        24 ENM          year 4
3 8/7/2020 13:07 Female        18 Marine science year 2
4 8/7/2020 13:17 Female        23 BCS          Year 3
5 8/7/2020 13:41 Male          18 Engineering   Year 2
6 8/7/2020 13:58 Female        24 BIT          Year 3
# 6 more variables: `What is your CGPA?` <chr>, `Marital status` <chr>,
# `do you have Depression?` <chr>, `do you have Anxiety?` <chr>, `do you have Panic attack?` <chr>,
# `did you seek any specialist for a treatment?` <chr>
> panic_or_treated_subset <- subset(mental,
>   'do you have Panic attack?' == "Yes" |
>   'did you seek any specialist for a treatment?' == "Yes")
>
```

The Environment pane on the right shows the following data objects:

Object	Size	Modified
boston	101 obs. of 11 variables	
dep_anx_subset	18 obs. of 11 variables	
high_age_subset	36 obs. of 11 variables	
mental	101 obs. of 11 variables	
my_data	2500 obs. of 10 variables	
panic_or_tre...	35 obs. of 11 variables	
Student Ment...	101 obs. of 11 variables	

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```
cat("Number of students with Panic attack or who took treatment:", nrow(panic_or_treated_subset),  
"\n")
```

The screenshot shows the RStudio interface. The script editor contains the following code:

```
16      'do you have Anxiety?' == "Yes")  
17  
18      cat("Number of students with both Depression and Anxiety:", nrow(dep_anx_subset), "\n")  
19      head(dep_anx_subset)  
20  
21      panic_or_treated_subset <- subset(mental,  
22      'do you have Panic attack?' == "Yes" |  
23      'did you seek any specialist for a treatment?' == "Yes")  
24  
25      cat("Number of students with Panic attack or who took treatment:", nrow(panic_or_treated_subset), "\n")  
26      head(panic_or_treated_subset)  
27  
28      young_students_filter <- mental |>  
29      filter(Age < 20)  
30
```

The console output shows the result of the `head(dep_anx_subset)` command:

```
> head(dep_anx_subset)  
# A tibble: 6 x 11  
  Timestamp      'Choose your gender' Age 'what is your course?' 'Your current year of Study'  
  <chr>          <chr>          <dbl> <chr>          <chr>  
1 8/7/2020 12:05 Male          19 BIT          year 1  
2 8/7/2020 12:52 Female        24 ENM          year 4  
3 8/7/2020 13:07 Female        18 Marine science year 2  
4 8/7/2020 13:17 Female        23 BCS          year 3  
5 8/7/2020 13:41 Male          18 Engineering  year 2  
6 8/7/2020 13:58 Female        24 BIT          year 3  
# 6 more variables: 'What is your CGPA?' <chr>, 'Marital status' <chr>,  
# 'do you have Depression?' <chr>, 'do you have Anxiety?' <chr>, 'do you have Panic attack?' <chr>,  
# 'did you seek any specialist for a treatment?' <chr>  
> panic_or_treated_subset <- subset(mental,  
+ 'do you have Panic attack?' == "Yes" |  
+ 'did you seek any specialist for a treatment?' == "Yes")  
> |
```

The Environment pane on the right shows the following data objects:

Object	Size	Modified
boston	101 obs. of 11 variables	
dep_anx_subset	18 obs. of 11 variables	
high_age_subset	36 obs. of 11 variables	
mental	101 obs. of 11 variables	
my_data	2500 obs. of 10 variables	
panic_or_treated_subset	35 obs. of 11 variables	
Student_Mental_health	101 obs. of 11 variables	

```
head(panic_or_treated_subset)
```

The screenshot shows the RStudio interface. The script editor contains the following code:

```
19      head(dep_anx_subset)  
20  
21      panic_or_treated_subset <- subset(mental,  
22      'do you have Panic attack?' == "Yes" |  
23      'did you seek any specialist for a treatment?' == "Yes")  
24  
25      cat("Number of students with Panic attack or who took treatment:", nrow(panic_or_treated_subset), "\n")  
26      head(panic_or_treated_subset)  
27  
28      young_students_filter <- mental |>  
29      filter(Age < 20)  
30  
31      cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")  
32      summary(young_students_filter$Age)  
33
```

The console output shows the result of the `head(panic_or_treated_subset)` command:

```
> head(panic_or_treated_subset)  
# A tibble: 6 x 11  
  Timestamp      'Choose your gender' Age 'what is your course?' 'Your current year of Study'  
  <chr>          <chr>          <dbl> <chr>          <chr>  
1 8/7/2020 12:02 Female        18 Engineering  year 1  
2 8/7/2020 12:05 Male          19 BIT          year 1  
3 8/7/2020 12:31 Male          19 Engineering  year 2  
4 8/7/2020 12:32 Female        23 Pendidikan islam year 2  
5 8/7/2020 12:39 Male          18 Irkhis        year 1  
6 8/7/2020 12:52 Female        24 ENM          year 4  
# 6 more variables: 'What is your CGPA?' <chr>, 'Marital status' <chr>,  
# 'do you have Depression?' <chr>, 'do you have Anxiety?' <chr>, 'do you have Panic attack?' <chr>,  
# 'did you seek any specialist for a treatment?' <chr>  
> |
```

The Environment pane on the right shows the following data objects:

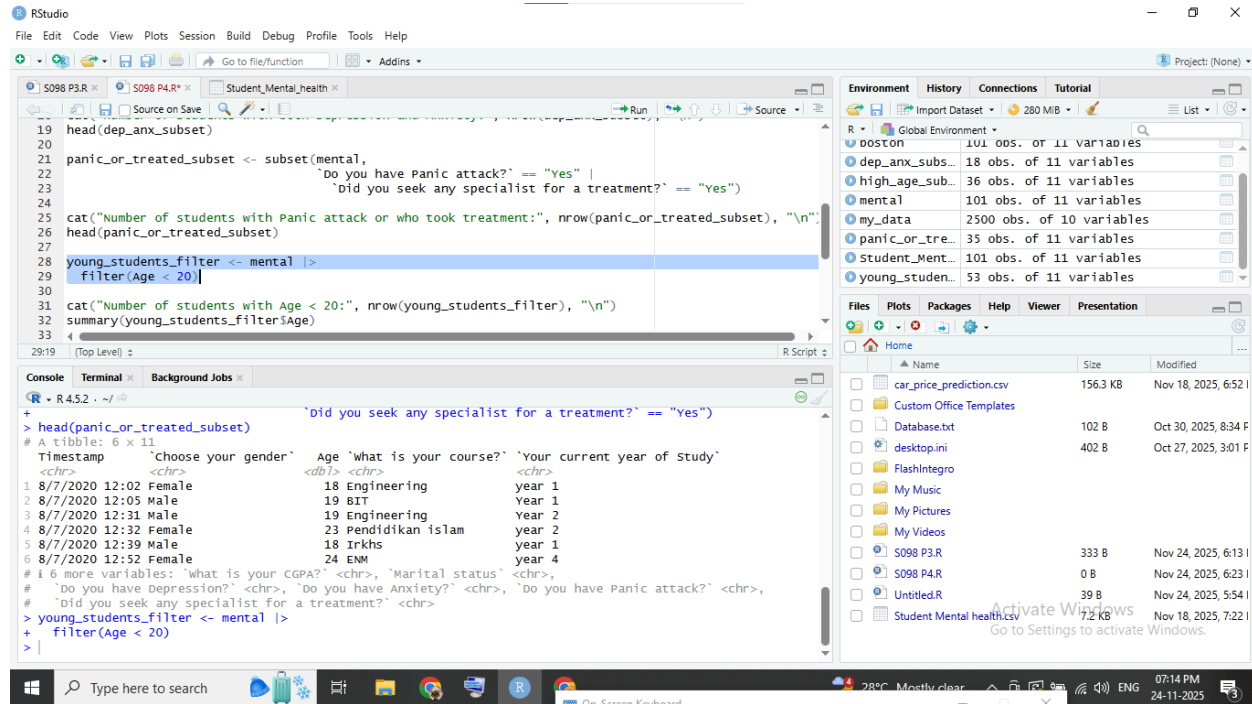
Object	Size	Modified
boston	101 obs. of 11 variables	
dep_anx_subset	18 obs. of 11 variables	
high_age_subset	36 obs. of 11 variables	
mental	101 obs. of 11 variables	
my_data	2500 obs. of 10 variables	
panic_or_treated_subset	35 obs. of 11 variables	
Student_Mental_health	101 obs. of 11 variables	

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```
young_students_filter <- mental |>
filter(Age < 20)
```

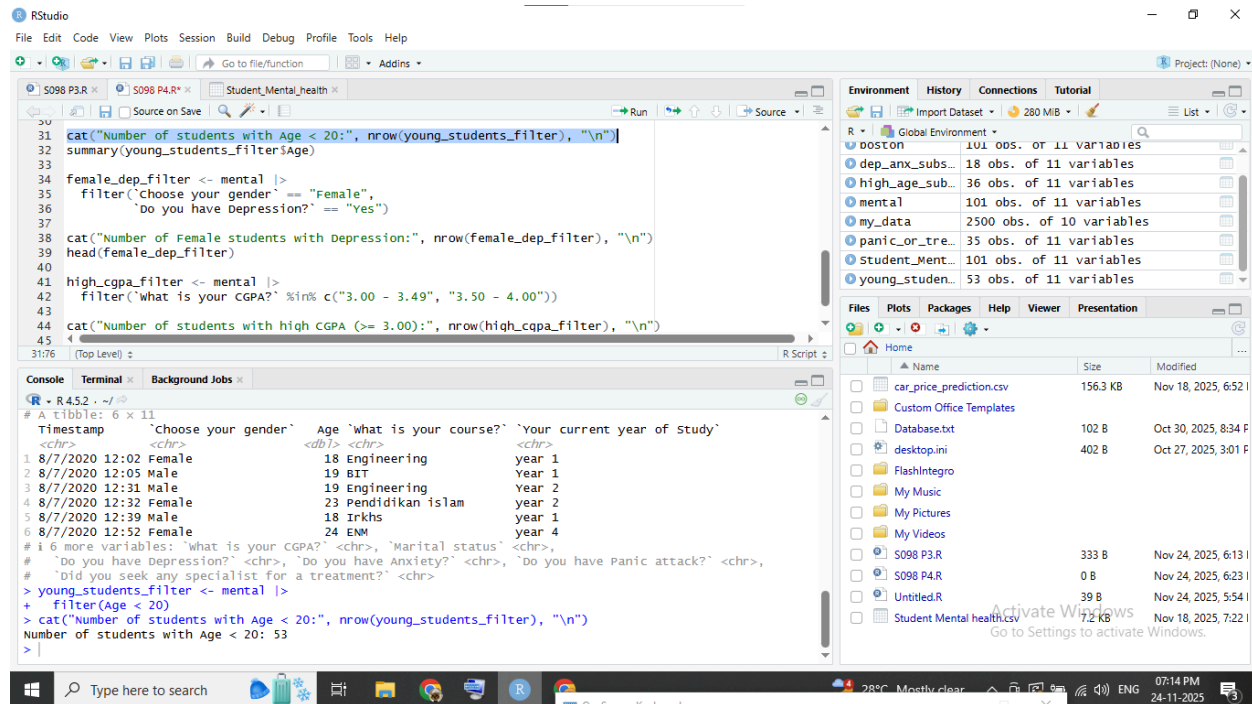


```
19 head(dep_anx_subset)
20
21 panic_or_treated_subset <- subset(mental,
22   'do you have Panic attack?' == "Yes" |
23   'did you seek any specialist for a treatment?' == "Yes")
24
25 cat("Number of students with Panic attack or who took treatment:", nrow(panic_or_treated_subset), "\n")
26 head(panic_or_treated_subset)
27
28 young_students_filter <- mental |>
29   filter(Age < 20)
30
31 cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")
32 summary(young_students_filter$Age)
33
```

Console output:

```
> head(panic_or_treated_subset)
# A tibble: 6 x 11
  Timestamp      "choose your gender" Age "what is your course?" "Your current year of Study"
  <chr>          <chr>          <dbl> <chr>          <chr>
1 8/7/2020 12:02 Female          18 Engineering          year 1
2 8/7/2020 12:05 Male          19 BIT                    Year 1
3 8/7/2020 12:31 Male          19 Engineering          Year 2
4 8/7/2020 12:32 Female        23 Pendidikan islam      year 2
5 8/7/2020 12:39 Male          18 Irkhs                  year 1
6 8/7/2020 12:52 Female        24 ENM                    year 4
```

```
cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")
```



```
31 cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")
32 summary(young_students_filter$Age)
33
34 female_dep_filter <- mental |>
35   filter("choose your gender" == "Female",
36   'do you have Depression?' == "Yes")
37
38 cat("Number of Female students with Depression:", nrow(female_dep_filter), "\n")
39 head(female_dep_filter)
40
41 high_cgpa_filter <- mental |>
42   filter("what is your CGPA?" %in% c("3.00 - 3.49", "3.50 - 4.00"))
43
44 cat("Number of students with high CGPA (>= 3.00):", nrow(high_cgpa_filter), "\n")
45
```

Console output:

```
> cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")
Number of students with Age < 20: 53
```


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summary(young_students_filter\$Age)

The screenshot shows the RStudio interface with the following code in the script editor:

```
30  
31 cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")  
32 summary(young_students_filter$Age)  
33  
34 female_dep_filter <- mental |>  
35   filter('choose your gender' == "Female",  
36         'do you have Depression?' == "Yes")  
37  
38 cat("Number of Female students with Depression:", nrow(female_dep_filter), "\n")  
39 head(female_dep_filter)  
40  
41 high_cgpa_filter <- mental |>  
42   filter('what is your CGPA?' %in% c("3.00 - 3.49", "3.50 - 4.00"))  
43  
44 cat("Number of students with high CGPA (>= 3.00):", nrow(high_cgpa_filter), "\n")  
45
```

The console output shows the execution of the code:

```
R - R4.5.2 ~ /  
1 8/7/2020 12:02 Female      18 Engineering      year 1  
2 8/7/2020 12:05 Male       19 BIT              year 1  
3 8/7/2020 12:31 Male       19 Engineering      year 2  
4 8/7/2020 12:32 Female     23 Pendidikan islam year 2  
5 8/7/2020 12:39 Male       18 Irkhs             year 1  
6 8/7/2020 12:52 Female     24 ENM              year 4  
# 6 more variables: 'what is your CGPA?' <chr>, 'Marital status' <chr>,  
# 'do you have Depression?' <chr>, 'do you have Anxiety?' <chr>, 'do you have Panic attack?' <chr>,  
# 'did you seek any specialist for a treatment?' <chr>  
> young_students_filter <- mental |>  
>   filter(Age < 20)  
> cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")  
Number of students with Age < 20: 53  
> summary(young_students_filter$Age)  
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.   
  18.0   18.0   18.0   18.4   19.0   19.0   
>
```

```
female_dep_filter <- mental |>  
  filter('Choose your gender' == "Female",  
        'Do you have Depression?' == "Yes")
```

The screenshot shows the RStudio interface with the following code in the script editor:

```
31 cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")  
32 summary(young_students_filter$Age)  
33  
34 female_dep_filter <- mental |>  
35   filter('choose your gender' == "Female",  
36         'do you have Depression?' == "Yes")  
37  
38 cat("Number of Female students with Depression:", nrow(female_dep_filter), "\n")  
39 head(female_dep_filter)  
40  
41 high_cgpa_filter <- mental |>  
42   filter('what is your CGPA?' %in% c("3.00 - 3.49", "3.50 - 4.00"))  
43  
44 cat("Number of students with high CGPA (>= 3.00):", nrow(high_cgpa_filter), "\n")  
45
```

The console output shows the execution of the code:

```
R - R4.5.2 ~ /  
4 8/7/2020 12:32 Female      23 Pendidikan islam year 2  
5 8/7/2020 12:39 Male       18 Irkhs             year 1  
6 8/7/2020 12:52 Female     24 ENM              year 4  
# 6 more variables: 'what is your CGPA?' <chr>, 'Marital status' <chr>,  
# 'do you have Depression?' <chr>, 'do you have Anxiety?' <chr>, 'do you have Panic attack?' <chr>,  
# 'did you seek any specialist for a treatment?' <chr>  
> young_students_filter <- mental |>  
>   filter(Age < 20)  
> cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")  
Number of students with Age < 20: 53  
> summary(young_students_filter$Age)  
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.   
  18.0   18.0   18.0   18.4   19.0   19.0   
> female_dep_filter <- mental |>  
>   filter('Choose your gender' == "Female",  
>         'Do you have Depression?' == "Yes")  
>
```

Vikas Pal
S098

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cat("Number of Female students with Depression:", nrow(female_dep_filter), "\n")

The screenshot shows the RStudio interface with the following components:

- Source Editor:** Contains R code for filtering data. The line `cat("Number of Female students with Depression:", nrow(female_dep_filter), "\n")` is highlighted.
- Console:** Displays the output of the code execution, including the number of female students with depression (29).
- Environment:** Lists the objects in the global environment, including `female_dep_filter` with 29 observations.
- Files:** Shows the file explorer with various files and folders.

```
30 cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")
31 summary(young_students_filter$Age)
32
33 female_dep_filter <- mental |>
34   filter('choose your gender' == "Female",
35         'do you have Depression?' == "Yes")
36
37 cat("Number of Female students with Depression:", nrow(female_dep_filter), "\n")
38 head(female_dep_filter)
39
40 high_cgpa_filter <- mental |>
41   filter('what is your CGPA?' %in% c("3.00 - 3.49", "3.50 - 4.00"))
42
43 cat("Number of students with high CGPA (>= 3.00):", nrow(high_cgpa_filter), "\n")
44
45 # (Top Level) >
```

Console Output:

```
R - R 4.5.2 ~ /
8/7/2020 12:52 Female 24 ENM year 4
# 6 more variables: 'what is your CGPA?' <chr>, 'Marital status' <chr>,
# 'do you have Depression?' <chr>, 'do you have Anxiety?' <chr>, 'do you have Panic attack?' <chr>,
# 'did you seek any specialist for a treatment?' <chr>
> young_students_filter <- mental |>
+ filter(Age < 20)
> cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")
Number of students with Age < 20: 53
> summary(young_students_filter$Age)
   Min. 1st Qu.  Median    Mean 3rd Qu.    Max.
   18.0   18.0   18.0   18.4   19.0   19.0
> female_dep_filter <- mental |>
+ filter('choose your gender' == "Female",
+       'do you have Depression?' == "Yes")
> cat("Number of Female students with Depression:", nrow(female_dep_filter), "\n")
Number of Female students with Depression: 29
>
```

head(female_dep_filter)

The screenshot shows the RStudio interface with the following components:

- Source Editor:** Contains R code for filtering data. The line `head(female_dep_filter)` is highlighted.
- Console:** Displays the output of the code execution, showing the first few rows of the filtered data.
- Environment:** Lists the objects in the global environment, including `female_dep_filter` with 29 observations.
- Files:** Shows the file explorer with various files and folders.

```
30 cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")
31 summary(young_students_filter$Age)
32
33 female_dep_filter <- mental |>
34   filter('choose your gender' == "Female",
35         'do you have Depression?' == "Yes")
36
37 cat("Number of Female students with Depression:", nrow(female_dep_filter), "\n")
38 head(female_dep_filter)
39
40 high_cgpa_filter <- mental |>
41   filter('what is your CGPA?' %in% c("3.00 - 3.49", "3.50 - 4.00"))
42
43 cat("Number of students with high CGPA (>= 3.00):", nrow(high_cgpa_filter), "\n")
44
45 # (Top Level) >
```

Console Output:

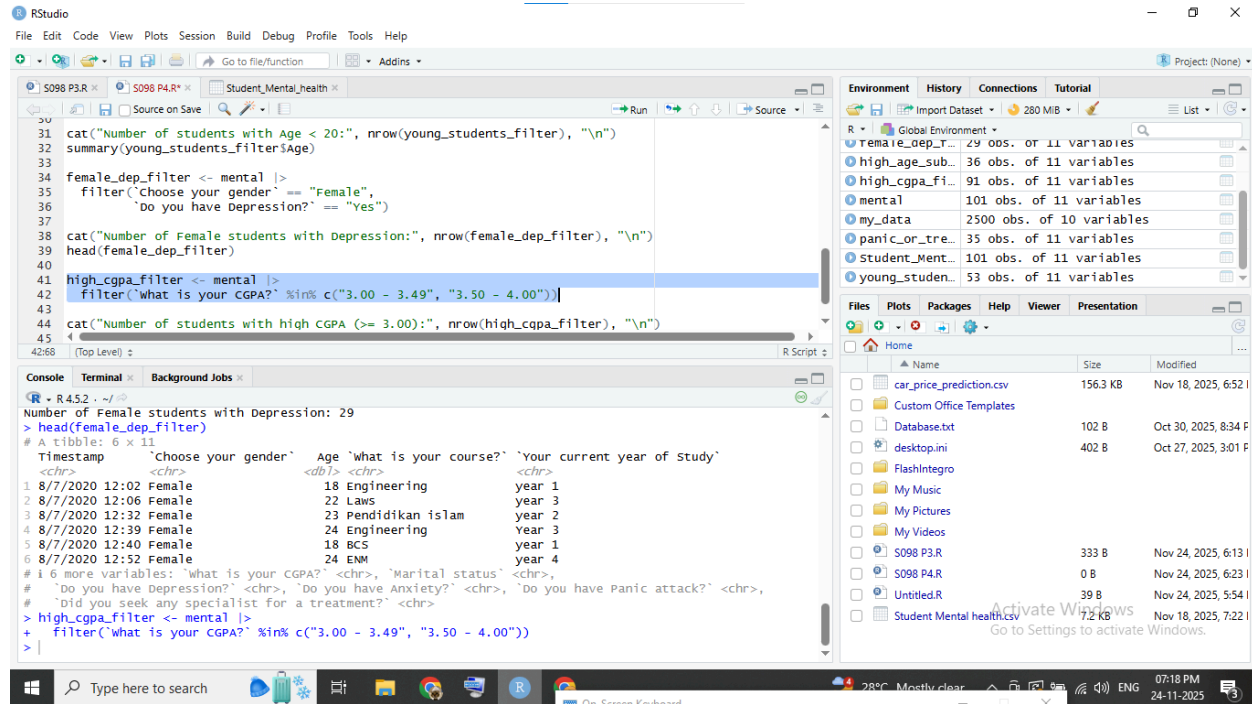
```
R - R 4.5.2 ~ /
+ 'do you have Depression?' == "Yes")
> cat("Number of Female students with Depression:", nrow(female_dep_filter), "\n")
Number of Female students with Depression: 29
> head(female_dep_filter)
# A tibble: 6 x 11
  Timestamp    "Choose your gender" Age "what is your course?" "Your current year of Study"
  <chr>      <chr>          <dbl> <chr>          <chr>
1 8/7/2020 12:02 Female      18 Engineering      year 1
2 8/7/2020 12:06 Female      22 Laws              year 3
3 8/7/2020 12:32 Female      23 Pendidikan islam year 2
4 8/7/2020 12:39 Female      24 Engineering      year 3
5 8/7/2020 12:40 Female      18 BCS              year 1
6 8/7/2020 12:52 Female      24 ENM              year 4
# 6 more variables: 'what is your CGPA?' <chr>, 'Marital status' <chr>,
# 'do you have Depression?' <chr>, 'do you have Anxiety?' <chr>, 'do you have Panic attack?' <chr>,
# 'did you seek any specialist for a treatment?' <chr>
>
```

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```
high_cgpa_filter <- mental |>
```

```
filter(`What is your CGPA?` %in% c("3.00 - 3.49", "3.50 - 4.00"))
```



```
31 cat("Number of students with Age < 20:", nrow(young_students_filter), "\n")
32 summary(young_students_filter$Age)
33
34 female_dep_filter <- mental |>
35   filter(`choose your gender` == "Female",
36         `do you have Depression?` == "Yes")
37
38 cat("Number of Female students with Depression:", nrow(female_dep_filter), "\n")
39 head(female_dep_filter)
40
41 high_cgpa_filter <- mental |>
42   filter(`what is your CGPA?` %in% c("3.00 - 3.49", "3.50 - 4.00"))
43
44 cat("Number of students with high CGPA (>= 3.00):", nrow(high_cgpa_filter), "\n")
45
```

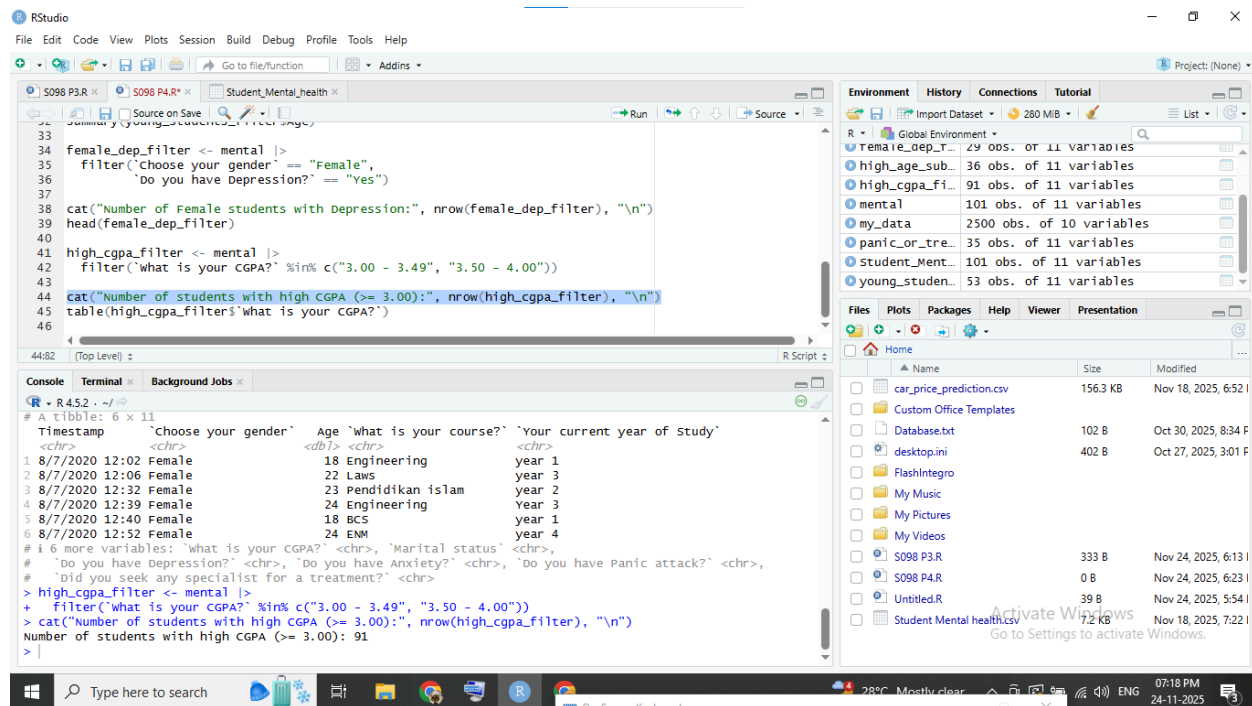
Console

```
R - R4.5.2 ~ /
> # Number of Female students with Depression: 29
> head(female_dep_filter)
# A tibble: 6 x 11
  timestamp      `choose your gender` Age `what is your course?` `Your current year of Study`
  <chr>          <chr>          <dbl> <chr>          <chr>
1 8/7/2020 12:02 Female             18 Engineering          year 1
2 8/7/2020 12:06 Female             22 Laws                 year 3
3 8/7/2020 12:32 Female             23 Pendidikan islam     year 2
4 8/7/2020 12:39 Female             24 Engineering          year 3
5 8/7/2020 12:40 Female             18 BCS                  year 1
6 8/7/2020 12:52 Female             24 ENM                  year 4
# 6 more variables: `what is your CGPA?` <chr>, `Marital status` <chr>,
# `do you have Depression?` <chr>, `do you have Anxiety?` <chr>, `do you have Panic attack?` <chr>,
# `did you seek any specialist for a treatment?` <chr>
> high_cgpa_filter <- mental |>
>   filter(`what is your CGPA?` %in% c("3.00 - 3.49", "3.50 - 4.00"))
> |
```

Environment

Object	Class	Attributes
female_dep_filter	tibble	29 obs. of 11 variables
high_age_sub	tibble	36 obs. of 11 variables
high_cgpa_filter	tibble	91 obs. of 11 variables
mental	tibble	101 obs. of 11 variables
my_data	tibble	2500 obs. of 10 variables
panic_or_tre	tibble	35 obs. of 11 variables
Student_Ment	tibble	101 obs. of 11 variables
young_studen	tibble	53 obs. of 11 variables

```
cat("Number of students with high CGPA (>= 3.00):", nrow(high_cgpa_filter), "\n")
```



```
41 high_cgpa_filter <- mental |>
42   filter(`what is your CGPA?` %in% c("3.00 - 3.49", "3.50 - 4.00"))
43
44 cat("Number of students with high CGPA (>= 3.00):", nrow(high_cgpa_filter), "\n")
45 table(high_cgpa_filter$`what is your CGPA?`)
46
```

Console

```
R - R4.5.2 ~ /
> # Number of Female students with Depression: 29
> head(female_dep_filter)
# A tibble: 6 x 11
  timestamp      `choose your gender` Age `what is your course?` `Your current year of Study`
  <chr>          <chr>          <dbl> <chr>          <chr>
1 8/7/2020 12:02 Female             18 Engineering          year 1
2 8/7/2020 12:06 Female             22 Laws                 year 3
3 8/7/2020 12:32 Female             23 Pendidikan islam     year 2
4 8/7/2020 12:39 Female             24 Engineering          year 3
5 8/7/2020 12:40 Female             18 BCS                  year 1
6 8/7/2020 12:52 Female             24 ENM                  year 4
# 6 more variables: `what is your CGPA?` <chr>, `Marital status` <chr>,
# `do you have Depression?` <chr>, `do you have Anxiety?` <chr>, `do you have Panic attack?` <chr>,
# `did you seek any specialist for a treatment?` <chr>
> high_cgpa_filter <- mental |>
>   filter(`what is your CGPA?` %in% c("3.00 - 3.49", "3.50 - 4.00"))
> cat("Number of students with high CGPA (>= 3.00):", nrow(high_cgpa_filter), "\n")
Number of students with high CGPA (>= 3.00): 91
> |
```

Environment

Object	Class	Attributes
female_dep_filter	tibble	29 obs. of 11 variables
high_age_sub	tibble	36 obs. of 11 variables
high_cgpa_filter	tibble	91 obs. of 11 variables
mental	tibble	101 obs. of 11 variables
my_data	tibble	2500 obs. of 10 variables
panic_or_tre	tibble	35 obs. of 11 variables
Student_Ment	tibble	101 obs. of 11 variables
young_studen	tibble	53 obs. of 11 variables

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table(high_cgpa_filter\$`What is your CGPA?`)

The screenshot displays the RStudio environment with the following components:

- Source Editor:** Contains R code for filtering data based on gender and CGPA.
- Environment Pane:** Lists loaded objects including 'female_dep_filter', 'high_cgpa_filter', and 'mental'.
- Console:** Shows the execution of the code, including the output of the 'table' function.

R Code in Source Editor:

```
33 female_dep_filter <- mental |>
34   filter('Choose your gender' == "Female",
35         'do you have Depression?' == "Yes")
36
37
38 cat("Number of Female students with Depression:", nrow(female_dep_filter), "\n")
39 head(female_dep_filter)
40
41 high_cgpa_filter <- mental |>
42   filter('what is your CGPA?' %in% c("3.00 - 3.49", "3.50 - 4.00"))
43
44 cat("Number of students with high CGPA (>= 3.00):", nrow(high_cgpa_filter), "\n")
45 table(high_cgpa_filter$`What is your CGPA?`)
46
```

Console Output:

```
2 8/7/2020 12:06 Female          22 Laws          year 3
3 8/7/2020 12:32 Female          23 Pendidikan islam year 2
4 8/7/2020 12:39 Female          24 Engineering    year 3
5 8/7/2020 12:40 Female          18 BCS           year 1
6 8/7/2020 12:52 Female          24 ENM           year 4
# i 6 more variables: 'what is your CGPA?' <chr>, 'Marital status' <chr>,
#   'do you have Depression?' <chr>, 'do you have Anxiety?' <chr>, 'do you have Panic attack?' <chr>,
#   'did you seek any specialist for a treatment?' <chr>
> high_cgpa_filter <- mental |>
+   filter('what is your CGPA?' %in% c("3.00 - 3.49", "3.50 - 4.00"))
> cat("Number of students with high CGPA (>= 3.00):", nrow(high_cgpa_filter), "\n")
Number of students with high CGPA (>= 3.00): 91
> table(high_cgpa_filter$`What is your CGPA?`)
3.00 - 3.49 3.50 - 4.00
      43      48
>
```

Environment Pane:

Object	Variables	Observations
female_dep_filter	11	29
high_age_sub...	11	36
high_cgpa_fi...	11	91
mental	11	101
my_data	10	2500
panic_or_tre...	11	35
student_Ment...	11	101
young_studen...	11	53

Files Pane:

Name	Size	Modified
car_price_prediction.csv	156.3 KB	Nov 18, 2025, 6:52 I
Custom Office Templates		
Database.txt	102 B	Oct 30, 2025, 8:34 P
desktop.ini	402 B	Oct 27, 2025, 3:01 P
FlashIntegro		
My Music		
My Pictures		
My Videos		
S098 P3.R	333 B	Nov 24, 2025, 6:13 I
S098 P4.R	0 B	Nov 24, 2025, 6:23 I
Untitled.R	39 B	Nov 24, 2025, 5:54 I
Student Mental health.cs	7.2 KB	Nov 18, 2025, 7:22 I