

MVLU COLLEGE

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

INPUT:

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
practica no4.R StudentMentalHealth
1 install.packages("dplyr")
2 install.packages("readr")
3
4 library(dplyr)
5 library(readr)
6
7 my_data <- read_csv("C:/Users/mvlu/OneDrive/Desktop/ankita tiwari/python/Student Mental Health.csv")
8
9 my_data <- my_data[, -1]
10
11 head(my_data)
12
13 # 1. Female students
14 female_students <- subset(my_data, 'choose your gender' == "Female")
15 cat("Number of female students:", nrow(female_students), "\n")
16 head(female_students)
17
18 depression_students <- subset(my_data, 'do you have Depression?' == "Yes")
19 cat("Number of students with depression:", nrow(depression_students), "\n")
20 head(depression_students)
21
22 senior_or_panic <- subset(my_data, 'your current year of Study' %in% c("year 3", "year 4") | 'do you have Panic attack?' == "Yes")
23 cat("Number of seniors or students with panic attacks:", nrow(senior_or_panic), "\n")
24 head(senior_or_panic)
25
26 high_cgpa <- my_data %>%
27   filter('what is your CGPA?' %in% c("3.50 - 3.99", "4.00"))
28 cat("Number of students with high CGPA:", nrow(high_cgpa), "\n")
29 head(high_cgpa)
30
31 married_treated <- my_data %>%
32   filter('Marital status' == "Yes", 'did you seek any specialist for a treatment?' == "Yes")
33 cat("Number of married students who sought treatment:", nrow(married_treated), "\n")
34 head(married_treated)
35
36 anxiety_panic <- my_data %>%
37   filter('Do you have Anxiety?' == "Yes", 'do you have Panic attack?' == "Yes")
38 cat("Number of students with both Anxiety and Panic attacks:", nrow(anxiety_panic), "\n")
39 head(anxiety_panic)
40
```

OUTPUT:

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
practica no4.R StudentMentalHealth
8 # Load your dataset
9 my_data <- read_csv("C:/Users/mvlu/OneDrive/Desktop/ankita tiwari/python/Student Mental Health.csv")
10
49/1 (Top Level) R Script
Console Terminal Background Jobs
R - R 4.1.2 - ~/R
>
> # Load your dataset
> my_data <- read_csv("C:/Users/mvlu/OneDrive/Desktop/ankita tiwari/python/Student Mental Health.csv")
Rows: 101 columns: 11
Column specification:
  delimiter: ","
chr (10): Timestamp, Choose your gender, what is your course?, your current year of Study, what is your CGPA?, Marital status, do you have Depression?, do you have Anxiety?, do you ha...
dbl (1): Age
i Use 'spec()' to retrieve the full column specification for this data.
i Specify the column types or set 'show_col_types = FALSE' to quiet this message.
>
> # Remove the first column if it's just an index
> my_data <- my_data[, -1]
>
> # View first few rows
> head(my_data)
# A tibble: 6 x 10
  'choose your gender' Age 'what is your course?' 'your current year of Study' 'what is your CGPA?' 'Marital status' Do you have Depressi-1 'Do you have Anxiety?' Do you have Panic at-2
  <chr> <dbl> <chr> <chr> <chr> <chr> <chr> <chr> <chr>
1 Female 18 Engineering year 1 3.00 - 3.49 No Yes No Yes
2 Male 21 Islamic education year 2 3.00 - 3.49 No No Yes No
3 Male 19 BIT year 1 3.00 - 3.49 No Yes Yes Yes
4 Female 22 Laws year 3 3.00 - 3.49 Yes Yes No No
5 Male 23 Mathematics year 4 3.00 - 3.49 No No No No
6 Male 19 Engineering Year 2 3.50 - 4.00 No No No Yes
# 1 abbreviated names: 1: 'do you have Depression?', 2: 'do you have Panic attack?'
# 1 more variable: 'did you seek any specialist for a treatment?' <chr>
>
> # 1. Female students
> female_students <- subset(my_data, 'Choose your gender' == "Female")
> cat("Number of female students:", nrow(female_students), "\n")
Number of female students: 75
> head(female_students)
# A tibble: 6 x 10
  'choose your gender' Age 'what is your course?' 'your current year of Study' 'what is your CGPA?' 'Marital status' Do you have Depressi-1 'Do you have Anxiety?' Do you have Panic at-2
  <chr> <dbl> <chr> <chr> <chr> <chr> <chr> <chr> <chr>
1 Female 18 Engineering year 1 3.00 - 3.49 No Yes No Yes
```

ANKITA TIWARI

SYCS

S122

Data Analysis with SAS / SPSS /R PRACTICAL NO.4

MVLU COLLEGE

The screenshot displays the RStudio environment with the following components:

- Menu Bar:** File, Edit, Code View, Plots, Session, Build, Debug, Profile, Tools, Help.
- Toolbar:** Includes icons for file operations (Open, Save, Print), navigation (Go to file/function), and project management (Project: None).
- Source Editor:** Contains R code for loading a dataset from a CSV file located at "C:/Users/mvluc/OneDrive/Desktop/ankita tiwari/python/Student Mental Health.csv". The code includes comments and variable assignments like `my_data` and `depression_students`.
- Console:** Shows the execution results of the code. It displays the dimensions of the loaded data (A tibble: 6 x 10) and the resulting data frame after filtering for students with depression. The output shows columns for gender, age, year, GPA, marital status, and various anxiety/depression indicators.

```
R> # Load your dataset
9 my_data <- read_csv("C:/Users/mvluc/OneDrive/Desktop/ankita tiwari/python/Student Mental Health.csv")
10
11 (Top Level) +

Console Terminal Background Jobs

R> R412 ~ ./
2 female      23 Pendidikan islam   year 2     3.00 - 3.49    Yes    YES    NO    NO
3 female      18 BCS              year 1     3.50 - 4.00    Yes    YES    NO    YES
4 female      19 Human Resources    year 2     2.50 - 2.99    No     NO     NO    NO
5 female      20 Psychology          year 1     3.50 - 4.00    No     NO     NO    NO
# 4 abbreviated names: 1: 'do you have Depression?', 2: 'do you have Panic attack?'
# 1 more variable: 'did you seek any specialist for a treatment?' <chr>
>
> # 2. Students with Depression
> depression_students <- subset(my_data, 'Do you have Depression?' == "Yes")
> cat("Number of students with depression:", nrow(depression_students), "\n")
Number of students with depression: 35
> head(depression_students)
# A tibble: 6 x 10
  choose your gender Age what is your course? Your current year of study what is your CGPA? Marital status Do you have Depressi-1 Do you have Anxiety? Do you have Panic at-2
<chr> <chr> <chr> <chr> <chr> <chr> <chr> <chr> <chr>
1 Female      18 Engineering        year 1     3.00 - 3.49    No     Yes    No    Yes
2 Male       19 BIT              year 1     3.00 - 3.49    No     Yes    No    Yes
3 Female      22 Laws              year 3     3.00 - 3.49    Yes    Yes    No    No
4 Female      23 Pendidikan islam   year 2     3.50 - 4.00    Yes    Yes    No    No
5 Female      24 Engineering        year 3     3.50 - 4.00    Yes    Yes    No    No
6 Female      18 BCS              year 1     3.00 - 3.49    No     Yes    No    No
# 4 abbreviated names: 1: 'do you have Depression?', 2: 'do you have Panic attack?'
# 1 more variable: 'did you seek any specialist for a treatment?' <chr>
>
> # 3. Students in year 3 or 4 OR have Panic attacks
> senior_or_panic <- subset(my_data, 'Your current year of study' %in% c("year 3", "year 4") | 'do you have Panic attack?' == "Yes")
> cat("Number of seniors or students with panic attacks:", nrow(senior_or_panic), "\n")
Number of seniors or students with panic attacks: 43
> head(senior_or_panic)
# A tibble: 6 x 10
  choose your gender Age what is your course? Your current year of study what is your CGPA? Marital status Do you have Depressi-1 Do you have Anxiety? Do you have Panic at-2
<chr> <chr> <chr> <chr> <chr> <chr> <chr> <chr> <chr>
1 Female      18 Engineering        year 1     3.00 - 3.49    No     Yes    No    Yes
2 Male       19 BIT              year 1     3.00 - 3.49    No     Yes    Yes    Yes
3 Female      22 Laws              year 3     3.00 - 3.49    Yes    Yes    No    No
4 Male       23 Mathematics      year 4     3.00 - 3.49    No     No     No    No
5 Male       19 Engineering        year 2     3.50 - 4.00    No     No     No    Yes
```

```

File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins
practica no.4.R Student.Mental.health
# Load your dataset
my_data <- read_csv("C:/Users/mv/luc/OneDrive/Desktop/ankita tiwari/python/Student Mental Health.csv")
# 10 variables: Choose your gender <chr>, Age <dbl>, what is your course? <chr>, Your current year of study <chr>, 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>
>
> # 5. Married students who have sought specialist treatment
> married_treated <- my_data %>%
+ filter('Marital status' == "Yes", 'did you seek any specialist for a treatment?' == "Yes")
> cat("Number of married students who sought treatment:", nrow(married_treated), "\n")
Number of married students who sought treatment: 4
> head(married_treated)
# A tibble: 4 x 10
  'choose your gender' Age 'what is your course?' 'Your current year of study' 'what is your CGPA?' 'Marital status' Do you have Depressi-1 'Do you have Anxiety?' Do you have Panic at-2
  <chr> <dbl> <chr> <chr> <chr> <chr> <chr> <chr> <chr>
1 Female 24 BIT Year 3 3.50 - 4.00 Yes Yes Yes Yes
2 Male 18 BCS Year 2 3.50 - 4.00 Yes Yes Yes No
3 Female 24 Engineering Year 2 2.50 - 2.99 Yes Yes No Yes
4 Female 23 ALA Year 1 2.50 - 2.99 Yes Yes No Yes
# 4 abbreviated names: 1: 'do you have Depression?', 2: 'Do you have Panic attack?'
# 1 more variable: 'did you seek any specialist for a treatment?' <chr>
>
> # 6. Students with both Anxiety and Panic attacks
> anxiety_panic <- my_data %>%
+ filter('do you have Anxiety?' == "Yes", 'do you have Panic attack?' == "Yes")
> cat("Number of students with both Anxiety and Panic attacks:", nrow(anxiety_panic), "\n")
Number of students with both Anxiety and Panic attacks: 13
> head(anxiety_panic)
# A tibble: 6 x 10
  'choose your gender' Age 'what is your course?' 'Your current year of study' 'what is your CGPA?' 'Marital status' Do you have Depressi-1 'Do you have Anxiety?' Do you have Panic at-2
  <chr> <dbl> <chr> <chr> <chr> <chr> <chr> <chr> <chr>
1 Male 19 BIT Year 1 3.00 - 3.49 No Yes Yes Yes
2 Male 18 Irkhs Year 1 3.50 - 4.00 No Yes Yes Yes
3 Female 24 ENM Year 4 3.00 - 3.49 Yes Yes Yes Yes
4 Female 18 Marine science Year 2 3.50 - 4.00 Yes Yes Yes Yes
5 Female 23 BCS Year 3 3.50 - 4.00 No Yes Yes Yes
6 Female 24 BIT Year 3 3.50 - 4.00 Yes Yes Yes Yes
# 4 abbreviated names: 1: 'do you have Depression?', 2: 'Do you have Panic attack?'
# 1 more variable: 'did you seek any specialist for a treatment?' <chr>
>

```

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