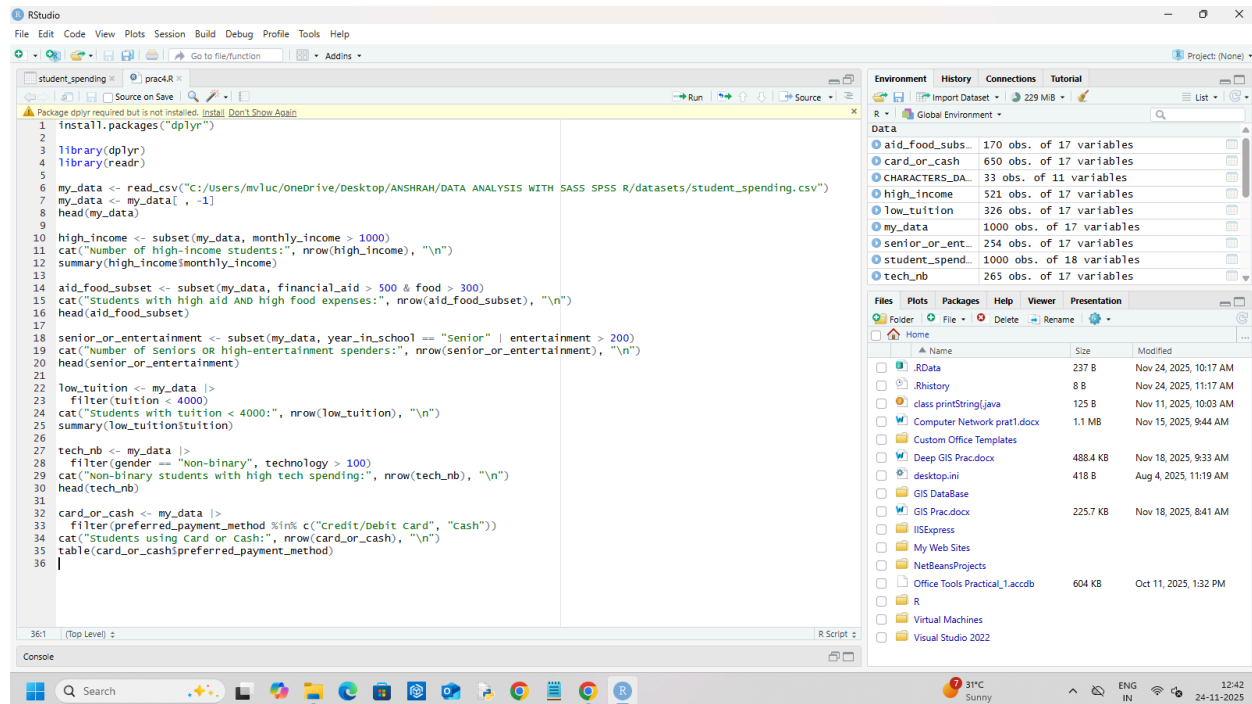


# MVLU COLLEGE

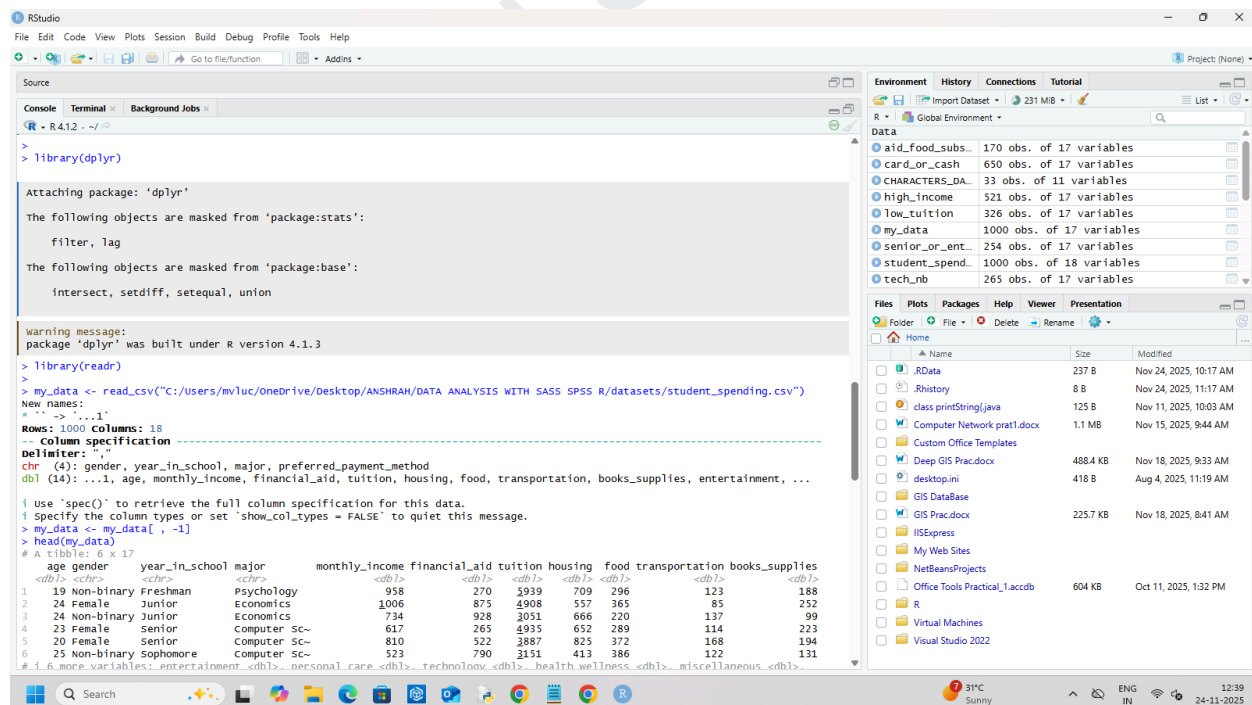
AIM: Applying conditional filters subset() or filter() in R.

INPUT:



```
1 install.packages("dplyr")
2
3 library(dplyr)
4 library(readr)
5
6 my_data <- read_csv("C:/Users/mvluc/OneDrive/Desktop/ANSHRAH/DATA ANALYSIS WITH SAS SPSS R/datasets/student_spending.csv")
7 my_data <- my_data[, -1]
8 head(my_data)
9
10 high_income <- subset(my_data, monthly_income > 1000)
11 cat("Number of Seniors or high-income students:", nrow(high_income), "\n")
12 summary(high_income$monthly_income)
13
14 aid_food_subset <- subset(my_data, financial_aid > 500 & food > 300)
15 cat("Students with high aid AND high food expenses:", nrow(aid_food_subset), "\n")
16 head(aid_food_subset)
17
18 senior_or_entertainment <- subset(my_data, year_in_school == "Senior" | entertainment > 200)
19 cat("Number of Seniors or high-entertainment spenders:", nrow(senior_or_entertainment), "\n")
20 head(senior_or_entertainment)
21
22 low_tuition <- my_data |>
23 filter(tuition < 4000)
24 cat("Students with tuition < 4000:", nrow(low_tuition), "\n")
25 summary(low_tuition$tuition)
26
27 tech_nb <- my_data |>
28 filter(gender == "Non-binary", technology > 100)
29 cat("Non-binary students with high tech spending:", nrow(tech_nb), "\n")
30 head(tech_nb)
31
32 card_or_cash <- my_data |>
33 filter(preferred_payment_method %in% c("Credit/Debit Card", "Cash"))
34 cat("Students using card or cash:", nrow(card_or_cash), "\n")
35 table(card_or_cash$preferred_payment_method)
36
```

OUTPUT:



```
> 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

warning message:
package 'dplyr' was built under R version 4.1.3
> library(readr)
> my_data <- read_csv("C:/Users/mvluc/OneDrive/Desktop/ANSHRAH/DATA ANALYSIS WITH SAS SPSS R/datasets/student_spending.csv")
New names:
  * '' -> ''
Rows: 1000 columns: 18
# A tibble: 1000 x 18
  age gender year_in_school major monthly_income financial_aid tuition housing food transportation books_supplies
  <dbl> <chr> <chr> <chr> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>
1 19 Non-binary Freshman Psychology 958 270 939 709 296 123 188
2 24 Female Junior Economics 1006 875 4908 557 365 85 252
3 24 Non-binary Junior Economics 734 928 2051 666 220 137 99
4 23 Female Senior Computer Sc- 617 265 4935 652 289 114 223
5 20 Female Senior Computer Sc- 810 522 3887 825 372 168 194
6 25 Non-binary Sophomore Computer Sc- 523 790 2151 413 386 122 131
# 6 more variables: entertainment <dbl>, personal_care <dbl>, technology <dbl>, health_wellness <dbl>, miscellaneous <dbl>
```

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# MVLU COLLEGE

The image displays two screenshots of the RStudio environment, showing the process of data manipulation and analysis using R code.

**Top Screenshot:**

- Console:** Shows the execution of R code. The first block of code filters for high-income students (monthly income > 1000) and displays a summary. The second block filters for students with high aid and high food expenses (financial aid > 500 & food > 300) and displays a summary. The third block filters for students with high aid and high food expenses (financial aid > 500 & food > 300) and displays a summary.
- Environment:** Lists the objects created in the environment, including `aid_food_subset`, `card_or_cash`, `CHARACTERS_DA`, `high_income`, `low_tuition`, `my_data`, `senior_or_ent`, `student_spend`, and `tech_nb`.
- Files:** Shows the file explorer with various files and folders, including `RData`, `Rhistory`, `class printString.java`, `Computer Network prat1.docx`, `Custom Office Templates`, `Deep GIS Prac.docx`, `desktop.ini`, `GIS DataBase`, `GIS Prac.docx`, `ISExpress`, `My Web Sites`, `NetBeansProjects`, `Office Tools Practical_1accdb`, `R`, `Virtual Machines`, and `Visual Studio 2022`.

**Bottom Screenshot:**

- Console:** Shows the execution of R code. The first block filters for students with tuition < 4000 and displays a summary. The second block filters for non-binary students with high tech spending (tech > 100) and displays a summary. The third block filters for students using Card or Cash (preferred payment method %in% c("Credit/Debit Card", "Cash")) and displays a summary.
- Environment:** Lists the objects created in the environment, including `aid_food_subset`, `card_or_cash`, `CHARACTERS_DA`, `high_income`, `low_tuition`, `my_data`, `senior_or_ent`, `student_spend`, and `tech_nb`.
- Files:** Shows the file explorer with various files and folders, including `RData`, `Rhistory`, `class printString.java`, `Computer Network prat1.docx`, `Custom Office Templates`, `Deep GIS Prac.docx`, `desktop.ini`, `GIS DataBase`, `GIS Prac.docx`, `ISExpress`, `My Web Sites`, `NetBeansProjects`, `Office Tools Practical_1accdb`, `R`, `Virtual Machines`, and `Visual Studio 2022`.

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