

MVLU COLLEGE

AIM:Sorting data using arrange() in R.

INPUT:

The screenshot shows the RStudio interface. The left pane displays an R script named 'prac5.R' with the following code:

```
1 library(dplyr)
2 library(readr)
3
4 my_data <- read_csv("C:/Users/mvluc/OneDrive/Desktop/ANSHRAH/DATA ANALYSIS WITH SAS SPSS R/datasets/student_spending.csv")
5 my_data <- my_data[, -1]
6 head(my_data)
7
8 students_sorted_income <- my_data |>
9   arrange(monthly_income)
10 head(students_sorted_income, 5)
11
12 students_sorted_food_desc <- my_data |>
13   arrange(desc(food))
14
15 head(students_sorted_food_desc, 5)
16 students_multi_sort <- my_data |>
17   arrange(year_in_school, desc(monthly_income))
18
19 head(students_multi_sort, 10)
20 high_tech_by_tuition <- my_data |>
21   filter(technology > 150) |>
22   arrange(tuition)
23
24 cat("Top 5 high-tech spenders with lowest tuition:\n")
25 print(high_tech_by_tuition |>
26   select(technology, tuition, monthly_income) |>
27   head(5))
```

The right pane shows the 'Environment' tab of the global environment, listing various objects and their details. Below it is a file browser showing local files like RData, .Rhistory, and various Microsoft Office documents. The bottom status bar shows system information including battery level (SENSEX +0.05%), language (ENG IN), and date/time (24-11-2025).

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S111

SYCS

DATA ANALYSIS WITH SAS / SPSS / R PRAC

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OUTOUT:

The screenshot shows the RStudio interface with the following details:

- File Menu:** File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help.
- Toolbar:** Go to file/function, Addins.
- Environment Pane:** Shows the global environment with objects like `high_income`, `high_tech_by_`, `low_tuition`, etc.
- Code Editor:** The code is reading a CSV file named `student_spending.csv` from a local path. The code includes handling for non-binary gender and setting column types.
- Data Preview:** The data frame `my_data` has 1000 rows and 18 columns. It includes variables like `age`, `monthly_income`, `financial_aid`, `tuition`, `housing`, `food`, `transportation`, `books_supplies`, `entertainment`, and `preferred_payment_method`.
- Console Output:** The output shows the first few rows of the data frame `my_data`.

The screenshot shows an RStudio interface with multiple panes. The top-left pane displays a large R script with numerous lines of code, primarily for data manipulation and analysis. The top-right pane shows the 'Environment' tab with a list of objects and their details. The bottom-right pane shows the file system with a tree view of files and their metadata. The bottom-left pane contains a search bar and various icons. The bottom center features the Windows taskbar with several pinned application icons.

```
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins ...
student_spending <-- pracR.R
source("pracR.R")
> head(students_sorted_food_desc, 5)
# A tibble: 5 x 17
  age gender year_in_school major monthly_income financial_aid tuition housing food transportation books_supplies
  <dbl> <fct>   <dbl>       <chr>    <dbl>      <dbl>    <dbl>    <dbl>    <dbl>      <dbl>    <dbl>
1 25 Female  Junior     Biology    1094      528    5486    789    400      81     211
2 22 Male   Junior     Engineering 1212      529    4012    897    400      53     120
3 19 Non-binary Freshman Engineering  855      397    4028    633    400     146     174
4 20 Non-binary Junior    Psychology 1255      82    4739    465    400      68     190
5 20 Non-binary Sophomore Biology    1110      400    5325    586    400      62     120
# # 6 more variables: entertainment <dbl>, personal_care <dbl>, technology <dbl>, health_wellness <dbl>, miscellaneous <dbl>,
# preferred_payment_method <chr>
> students_multi_sort <- my_data |>
+ arrange(year_in_school, desc(monthly_income))
> head(students_multi_sort, 10)
# A tibble: 10 x 17
  age gender year_in_school major monthly_income financial_aid tuition housing food transportation books_supplies
  <dbl> <fct>   <dbl>       <chr>    <dbl>      <dbl>    <dbl>    <dbl>    <dbl>      <dbl>    <dbl>
1 24 Non-binary Freshman Economics 1496      75    5301    657    151      63     92
2 25 Female  Freshman Computer S- 1495      892    5525    767    182      97     213
3 18 Non-binary Freshman Economics 1489      202    4710    921    101     187     122
4 24 Non-binary Freshman Biology   1487      940    3167    765    202     146     183
5 19 Male   Freshman Biology   1485      53    3659    651    221     198     124
6 18 Female  Freshman Biology   1484      594    4636    518    299      74     55
7 19 Male   Freshman Biology   1482      705    4973    433    294     144     233
8 25 Male   Freshman Computer S- 1482      92    3987    540    194     125     193
9 23 Male   Freshman Psychology 1479      418    3501    960    344     103     239
10 20 Female Freshman Computer S- 1466      977    5400    698    283     135     58
# # 6 more variables: entertainment <dbl>, personal_care <dbl>, technology <dbl>, health_wellness <dbl>, miscellaneous <dbl>,
# preferred_payment_method <chr>
> high_tech_by_tuition <- my_data |>
+ filter(technology > 150) |>
+ arrange(tuition)
> cat("Top 5 high-tech spenders with lowest tuition:\n")
Top 5 high-tech spenders with lowest tuition:
> print(high_tech_by_tuition |>
+   select(technology, tuition, monthly_income) |>
+   head(5))
```