

SHETH L.U.J AND SIR MV COLLRGR
PRACTICAL NO:- 05

AIM :- Sorting data using arrange() in R.

CODE :-

```
library(dplyr)
library(readr)

# Load dataset
data <- read_csv("C:/Users/Rani/Downloads/student-mat (1).csv")

# -----
# Example 1 : Arrange by a single variable (Ascending)
# Sort by Final Grade (G3) lowest → highest
# -----

data_sorted_g3 <- data |>
  arrange(G3)

head(data_sorted_g3, 5)

# -----
# Example 2 : Arrange by a single variable (Descending)
# Sort by Absences highest → lowest
# -----

data_sorted_abs_desc <- data |>
  arrange(desc(absences))

head(data_sorted_abs_desc, 5)

# -----
# Example 3 : Sort by MULTIPLE columns
# First by sex (F then M), then G3 highest first
# -----

data_multi_sort <- data |>
  arrange(sex, desc(G3))

head(data_multi_sort, 10)
```

SHETH L.U.J AND SIR MV COLLGR PRACTICAL NO:- 05

```
# -----
# Example 4 : FILTER + ARRANGE
# Filter studytime > 2 and then arrange by absences ascending
# -----
```

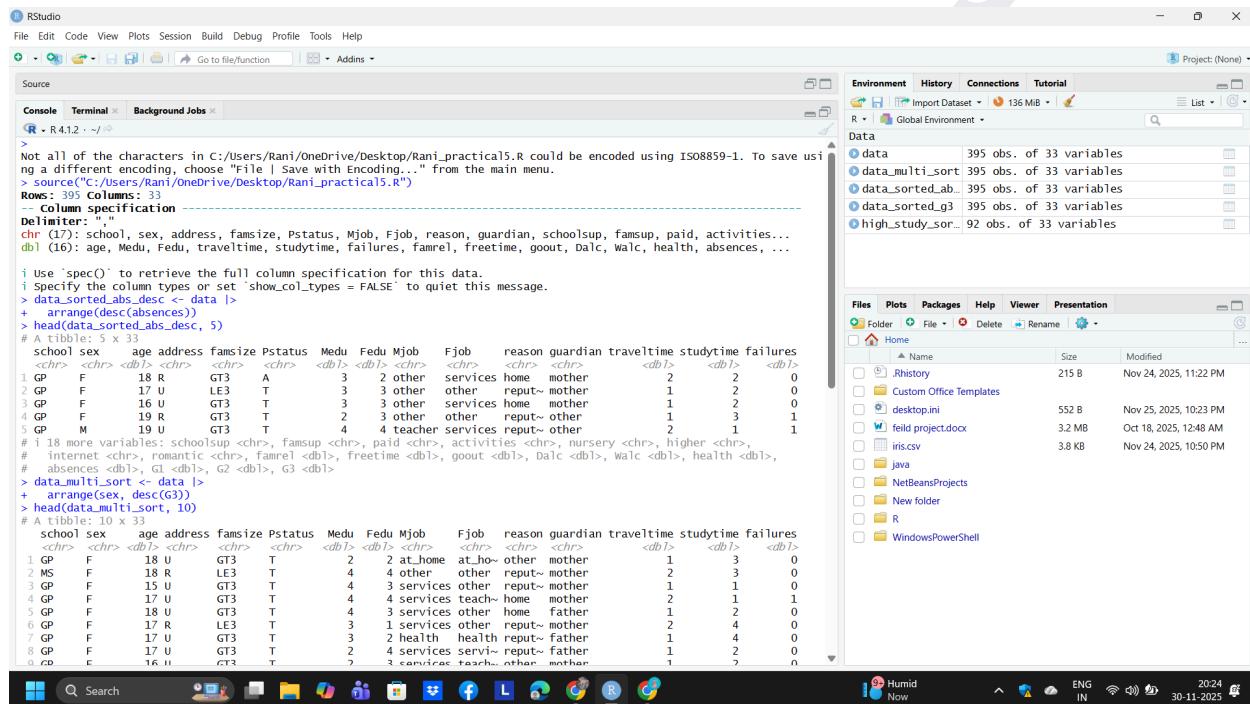
```
high_study_sorted <- data |>
```

```
filter(studytime > 2) |>
```

```
arrange(absences)
```

```
head(high_study_sorted) |> select(age, sex, studytime, absences, G3), 10)
```

OUTPUT:-



The screenshot shows the RStudio interface with the following details:

- Console:** Displays the R code and its output. The output shows the creation of `high_study_sorted` from `data`, filtering for `studytime > 2`, and arranging by `absences`. It also shows the head of the resulting data frame with 10 rows.
- Environment:** Shows the global environment with variables: `data`, `data_multi_sort`, `data_sorted_ab`, `data_sorted_g3`, and `high_study_sorted`.
- Files:** Shows the project structure with files like `Rhistory`, `desktop.ini`, `feild project.docx`, `iris.csv`, `java`, `NetBeansProjects`, `New folder`, `R`, and `WindowsPowerShell`.
- Plots:** No plots are present.
- Packages:** No packages are listed.
- Help:** No help pages are listed.
- Viewer:** No viewer content is shown.
- Presentation:** No presentation content is shown.

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RStudio

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Go to file/function Addins

Source

```

R - R 4.1.2 - /d
# internet <chr>, romantic <chr>, famrel <dbl>, freetime <dbl>, goout <dbl>, dalc <dbl>, walc <dbl>, health <dbl>
# absences <dbl>, G1 <dbl>, G2 <dbl>, G3 <dbl>
> data.multi_sort <- data
+ arrange(data, .by=c(G3))
> head(data.multi_sort, 10)
# A tibble: 10 × 33
  school sex address famsize Pstatus Medu Fedu Mjob Fjob reason guardian traveltim
  <chr> <chr> <chr> <chr> <chr> <dbl> <dbl> <chr> <chr> <chr> <dbl> <dbl> <dbl>
1 GP   F    18 U    LE3    GT3    T      2     2 at_home at_ho~ other mother  1     3   0
2 MS   F    18 R    LE3    GT3    T      4     4 other reput~ mother  2     3   0
3 GP   F    15 U    GT3    GT3    T      4     4 services teach~ home mother  1     1   0
4 GP   F    17 U    GT3    GT3    T      4     4 services teach~ home mother  2     1   1
5 GP   F    18 U    GT3    GT3    T      4     4 services teach~ home father  1     2   0
6 GP   F    17 R    LE3    GT3    T      3     1 services other reput~ mother  2     4   0
7 GP   F    17 U    GT3    GT3    T      3     2 health  health reput~ father  1     4   0
8 GP   F    17 U    GT3    GT3    T      2     3 services serv~ reput~ father  1     2   0
9 GP   F    16 U    GT3    GT3    T      2     3 services serv~ other mother  1     2   0
10 GP  F    18 U   LE3    T      3     3 services serv~ home mother  1     4   0
# i: 18 more variables: schoolsup <chr>, famsup <chr>, paid <chr>, activities <chr>, nursery <chr>, higher <chr>
# internet <chr>, romantic <chr>, famrel <dbl>, freetime <dbl>, goout <dbl>, dalc <dbl>, walc <dbl>, health <dbl>
# absences <dbl>, G1 <dbl>, G2 <dbl>, G3 <dbl>
> high_study_sorted <- data
+ filter(studytim > 2) 
+ arrange(absences)
> head(high_study_sorted) |> select(age, sex, studytim, absences, G3), 10
# A tibble: 10 × 5
  age sex studytim absences G3
  <dbl> <chr> <dbl> <dbl> <dbl>
1 15 M   3     0     16
2 16 M   4     0     15
3 15 M   4     0     10
4 16 F   4     0     11
5 16 F   3     0     8
6 16 F   3     0     8
7 16 M   3     0     17
8 16 F   3     0     10
9 15 F   3     0     0
10 15 F  3     0     0
>
>
>
```

Environment History Connections Tutorial

R Project: (None)

Data

- data 395 obs. of 33 variables
- data_multi_sort 395 obs. of 33 variables
- data_sorted_ab_ 395 obs. of 33 variables
- data_sorted_g3 395 obs. of 33 variables
- high_study_sor... 92 obs. of 33 variables

Files Plots Packages Help Viewer Presentation

Home

Name	Size	Modified
Rhistory	215 B	Nov 24, 2025, 11:22 PM
Custom Office Templates		
desktop.ini	552 B	Nov 25, 2025, 10:23 PM
field project.docx	3.2 MB	Oct 18, 2025, 12:48 AM
iris.csv	3.8 KB	Nov 24, 2025, 10:50 PM
java		
NetBeansProjects		
New folder		
R		
WindowsPowerShell		

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RStudio

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```

R - R 4.1.2 - /d
> high_study_sorted <- data
+ filter(studytim > 2) 
+ arrange(absences)
> head(high_study_sorted) |> select(age, sex, studytim, absences, G3), 10
# A tibble: 10 × 5
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3 15 M   4     0     10
4 16 F   4     0     11
5 16 F   3     0     8
6 16 F   3     0     8
7 16 M   3     0     17
8 16 F   3     0     10
9 15 F   3     0     0
10 15 F  3     0     0
>
>
>
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>
>
>
>
> source("C:/Users/Rani/OneDrive/Desktop/Rani_practical5.R")
Rows: 395 Columns: 33
  ... column specification ...
  $ Delemiter: ","
  $ chr (17): school, sex, address, famsize, Pstatus, Mjob, Fjob, reason, guardian, schoolsup, famsup, paid, activities...
  $ dbl (16): age, Medu, Fedu, traveltim, studytim, failures, famrel, freetime, goout, Dalc, Walc, health, absences, ...
  $ Use 'spec()' to retrieve the full column specification for this data.
  $ Specify the column types or set 'show_col_types = FALSE' to quiet this message.
>
>
>
>
>
> View(data)
> |

```

Environment History Connections Tutorial

R Project: (None)

Data

- data 395 obs. of 33 variables
- data_multi_sort 395 obs. of 33 variables
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