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)
```


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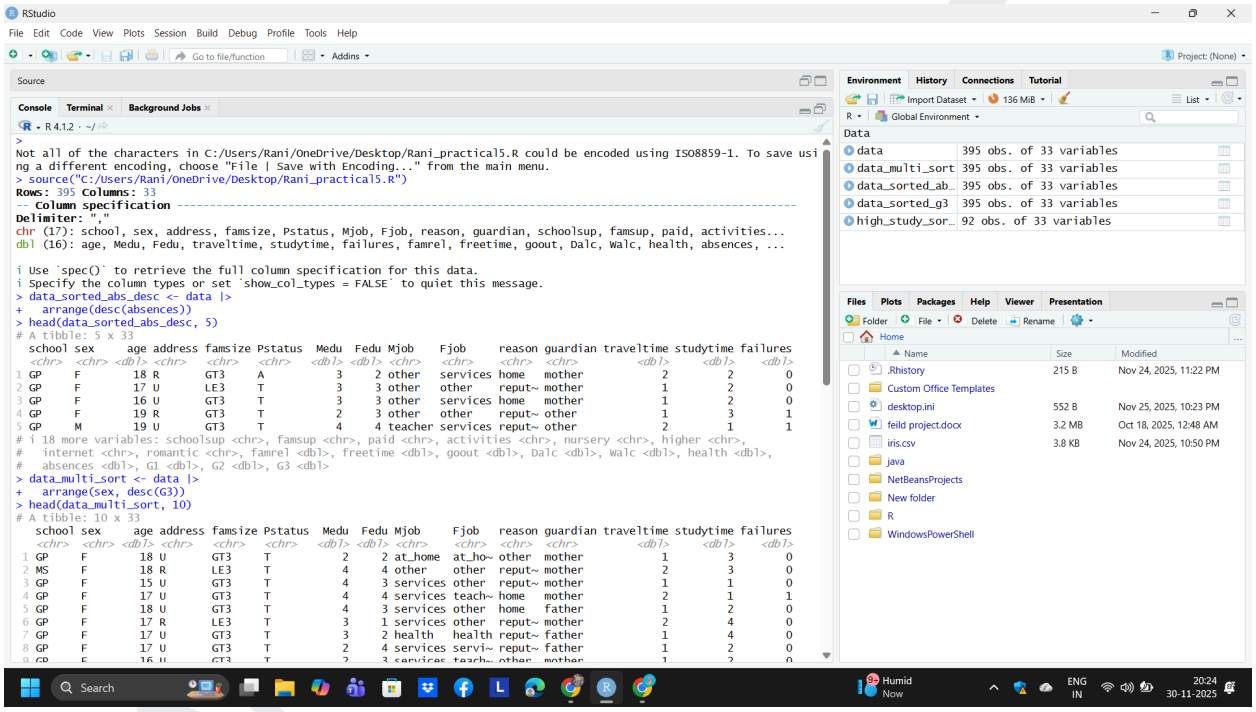
```
# ------------------------------------------------------
# Example 4 : FILTER + ARRANGE
# Filter studytime > 2 and then arrange by absences ascending
# ------------------------------------------------------

high_study_sorted <- data |>
  filter(studytime > 2) |>
  arrange(absences)

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

OUTPUT:-



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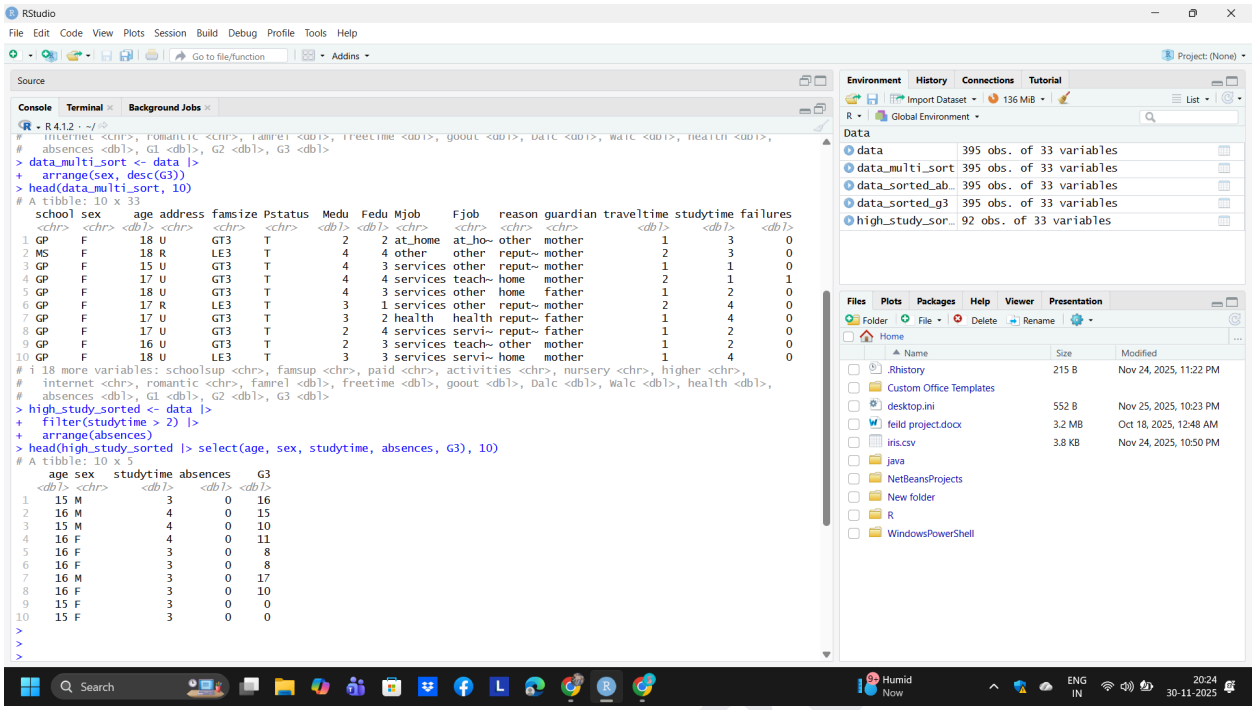
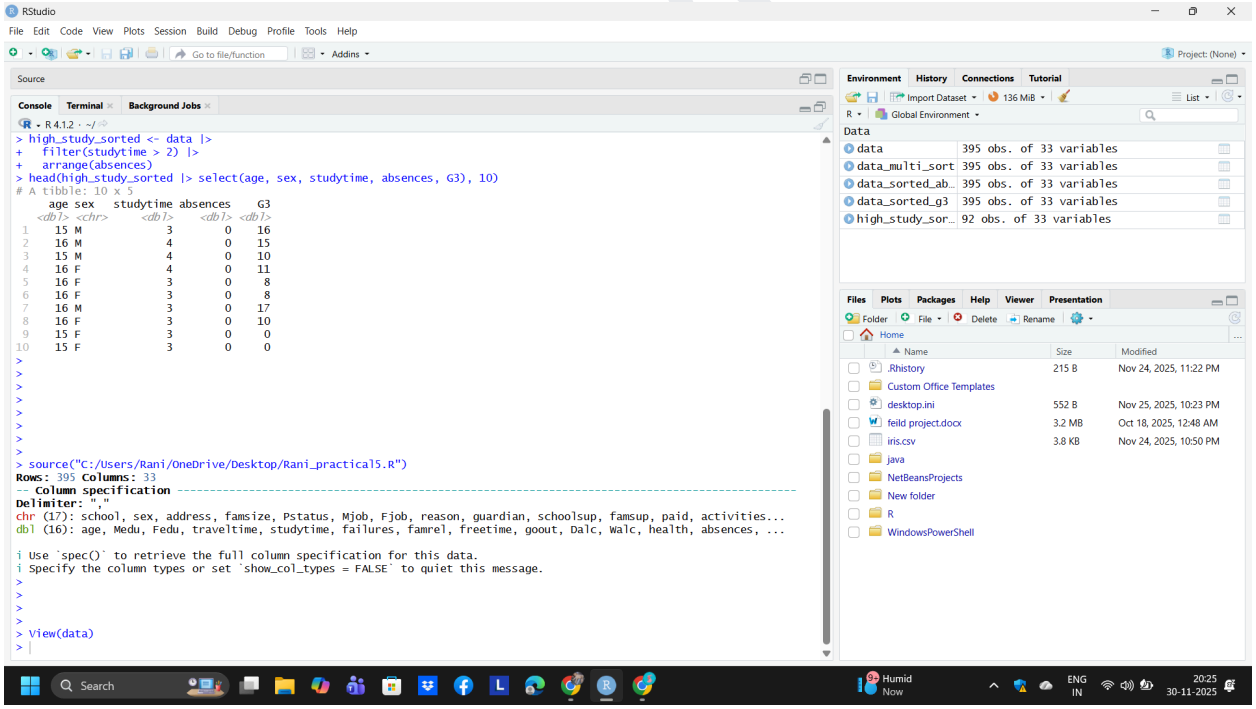


```
#   internet <chr>, romantic <chr>, famrel <dbl>, freetime <dbl>, goout <dbl>, Dalc <dbl>, Walc <dbl>, health <dbl>,
#   absences <dbl>, G1 <dbl>, G2 <dbl>, G3 <dbl>
> data_multi_sort <- data |>
+   arrange(sex, desc(G3))
> head(data_multi_sort, 10)
# A tibble: 10 x 33
   school sex     age address famsize Pstatus  Medu  Fedu Mjob     Fjob    reason guardian traveltime studytime failures
   <chr>  <chr> <dbl> <chr>   <chr>   <chr>   <dbl> <dbl> <chr>    <chr>   <chr>  <chr>        <dbl>     <dbl>    <dbl>
 1 GP     F        18 U       GT3     T           2     2 at_home  at_ho~ other  mother           1         3        0
 2 MS     F        18 R       LE3     T           4     4 other    other  reput~ mother           2         3        0
 3 GP     F        15 U       GT3     T           4     3 services other  reput~ mother           1         1        0
 4 GP     F        17 U       GT3     T           4     4 services teach~ home   mother          2         1        1
 5 GP     F        18 U       GT3     T           4     3 services other  home   father          1         2        0
 6 GP     F        17 R       LE3     T           3     1 services other  reput~ mother          2         4        0
 7 GP     F        17 U       GT3     T           3     2 health   health reput~ father          1         4        0
 8 GP     F        17 U       GT3     T           2     4 services servi~ reput~ father          1         2        0
 9 GP     F        16 U       GT3     T           2     3 services teach~ other  mother          1         2        0
10 GP     F        18 U       LE3     T           3     3 services servi~ 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(studytime > 2) |>
+   arrange(absences)
> head(high_study_sorted |> select(age, sex, studytime, absences, G3), 10)
# A tibble: 10 x 5
     age sex   studytime 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
>
>
>
```



```
> high_study_sorted <- data |>
+   filter(studytime > 2) |>
+   arrange(absences)
> head(high_study_sorted |> select(age, sex, studytime, absences, G3), 10)
# A tibble: 10 x 5
     age sex   studytime 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
>
>
>
>
>
>
>
>
> source("C:/Users/Rani/OneDrive/Desktop/Rani_practical5.R")
Rows: 395 Columns: 33
-- Column specification --------------------------------------------------------------------------------------------------
Delimiter: ","
chr (17): school, sex, address, famsize, Pstatus, Mjob, Fjob, reason, guardian, schoolsup, famsup, paid, activities...
dbl (16): age, Medu, Fedu, traveltime, studytime, failures, famrel, freetime, goout, Dalc, Walc, health, absences, ...

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.
>
>
>
>
> View(data)
>
```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