

SHETH L.U.J & SIR M.V COLLEGE OF SCIENCE

SUBJECT : Data Analysis with SAS / SPSS / R

AIM : Sorting data using PROC SORT in SAS, Sort Cases in SPSS, and arrange() in R.

OUTPUT

The first screenshot shows the initial data loading and sorting process. The console displays the following R code and output:

```
> library(dplyr)
> sleep <- read.csv("Sleep_health.csv")
> sleep_sorted_duration <- sleep |>
+ arrange(Sleep.Duration)
> head(sleep_sorted_duration, 5)
```

Person.ID	Gender	Age	Occupation	Sleep.Duration	Quality.of.Sleep
1	81	Female	34	Scientist	5.8
2	82	Female	34	Scientist	5.8
3	4	Male	28	Sales Representative	5.9
4	5	Male	28	Sales Representative	5.9
5	6	Male	28	Software Engineer	5.9

The second screenshot shows the multi-sorting and filtering process. The console displays the following R code and output:

```
> sleep_multi_sort <- sleep |>
+ arrange(desc(Gender), desc(Sleep.Duration))
> head(sleep_multi_sort, 10)
```

Person.ID	Gender	Age	Occupation	Sleep.Duration	Quality.of.Sleep	Physical.Activity.Level
1	299	Female	51	Engineer	8.5	9
2	300	Female	51	Engineer	8.5	9
3	301	Female	51	Engineer	8.5	9
4	302	Female	51	Engineer	8.5	9
5	317	Female	53	Engineer	8.5	9
6	318	Female	53	Engineer	8.5	9
7	321	Female	53	Engineer	8.5	9
8	324	Female	53	Engineer	8.5	9
9	326	Female	53	Engineer	8.5	9
10	328	Female	53	Engineer	8.5	9

The third screenshot shows the filtering and sorting process. The console displays the following R code and output:

```
> long_sleep_by_quality <- sleep |>
+ filter(Sleep.Duration > 8) |>
+ arrange(Quality.of.Sleep)
> cat("Top 5 longest sleepers with lowest sleep quality:\n")
Top 5 longest sleepers with lowest sleep quality:
> print(long_sleep_by_quality |> select(Sleep.Duration, Quality.of.Sleep, Age) |> head(5))
```

Sleep.Duration	Quality.of.Sleep	Age
125/80	65	5000
125/80	65	5000
125/80	65	5000
125/80	65	5000
125/80	65	5000

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The screenshot displays the RStudio environment with the following components:

- Source Editor:** Contains R code for data manipulation and viewing.
- Console:** Shows the output of the R commands.
- Environment:** Lists loaded datasets and their dimensions.
- Files:** Shows the file explorer with a project folder named 'RData'.
- Snipping Tool:** A small window indicating a screenshot was copied to the clipboard.

R Code in Source Editor:

```
> sleep_multi_sort <- sleep |>
+ arrange(Gender, desc(Sleep.Duration))
> head(sleep_multi_sort, 10)

  Person.ID Gender Age Occupation Sleep.Duration Quality.of.Sleep Physical.Activity.Level
1      299 Female  51 Engineer           8.5           9           30
2      300 Female  51 Engineer           8.5           9           30
3      301 Female  51 Engineer           8.5           9           30
4      302 Female  51 Engineer           8.5           9           30
5      317 Female  53 Engineer           8.5           9           30
6      318 Female  53 Engineer           8.5           9           30
7      321 Female  53 Engineer           8.5           9           30
8      324 Female  53 Engineer           8.5           9           30
9      326 Female  53 Engineer           8.5           9           30
10     328 Female  53 Engineer           8.5           9           30

  Stress.Level BMI.Category Blood.Pressure Heart.Rate Daily.Steps Sleep.Disorder
1           3      Normal      125/80       65      5000      None
2           3      Normal      125/80       65      5000      None
3           3      Normal      125/80       65      5000      None
4           3      Normal      125/80       65      5000      None
5           3      Normal      125/80       65      5000      None
6           3      Normal      125/80       65      5000      None
7           3      Normal      125/80       65      5000      None
8           3      Normal      125/80       65      5000      None
9           3      Normal      125/80       65      5000      None
10          3      Normal      125/80       65      5000      None

>
> long_sleep_by_quality <- sleep |>
+ filter(Sleep.Duration > 8) |>
+ arrange(Quality.of.Sleep)
>
> cat("Top 5 longest sleepers with lowest sleep quality:\n")
> print(long_sleep_by_quality |> select(Sleep.Duration, Quality.of.Sleep, Age) |> head(5))
  Sleep.Duration Quality.of.Sleep Age
1           8.1           9      49
2           8.1           9      49
3           8.3           9      50
4           8.5           9      51
5           8.5           9      51
> |
```

Environment Panel:

Dataset	Observations	Variables
album_or_single_filt...	8075	15
explicit_and_famous...	1798	15
high_popularity_subs...	592	15
long_single_filter	607	15
long_sleep_by_quality	58	13
low_popularity_filter	1481	15
sleep	374	13
sleep_multi_sort	374	13

Files Panel:

- RData (2.5 KB, Nov 24, 2025, 3:42 PM)
- Rhistory
- Custom Office Templates
- Dell
- desktop.ini
- My Music
- My Videos
- NetBeansProjects
- Shortcut to Documents (OneDrive - Personal)lnk
- Sleep_health.csv

Snipping Tool:

Screenshot copied to clipboard
Automatically saved to screenshots folder.
Mark-up and share

