

MVLU COLLEGE

PRACTICAL NO. 5

AIM:Sorting data using arrange() in R.

#Code:

The screenshot shows the RStudio interface with the following details:

- Code Editor:** Displays an R script titled "SIYA R PRAC 4.R" containing the following code:

```
1 library(dplyr)
2 student <- read.csv("C:/Users/DELL/Desktop/siya/Cleaned_Student_Performance.csv")
3 student_sorted_score <- student |>
4   arrange(exam_score)
5 head(student_sorted_score, 5)
6 student_sorted_score_desc <- student |>
7   arrange(desc(exam_score))
8 head(student_sorted_score_desc, 5)
9 student_multi_sort <- student |>
10  arrange(gender, desc(exam_score))
11 head(student_multi_sort, 10)
12 hardworking_low_attendance <- student |>
13   filter(hours_studied > 20) |>
14   arrange(attendance)
15 cat("Top 5 students who studied >20 hrs with lowest attendance:\n")
16 print(
17   hardworking_low_attendance |>
18     select(hours_studied, attendance, exam_score) |>
19     head($)
20 )
21 |
```
- Environment View:** Shows a list of objects in the global environment:
 - cars: 199 obs. of 10 variables
 - Cleaned_Car...: 199 obs. of 10 variables
 - Cleaned_Stu...: 399 obs. of 20 variables
 - diesel_or_e...: 109 obs. of 10 variables
 - hardworking...: 192 obs. of 20 variables
 - high_price...: 97 obs. of 10 variables
 - large_engin...: 74 obs. of 10 variables
 - low_mileage...: 26 obs. of 10 variables
 - new_automat...: 27 obs. of 10 variables
 - premium_bra...: 99 obs. of 10 variables
 - student: 399 obs. of 20 variables
 - student_mul...: 399 obs. of 20 variables
 - student_sor...: 399 obs. of 20 variables
 - student_sor...: 399 obs. of 20 variables
- Console:** Shows the command "R Script" and the current date and time "21:1 (Top Level) 11/24/2025".
- System Tray:** Shows the Windows taskbar with various pinned icons and the system status bar indicating "30°C Mostly clear" and "ENG 7:45 PM IN 11/24/2025".

MVLU COLLEGE

PRACTICAL NO. 5

#Output:

RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins Project: (None)
Source
Console Terminal Background Jobs
> library(readr)
> Cleaned_Student_Performance <- read_csv("C:/Users/DELL/Desktop/siya/Cleaned_Student_Performance.csv")
Rows: 399 Columns: 20
Column specification
Delimiter: ";"
chr (13): parental_involvement, access_to_resources, extracurricular_activities, motivation_...
dbl (7): hours_studied, attendance, sleep_hours, previous_scores, tutoring_sessions, physic...
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(Cleaned_Student_Performance)
> student <- read.csv("C:/Users/DELL/Desktop/siya/Cleaned_Student_Performance.csv")
> student_sorted_score <- student |>
+ arrange(exam_score)
Error in arrange(student, exam_score) : could not find function "arrange"
Show Traceback Rerun with Debug

> 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
> student_sorted_score <- student |>

RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins Project: (None)
Source
Console Terminal Background Jobs
> student_sorted_score <- student |>
> arrange(exam_score)
> head(student_sorted_score, 5)
hours_studied attendance parental_involvement access_to_resources extracurricular_activities
1 13 69 Medium Low Yes
2 14 60 Medium Low Yes
3 8 61 Medium Medium Yes
4 10 64 Medium High No
5 8 73 Medium Medium No
sleep_hours previous_scores motivation_level internet_access tutoring_sessions family_income
1 5 68 Low yes 0 High
2 10 65 Low yes 0 High
3 7 54 Medium yes 1 High
4 7 64 High yes 0 Medium
5 7 60 Medium No 0 High
teacher_quality school_type peer_influence physical_activity learning_disabilities
1 Medium Public Positive 1 Yes
2 Medium Private Positive 3 No
3 Medium Public Positive 3 No
4 Medium Public Positive 4 Yes
5 Medium Private Neutral 3 No
parental_education_level distance_from_home gender exam_score
1 High School Moderate Female 59
2 College Near Male 60
3 College Near Male 60
4 High School Moderate Female 60
5 High School Near Female 60
> student_sorted_score_desc <- student |>
> arrange(desc(exam_score))
> head(student_sorted_score_desc, 5)

MVLU COLLEGE

PRACTICAL NO. 5

RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Source
Console Terminal Background Jobs
R 4.5.2 · ~/...
> student_sorted_score_desc <- student |>
+ arrange(desc(exam_score))
> head(student_sorted_score_desc, 5)
hours_studied attendance parental_involvement access_to_resources extracurricular_activities
1 18 89 High Medium Yes
2 19 70 Medium Low No
3 35 99 High High Yes
4 43 86 High Medium Yes
5 31 100 Medium Medium No
sleep_hours previous_scores motivation_level internet_access tutoring_sessions family_income
1 4 73 Medium Yes 3 High
2 7 54 High Yes 0 Medium
3 7 85 Low Yes 2 Medium
4 7 97 Medium Yes 2 Medium
5 7 59 Medium Yes 2 High
teacher_quality school_type peer_influence physical_activity learning_disabilities
1 Medium Private Positive 2 No
2 Medium Public Positive 2 Yes
3 High Private Neutral 2 No
4 High Public Positive 1 No
5 High Public Positive 5 No
parental_education_level distance_from_home gender exam_score
1 College Near Female 100
2 High School Moderate Male 89
3 Postgraduate Near Female 79
4 High School Near Female 78
5 Postgraduate Moderate Male 76
> student_multi_sort <- student |>
+ arrange(gender, desc(exam_score))
> head(student_multi_sort, 10)
hours_studied attendance parental_involvement access_to_resources extracurricular_activities
1 18 89 High Medium Yes
2 19 70 Medium Low No
3 35 99 High High Yes
4 43 86 High Medium Yes
5 31 100 Medium Medium No
6 28 92 Medium High Yes
7 34 88 High Medium Yes
8 30 95 High High Yes
9 37 84 Medium Medium No
10 32 91 Medium High Yes
Windows Taskbar: Type here to search, File Explorer, File History, Control Panel, File Cabinet, Mail, Photos, OneDrive, Google Chrome, RStudio, Microsoft Edge, File Explorer, 30°C Mostly clear, ENG 7:46 PM IN 11/24/2025, 3 notifications

MVLU COLLEGE

PRACTICAL NO. 5



RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Source

Console Terminal Background Jobs

```
R - R 4.5.2 - ~/student
> student_multi_sort <- student |>
+ arrange(gender, desc(exam_score))
> head(student_multi_sort, 10)
#> #> #> #> #> #> #> #> #> #>
```

	Postgraduate	Moderate	Male	76	
1	18	89	High	Medium	Yes
2	35	99	High	High	Yes
3	43	86	High	Medium	Yes
4	28	89	Medium	High	Yes
5	26	96	Medium	Medium	Yes
6	22	89	High	High	Yes
7	27	97	Low	High	Yes
8	27	98	Low	High	Yes
9	29	92	Low	Medium	No
10	21	91	High	Medium	No

	sleep_hours	previous_scores	motivation_level	internet_access	tutoring_sessions	family_income
1	4	73	Medium	Yes	3	High
2	7	85	Low	Yes	2	Medium
3	7	97	Medium	Yes	2	Medium
4	10	97	High	Yes	3	Medium
5	7	68	Medium	Yes	3	High
6	6	80	Medium	Yes	1	High
7	8	81	Medium	Yes	0	High
8	7	56	Low	Yes	1	High
9	4	91	Medium	Yes	2	Medium
10	6	100	Medium	Yes	0	High

	teacher_quality	school_type	peer_influence	physical_activity	learning_disabilities
1	Medium	Private	Positive	2	No
2	High	Private	Neutral	2	No
3	High	Public	Positive	1	No
4	Low	Public	Negative	6	No
5	Medium	Private	Positive	3	No

Windows Taskbar: Type here to search, File Explorer, File Manager, Task View, Start, Control Panel, Settings, Microsoft Edge, Google Chrome, R, File History, 30°C Mostly clear, ENG IN 7:47 PM IN 11/24/2025



RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Source

Console Terminal Background Jobs

```
R - R 4.5.2 - ~/student
> #> #> #> #> #> #> #> #> #> #>
```

	medium	public	positive	>	no
8	Medium	Private	Positive	3	No
9	Medium	Public	Negative	1	No
10	Medium	Private	Neutral	2	No

	parental_education_level	distance_from_home	gender	exam_score
1	College	Near	Female	100
2	Postgraduate	Near	Female	79
3	High School	Near	Female	78
4	High School	Near	Female	75
5	College	Near	Female	74
6	High School	Near	Female	73
7	High School	Near	Female	73
8	College	Near	Female	73
9	Postgraduate	Near	Female	72
10	Postgraduate	Near	Female	72

```
> hardworking_low_attendance <- student |>
+ filter(hours_studied > 20) |>
+ arrange(attendance)
> cat("Top 5 students who studied >20 hrs with lowest attendance:\n")
Top 5 students who studied >20 hrs with lowest attendance:
> print(
+   hardworking_low_attendance |>
+     select(hours_studied, attendance, exam_score) |>
+     head(5)
+ )
#> #> #> #> #> #> #> #> #> #>
```

	hours_studied	attendance	exam_score
1	21	60	64
2	23	60	66
3	24	60	63
4	26	61	64
5	29	61	67

Windows Taskbar: Type here to search, File Explorer, File Manager, Task View, Start, Control Panel, Settings, Microsoft Edge, Google Chrome, R, File History, 30°C Mostly clear, ENG IN 7:47 PM IN 11/24/2025