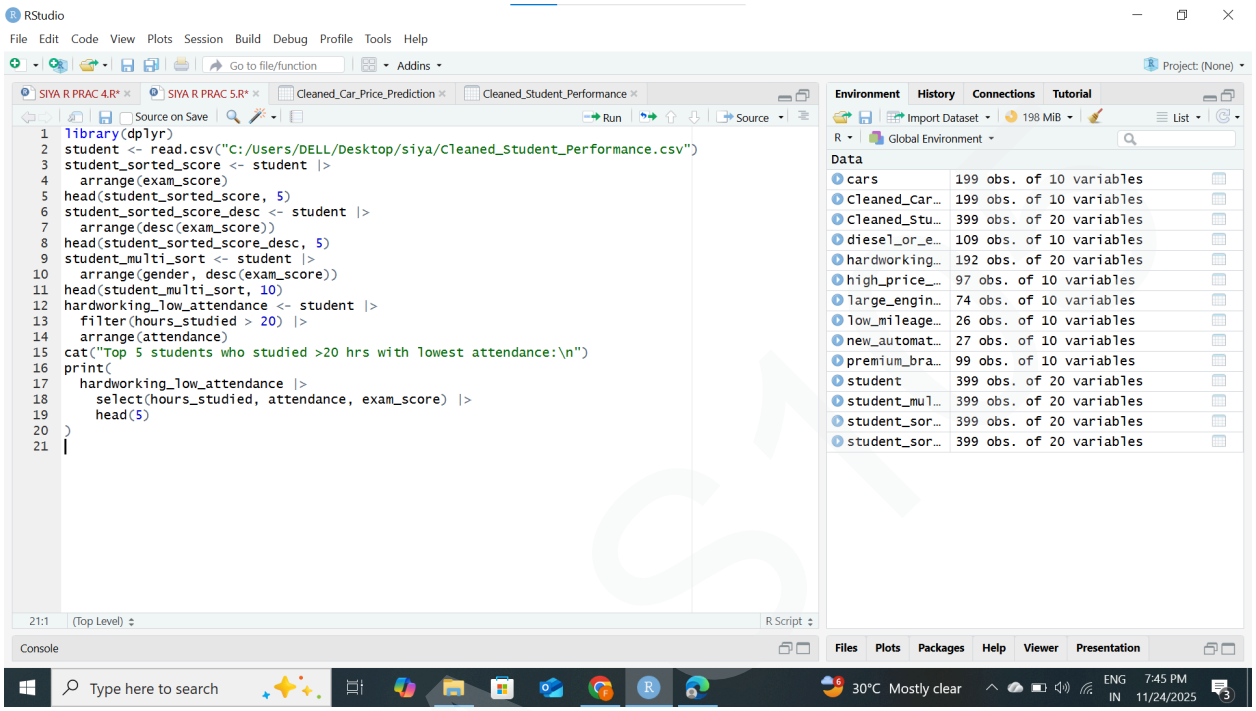
MVLU COLLEGE
PRACTICAL NO. 5

AIM:Sorting data using arrange() in R.

#Code:



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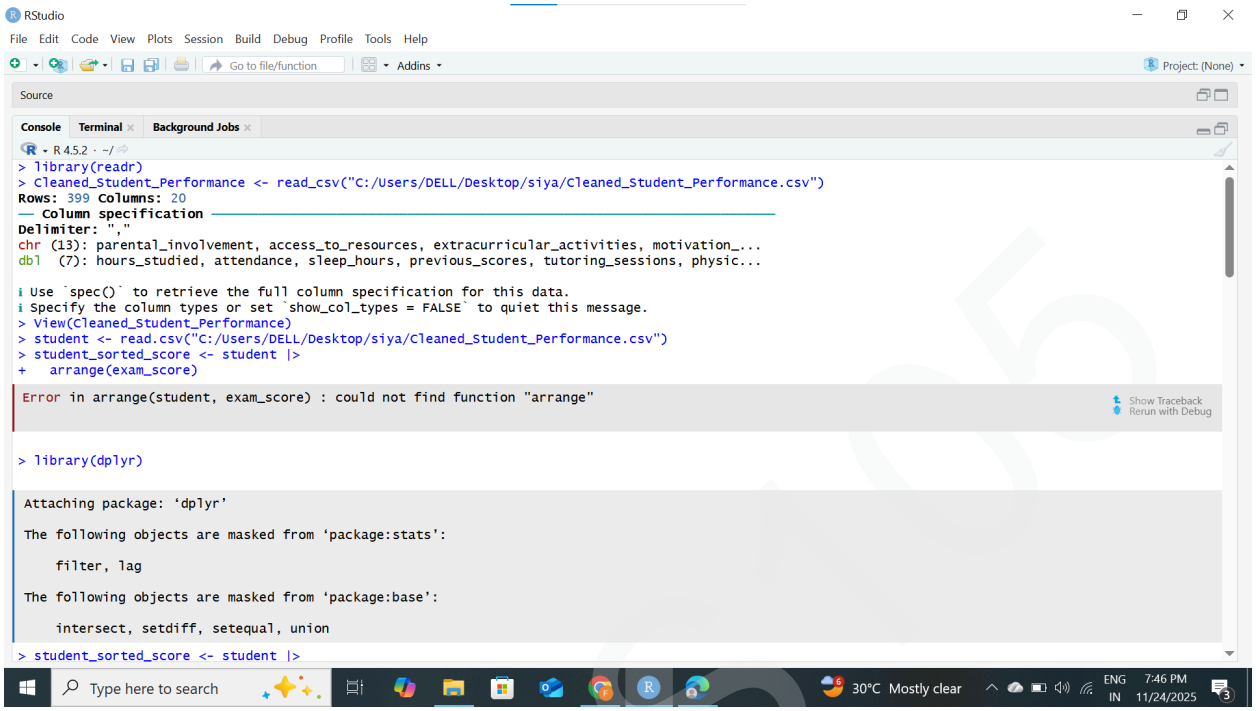
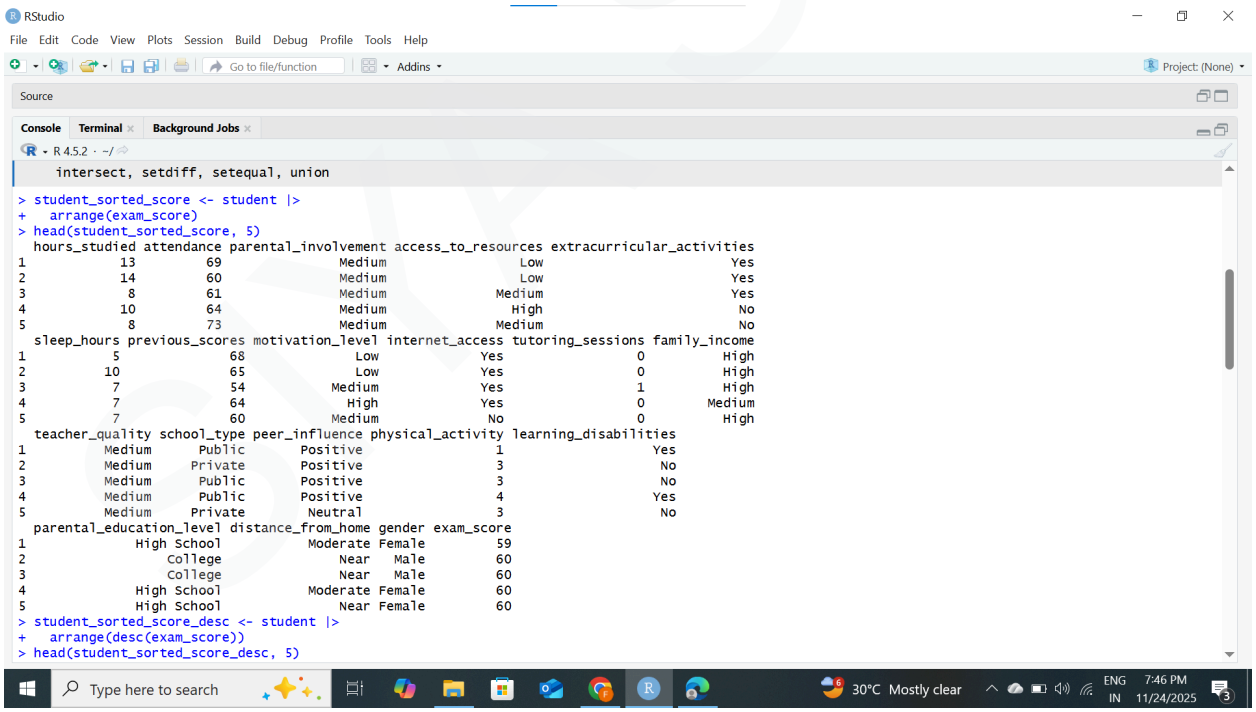
#Output:





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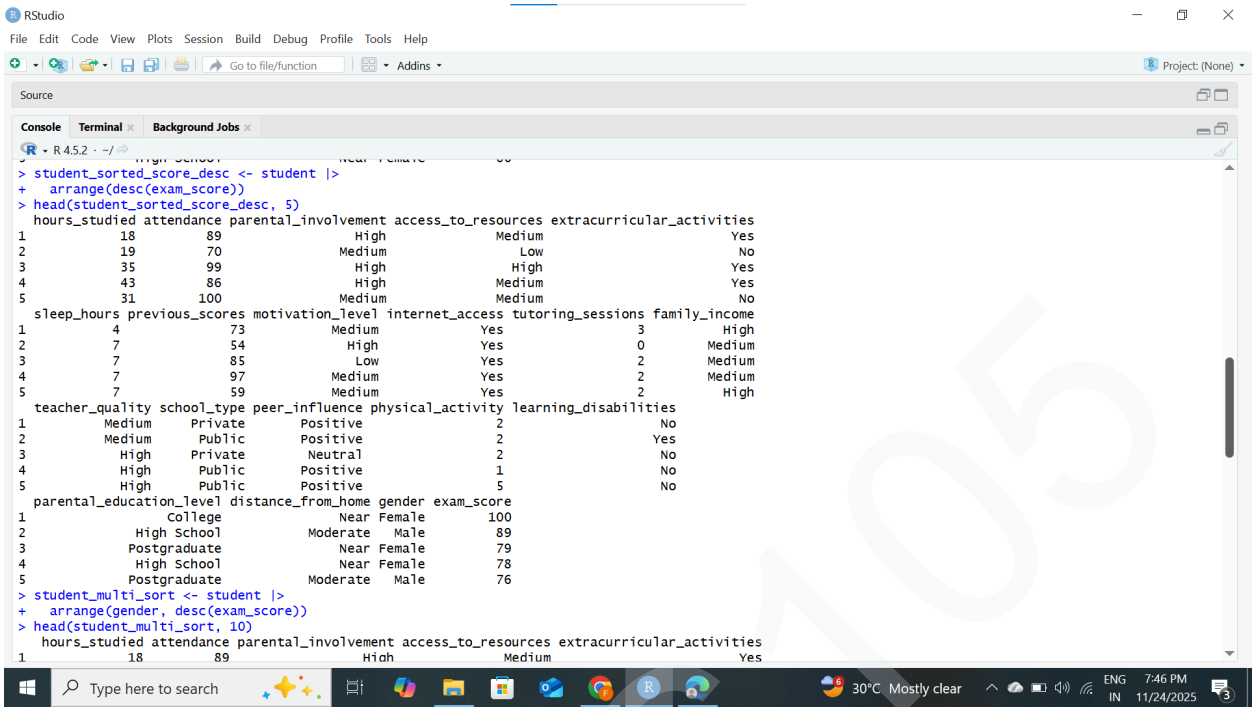

```
> student_sorted_score_desc <- student |>
+   arrange(desc(exam_score))
> head(student_sorted_score_desc, 5)
  hours_studied attendance parental_involvement access_to_resources extracurricular_activities
1            18         89                 High               Medium                       Yes
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
```

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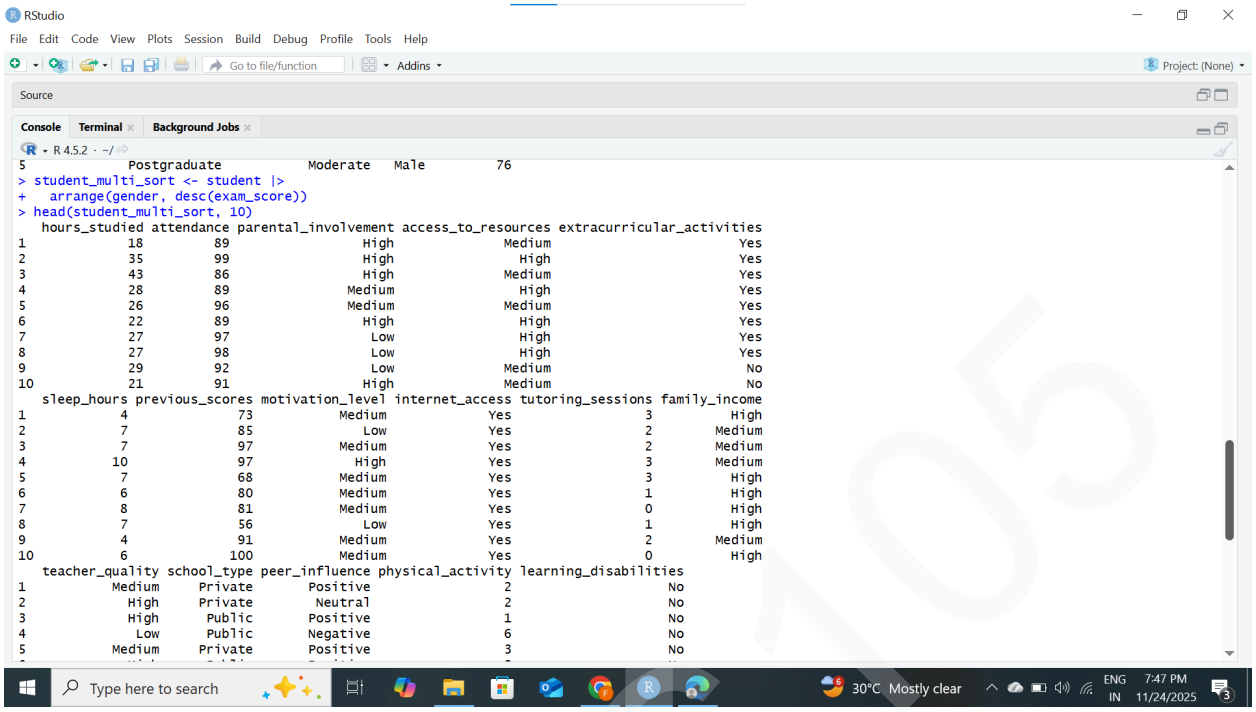
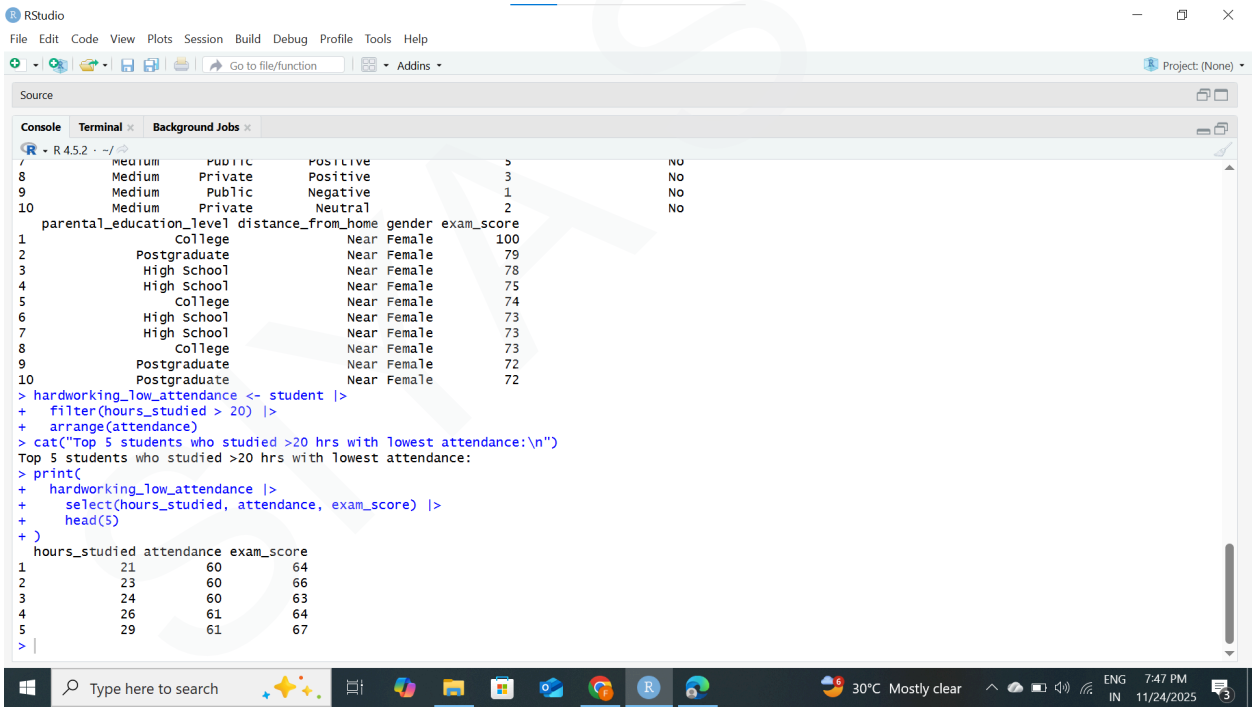


```
5           Postgraduate           Moderate   Male         76
> student_multi_sort <- student |>
+   arrange(gender, desc(exam_score))
> head(student_multi_sort, 10)
   hours_studied attendance parental_involvement access_to_resources extracurricular_activities
1             18         89                 High              Medium                       Yes
2             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
```



```
7           Medium      Public       Positive                 5                   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
>
```