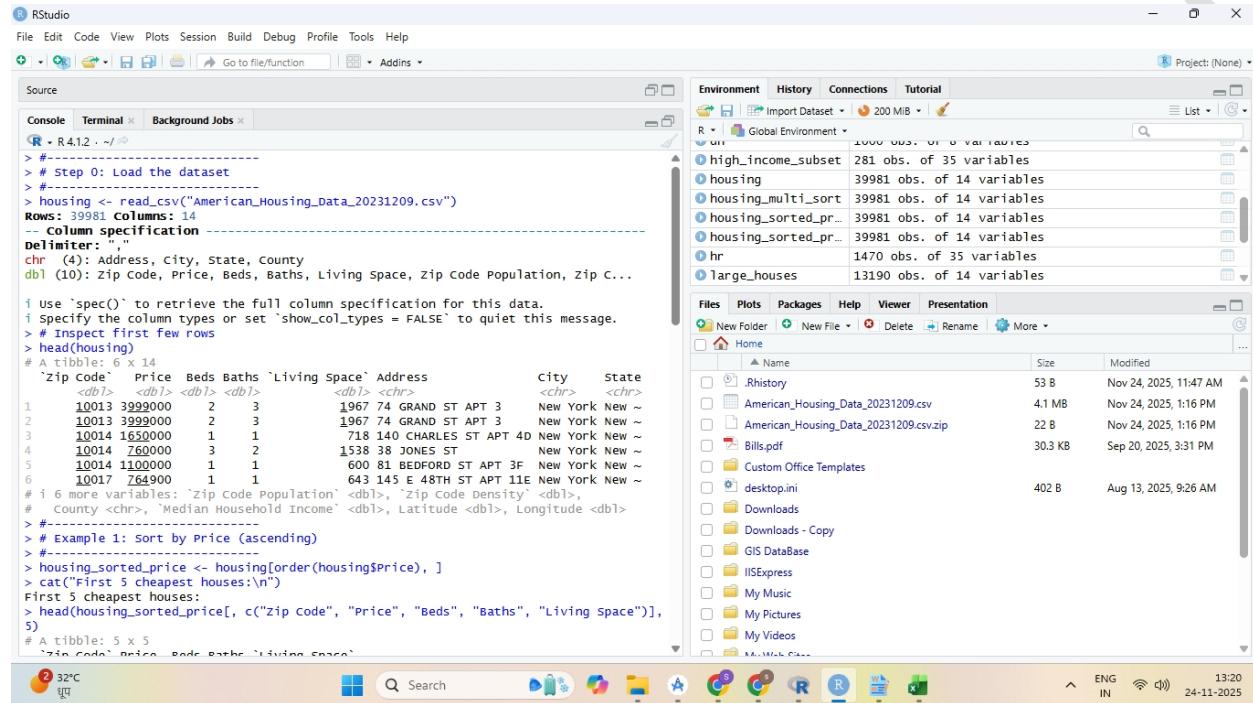


PRACTICAL NO 5

AIM : Sorting data using arrange() in R.



RStudio interface showing the following R code in the console:

```

> #-----#
> # Step 0: Load the dataset
> #
> housing <- read_csv("American_Housing_Data_20231209.csv")
Rows: 39981 Columns: 14
-- Column specification --
Delimiter: ","
chr (4): Address, city, State, County
dbl (10): Zip Code, Price, Beds, Baths, Living Space, zip code Population, zip c...
# 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.
> # Inspect first few rows
> head(housing)
# A tibble: 6 × 14
  Zip Code  Price Beds Baths `Living Space` Address      City      State
  <dbl>    <dbl> <dbl> <dbl> <dbl> <chr>      <chr>      <chr>
1 10013 39990000 2     3     1967 74 GRAND ST APT 3 New York New ~
2 10013 39990000 2     3     1967 74 GRAND ST APT 3 New York New ~
3 10014 16500000 1     1     718 140 CHARLES ST APT 4D New York New ~
4 10014 26000000 3     2     1538 38 JONES ST New York New ~
5 10014 11000000 1     1     600 81 BEDFORD ST APT 3F New York New ~
6 10017 764900 1     1     643 145 E 48TH ST APT 11E New York New ~
# i 6 more variables: `Zip Code Population` <dbl>, `Median Household Income` <dbl>,
# County <chr>, `Median Household Income` <dbl>, Latitude <dbl>, Longitude <dbl>
> #-----#
> # Example 1: Sort by Price (ascending)
> #
> housing_sorted_price <- housing[order(housing$Price), ]
> cat("First 5 cheapest houses:\n")
First 5 cheapest houses:
> head(housing_sorted_price[, c("zip code", "Price", "Beds", "Baths", "Living Space")], 5)
# A tibble: 5 × 5
  Zip Code  Price Beds Baths `Living Space`
  <dbl>    <dbl> <dbl> <dbl> <dbl>
1 10308 1800 1     1     700
2 32150 1950 2     1     1365
3 92650 1995 3     2     1322
4 70123 2000 3     2     1467
5 10309 2200 2     1     1100
# -----#
# Example 2: Sort by Price (descending)
> #
> housing_sorted_price_desc <- housing[order(-housing$Price), ]
> cat("\nTop 5 most expensive houses:\n")
Top 5 most expensive houses:
> head(housing_sorted_price_desc[, c("zip code", "Price", "Beds", "Baths", "Living Space")], 5)
# A tibble: 5 × 5
  Zip Code  Price Beds Baths `Living Space`
  <dbl>    <dbl> <dbl> <dbl> <dbl>
1 90027 38000000 9     11    20000
2 94115 32000000 10    7     11155
3 20007 31900000 5     9     16250
4 33133 31500000 7     9     14720
5 90069 28500000 4     6     9052
# -----#
# Example 3: Multi-column sort
# Sort first by Beds (descending), then Price (descending)
> #
> housing_multi_sort <- housing[order(-housing$Beds, -housing$Price), ]
> cat("\nTop 10 houses by Beds and Price:\n")

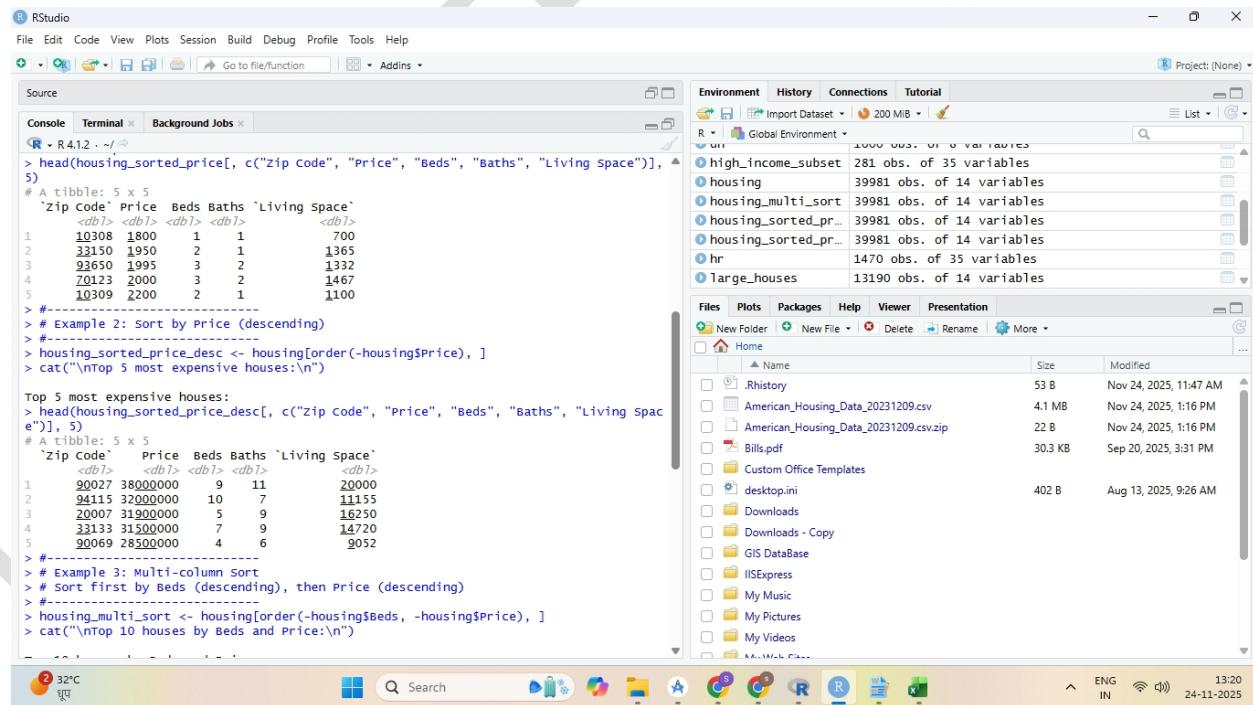
```

The Environment pane shows the following objects:

- high_income_subset: 281 obs. of 35 variables
- housing: 39981 obs. of 14 variables
- housing_multi_sort: 39981 obs. of 14 variables
- housing_sorted_price: 39981 obs. of 14 variables
- housing_sorted_price_desc: 39981 obs. of 14 variables
- hr: 1470 obs. of 35 variables
- large_houses: 13190 obs. of 14 variables

The Files pane shows the following files:

- .Rhistory (53 B, Nov 24, 2025, 11:47 AM)
- American_Housing_Data_20231209.csv (4.1 MB, Nov 24, 2025, 1:16 PM)
- American_Housing_Data_20231209.csv.zip (22 B, Nov 24, 2025, 1:16 PM)
- Bills.pdf (30.3 KB, Sep 20, 2025, 3:31 PM)
- Custom Office Templates
- desktop.ini
- Downloads
- Downloads - Copy
- GIS DataBase
- IISExpress
- My Music
- My Pictures
- My Videos



RStudio interface showing the continuation of the R code from the previous screenshot:

```

> head(housing_sorted_price[, c("zip code", "Price", "Beds", "Baths", "Living Space")], 5)
# A tibble: 5 × 5
  Zip Code  Price Beds Baths `Living Space`
  <dbl>    <dbl> <dbl> <dbl> <dbl>
1 90027 38000000 9     11    20000
2 94115 32000000 10    7     11155
3 20007 31900000 5     9     16250
4 33133 31500000 7     9     14720
5 90069 28500000 4     6     9052
# -----#
# Example 3: Multi-column sort
# Sort first by Beds (descending), then Price (descending)
> #
> housing_multi_sort <- housing[order(-housing$Beds, -housing$Price), ]
> cat("\nTop 10 houses by Beds and Price:\n")

```

The Environment pane shows the same objects as the previous screenshot.

The Files pane shows the same files as the previous screenshot.

Sheth L.U.J. College of Arts & Sir M.V. College Of Science & Commerce

SUBJECT NAME: Data Analysis with SAS / SPSS / R

RStudio

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R 4.1.2 - ~

```
Top 10 houses by Beds and Price:  
> head(housing_multi_sort[, c("zip code", "Beds", "Price", "Living space")], 10)  
# A tibble: 10 x 4  
#> # ... with 4 variables:  
#> #   Zip Code` <dbl> Beds <dbl> Price `<dbl>  
#> 1 93728 54 1899998 33308  
#> 2 93726 46 3500000 19768  
#> 3 93726 44 5875000 28728  
#> 4 90802 37 11495000 35429  
#> 5 90046 36 7300000 22251  
#> 6 90003 36 4995000 17947  
#> 7 75214 34 3227025 9536  
#> 8 38104 32 4950000 3400  
#> 9 90006 30 5690000 40000  
#> 10 90806 30 4750000 14814  
> #-----  
> # Example 4: Filter and sort  
> # Filter for houses with more than 3 beds, then sort by Living Space (ascending)  
> #-----  
> large_houses <- subset(housing, Beds > 3)  
> large_houses_sorted <- large_houses[order(large_houses$Living.space), ]  
Error in order(large_houses$living.space) : argument 1 is not a vector  
In addition: warning message:  
Unknown or uninitialized column: 'Living.space'.  
  
> cat("\nTop 5 large houses (Beds > 3) by smallest Living Space:\n")  
Top 5 large houses (Beds > 3) by smallest Living Space:  
> head(large_houses_sorted[, c("zip code", "Beds", "Living space", "Price")], 5)  
Error in head(large_houses_sorted[, c("zip code", "Beds", "Living space", :
```

Environment History Connections Tutorial

Import Dataset 200 MB

Global Environment 1000 obs. of 8 variables

high_income_subset 281 obs. of 35 variables

housing 39981 obs. of 14 variables

housing_multi_sort 39981 obs. of 14 variables

housing_sorted_pr... 39981 obs. of 14 variables

housing_sorted_pr... 39981 obs. of 14 variables

hr 1470 obs. of 35 variables

large_houses 13190 obs. of 14 variables

Files Plots Packages Help Viewer Presentation

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Name	Size	Modified
.Rhistory	53 B	Nov 24, 2025, 11:47 AM
American_Housing_Data_20231209.csv	4.1 MB	Nov 24, 2025, 1:16 PM
American_Housing_Data_20231209.csv.zip	22 B	Nov 24, 2025, 1:16 PM
Bills.pdf	30.3 KB	Sep 20, 2025, 3:31 PM
Custom Office Templates		
desktop.ini	402 B	Aug 13, 2025, 9:26 AM
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