

## **PRACTICAL NO 4**

**AIM :** Applying conditional filters subset() or filter() in R.

### **Output:**

The screenshot shows the RStudio interface with the following details:

- Console:** Displays R code and its output. The code reads a CSV file named "Housing.csv" and performs several operations:
  - Subset the data for homes priced above 8,000,000.
  - Print the number of such homes.
  - Print a summary of prices.
  - Print the summary statistics of the expensive homes.
  - Subset the data for homes with "furnished" status.
- Environment:** Shows various objects in the global environment, including "high\_r\_..." through "specia\_..." and "my\_data".
- Files:** Shows a file browser with several PDF files in the "Downloads" folder, including "1-Limitless-Paper-Grade-7.pdf", "1-mATHS.pdf", etc.
- Bottom Bar:** Shows the taskbar with various application icons and the system clock indicating 25-11-2025 at 20:48.

# SHETH L.U.J. AND SIR M.V. COLLEGE OF ARTS SCIENCE AND COMMERCE

## Subject : Data Analysis with SAS / SPSS /R

RStudio

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Console Terminal Background Jobs

```
R - R 4.5.2 · C:/users/PRIYANKA/Downloads/·
> furnished_homes <- subset(housing_data, furnishingstatus == "furnished")
> Cat("\n--- 2. Fully Furnished Homes (furnishingstatus == 'furnished') ---\n")
--- 2. Fully Furnished Homes (furnishingstatus == 'furnished') ---
> Cat("Number of fully furnished homes:", nrow(furnished_homes), "\n")
Number of fully furnished homes: 140
> print(head(furnished_homes))
# A tibble: 6 × 13
   price area bedrooms bathrooms stories mainroad guestroom basement hotwaterheating airconditioning parking prefarea furnishingstatus
   <dbl> <dbl> <dbl> <dbl> <dbl> <chr> <chr> <chr> <chr> <chr> <chr> <chr>
1 13300000 7420 4 2 3 yes no no no yes 2 yes furnished
2 12250000 8960 4 4 4 yes no no no yes 3 no furnished
3 12215000 7500 4 2 2 yes no yes no yes 3 yes furnished
4 11410000 7420 4 1 2 yes yes yes no yes 2 no furnished
5 9870000 8100 4 1 2 yes yes yes no yes 2 yes furnished
6 9800000 13200 3 1 2 yes no yes no yes 2 yes furnished
>
> special_homes <- subset(
+   housing_data,
+   area > 10000 | stories == 4
+ )
> Cat("\n--- 3. Special Homes (area > 10000 OR stories == 4) ---\n")
--- 3. Special Homes (area > 10000 OR stories == 4) ---
> Cat("Special homes (Large Area OR Max Stories):", nrow(special_homes), "\n")
Special homes (Large Area OR Max Stories): 59
> print(head(special_homes))
# A tibble: 6 × 13
   price area bedrooms bathrooms stories mainroad guestroom basement hotwaterheating airconditioning parking prefarea furnishingstatus
   <dbl> <dbl> <dbl> <dbl> <dbl> <chr> <chr> <chr> <chr> <chr> <chr> <chr>
1 12250000 8960 4 4 4 yes no no no yes 3 no furnished
2 10150000 8580 4 3 4 yes no no no yes 2 yes semi-furnished
3 10150000 16200 5 3 2 yes no no no no 0 yes unfurnished
4 9800000 5750 3 2 4 yes yes no no yes 1 yes unfurnished
5 9800000 13200 3 1 2 yes yes no no yes 2 yes furnished
6 8960000 8500 3 2 4 yes no no no yes 2 no furnished
>
> low_cost_filter <- housing_data %>%
+   filter(price < 3000000)
> Cat("\n--- 4. Low-Priced Homes (price < 3,000,000) ---\n")
```

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Files Plots Packages Help V

Project: (None)

Environment History Connection

R Global Environment

high\_r\_... 107 obs. of 10 ...
Housin... 545 obs. of 13 ...
housin... 545 obs. of 13 ...
low\_co... 71 obs. of 13 v...
low\_ip... 10000 obs. of 1...
my\_data 519 obs. of 25 ...
pref\_a... 24 obs. of 13 v...
Shark... 519 obs. of 25 ...
special... 59 obs. of 13 v...

Name

1-Limitless-Paper-Grade-7.pdf
1-mATHS.pdf
1-Motion in - 390-OK.pmd
1-Phy-DPP-1 - Motion in a straight.l
1-Teachers-1 (1).pmd
1-Teachers-1 (2).pmd
1-Teachers-1.pmd
1-XI - All Branch.pmd
2-mATHS.pdf
2-Phy-DPP-2 - Motion in a straight.l
2-XII - All Branch (1).pmd
2-XII - All Branch.pmd
2. Kingdom Plantae.pmd
3-cHAM-1.pdf
3-PCM-1.pdf
Plant kingdom (Branch).pmd

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RStudio

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```
R - R 4.5.2 · C:/users/PRIYANKA/Downloads/·
> cat("Number of homes with price < 3,000,000:", nrow(low_cost_filter), "\n")
Number of homes with price < 3,000,000: 71
> Cat("Summary of prices:\n")
Summary of prices:
> print(summary(low_cost_filter$price))
  Min. 1st Qu. Median  Mean 3rd Qu.  Max.
17500000 22925000 25900000 2506291. 2817500 2975000
>
> Pref_area_large <- housing_data %>%
+   filter(prefarea == "yes", bedrooms > 3)
> Cat("\n--- 5. Homes in Preferred Area with > 3 Bedrooms ---\n")
--- 5. Homes in Preferred Area with > 3 Bedrooms ---
> Cat("Count:", nrow(pref_area_large), "\n")
Count: 24
> print(head(pref_area_large))
# A tibble: 6 × 13
   price area bedrooms bathrooms stories mainroad guestroom basement hotwaterheating airconditioning parking prefarea furnishingstatus
   <dbl> <dbl> <dbl> <dbl> <dbl> <chr> <chr> <chr> <chr> <chr> <chr> <chr>
1 13300000 7420 4 2 3 yes no no no yes 2 yes furnished
2 12215000 7500 4 2 2 yes no yes no yes 3 yes furnished
3 10150000 8580 4 3 4 yes no no yes yes 2 yes semi-furnished
4 9820000 8100 4 1 2 yes yes yes no yes 2 yes furnished
5 9310000 6550 4 2 2 yes no no no yes 1 yes semi-furnished
6 9100000 6600 4 2 2 yes yes yes no yes 1 yes unfurnished
>
> comfort_filter <- housing_data %>%
+   filter(airconditioning == "yes" | hotwaterheating == "yes")
> Cat("\n--- 6. Homes with Air Conditioning or Hot Water Heating ---\n")
--- 6. Homes with Air Conditioning or Hot Water Heating ---
> Cat("Homes with comfort amenities count:", nrow(comfort_filter), "\n")
Homes with comfort amenities count: 196
> Cat("Breakdown by Air Conditioning status:\n")
Breakdown by Air Conditioning status:
> print(table(comfort_filter$airconditioning))

no yes
24 172
>
```

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Files Plots Packages Help V

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