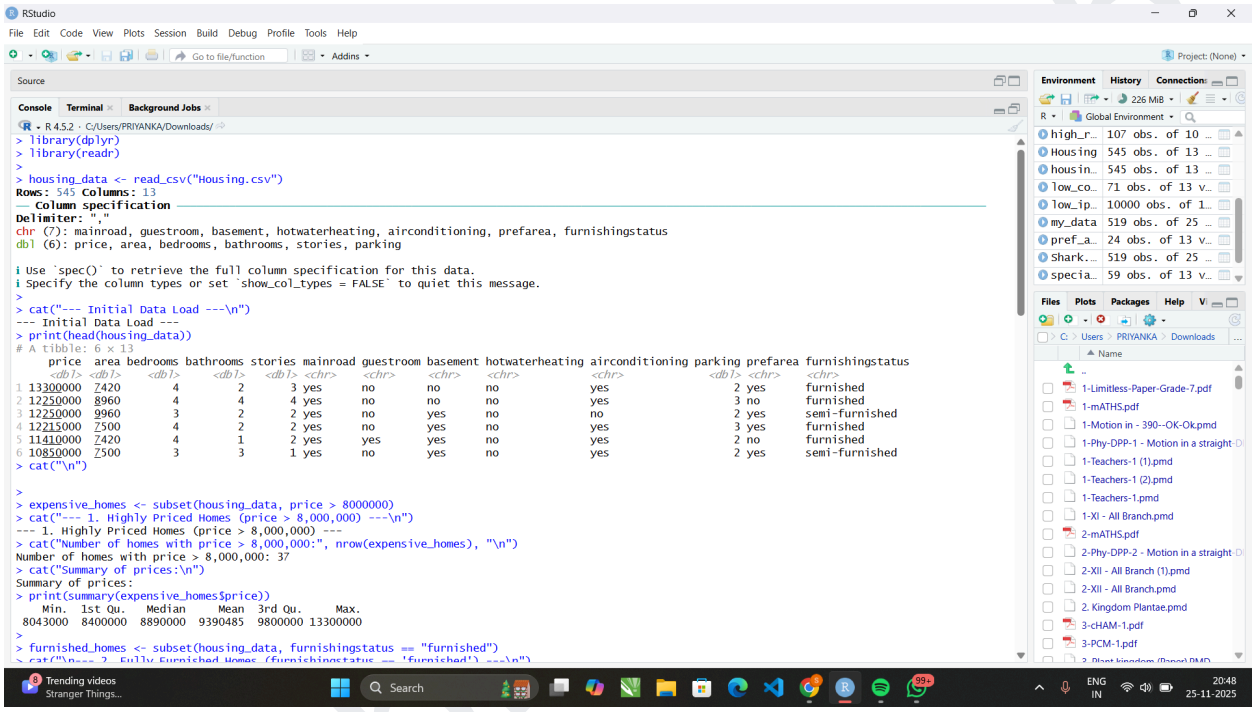
SHETH L.U.J. AND SIR M.V. COLLEGE OF ARTS SCIENCE AND COMMERCE

Subject : Data Analysis with SAS / SPSS /R

PRACTICAL NO 4

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

Output:



NAME : SHUBHAM SANJAY KARAPE

ROLL NO : S085

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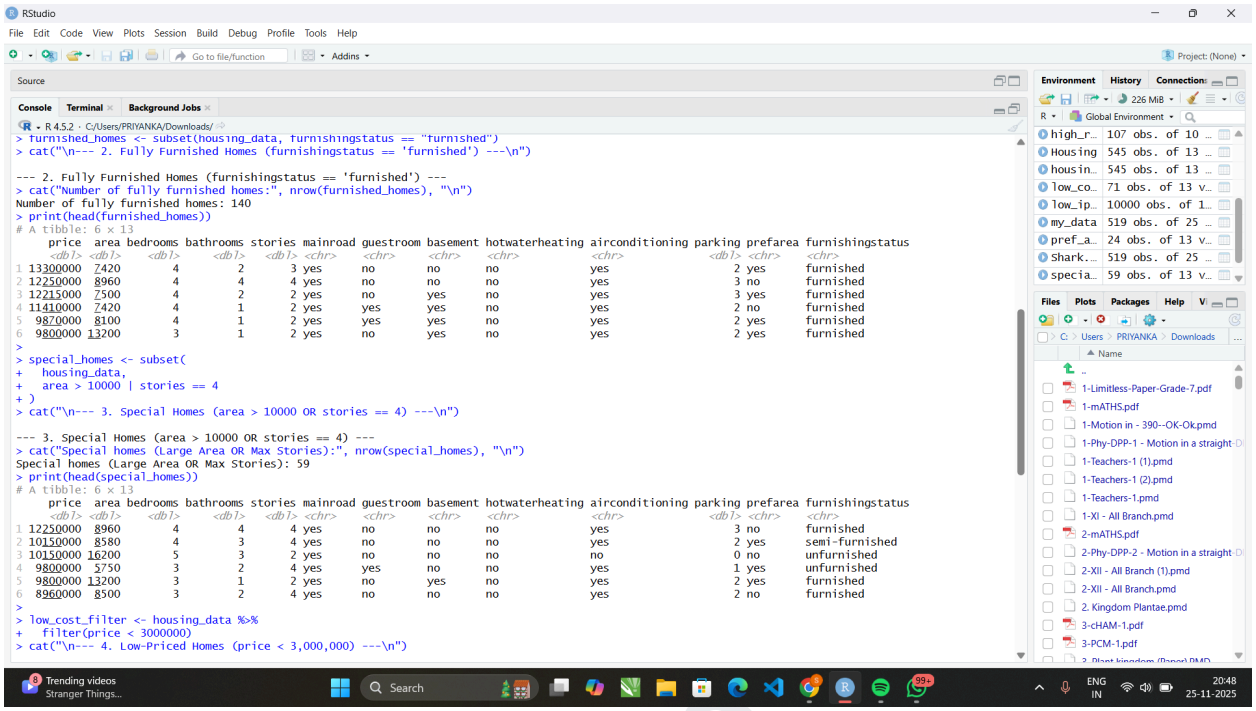
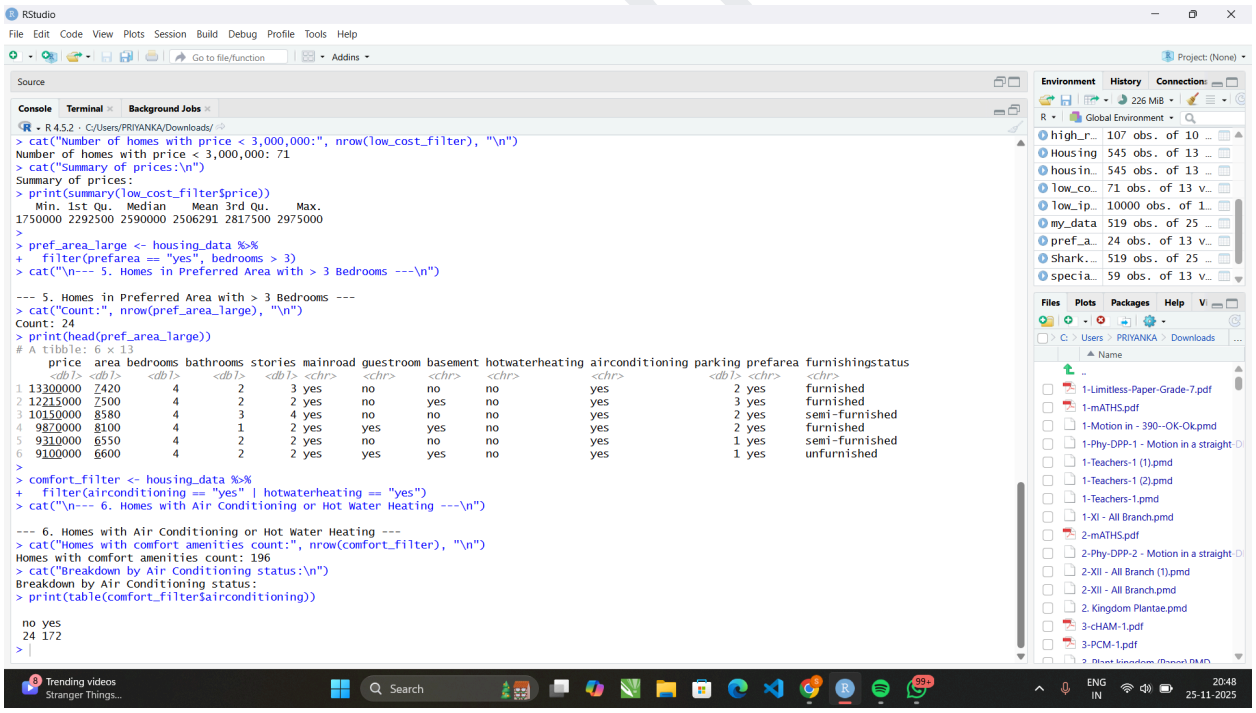
Subject : Data Analysis with SAS / SPSS /R



```
> 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>           <dbl> <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>           <dbl> <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 no       unfurnished
4  9800000  5750        3         2       4 yes      yes       no       no              yes                 1 yes      unfurnished
5  9800000 13200        3         1       2 yes      no        yes      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")
```



```
> 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.
1750000 2292500 2590000 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>           <dbl> <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       no              yes                 2 yes      semi-furnished
4  9870000  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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