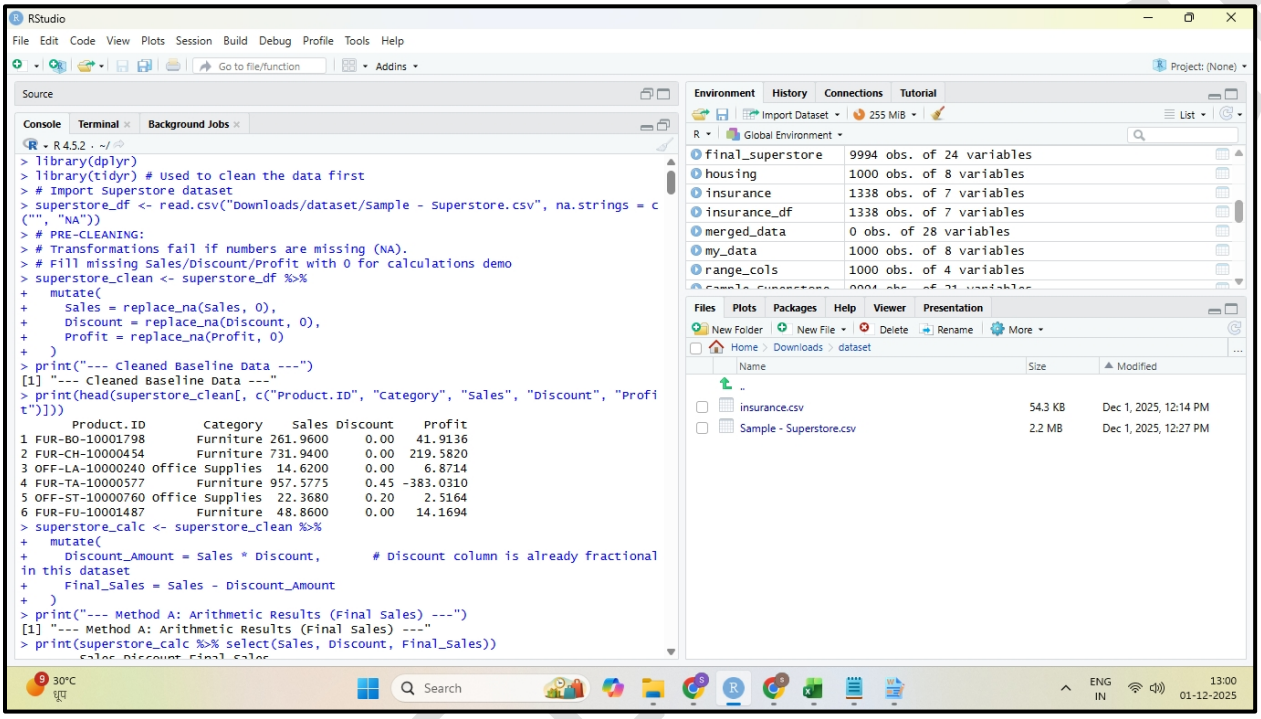
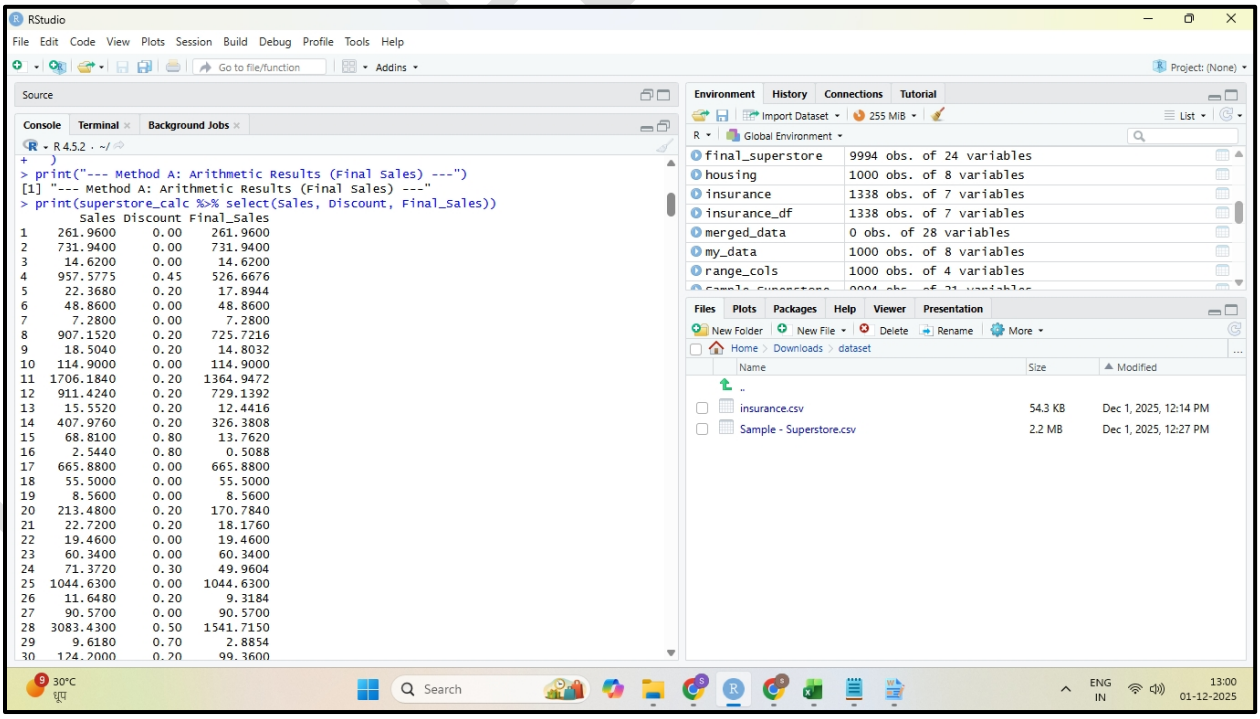
Sheth L.U.J. College of Arts & Sir M.V. College Of Science & Commerce
SUBJECT NAME: Data Analysis with SAS / SPSS/R

PRACTICAL NO : 10

AIM : Creating new variables using transformations and calculations in R. import dataset.





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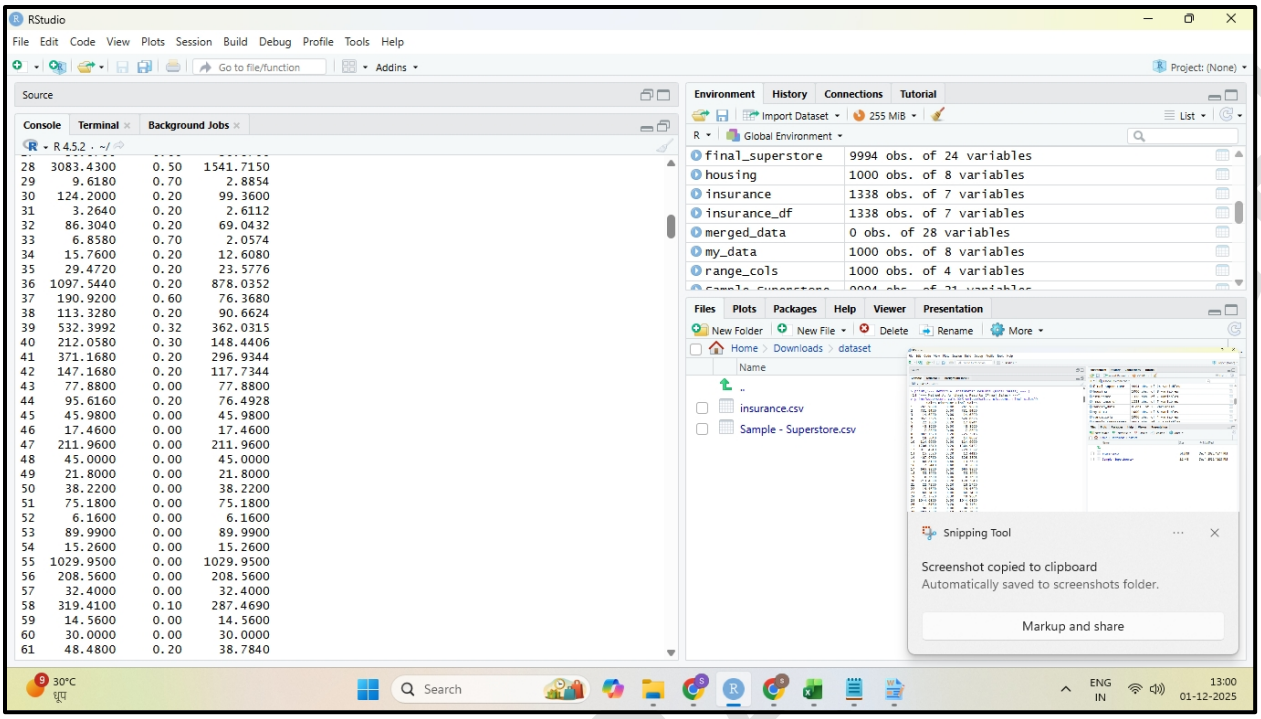
RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Source
Console Terminal Background Jobs
R 4.5.2 · ~/
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29 9.6180 0.70 2.8854
30 124.2000 0.20 99.3600
31 3.2640 0.20 2.6112
32 86.3040 0.20 69.0432
33 6.8580 0.70 2.0574
34 15.7600 0.20 12.6080
35 29.4720 0.20 23.5776
36 1097.5440 0.20 878.0352
37 190.9200 0.60 76.3680
38 113.3280 0.20 90.6624
39 532.3992 0.32 362.0315
40 212.0580 0.30 148.4406
41 371.1680 0.20 296.9344
42 147.1680 0.20 117.7344
43 77.8800 0.00 77.8800
44 95.6160 0.20 76.4928
45 45.9800 0.00 45.9800
46 17.4600 0.00 17.4600
47 211.9600 0.00 211.9600
48 45.0000 0.00 45.0000
49 21.8000 0.00 21.8000
50 38.2200 0.00 38.2200
51 75.1800 0.00 75.1800
52 6.1600 0.00 6.1600
53 89.9900 0.00 89.9900
54 15.2600 0.00 15.2600
55 1029.9500 0.00 1029.9500
56 208.5600 0.00 208.5600
57 32.4000 0.00 32.4000
58 319.4100 0.10 287.4690
59 14.5600 0.00 14.5600
60 30.0000 0.00 30.0000
61 48.4800 0.20 38.7840
Environment History Connections Tutorial
Import Dataset 255 MiB
Global Environment
final_superstore 9994 obs. of 24 variables
housing 1000 obs. of 8 variables
insurance 1338 obs. of 7 variables
insurance_df 1338 obs. of 7 variables
merged_data 0 obs. of 28 variables
my_data 1000 obs. of 8 variables
range_cols 1000 obs. of 4 variables
Files Plots Packages Help Viewer Presentation
New Folder New File Delete Rename More
Home Downloads dataset
Name
insurance.csv
Sample - Superstore.csv
Snipping Tool
Screenshot copied to clipboard
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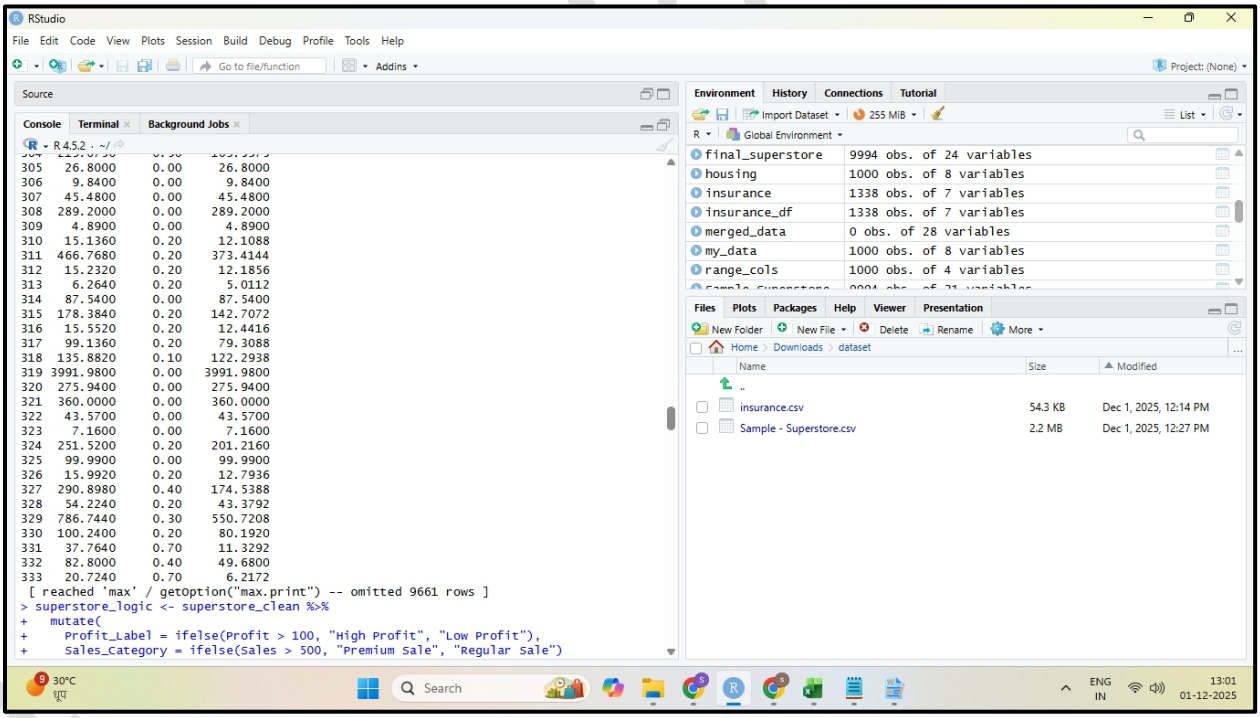
RStudio
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R 4.5.2 · ~/
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307 45.4800 0.00 45.4800
308 289.2000 0.00 289.2000
309 4.8900 0.00 4.8900
310 15.1360 0.20 12.1088
311 466.7680 0.20 373.4144
312 15.2320 0.20 12.1856
313 6.2640 0.20 5.0112
314 87.5400 0.00 87.5400
315 178.3840 0.20 142.7072
316 15.5520 0.20 12.4416
317 99.1360 0.20 79.3088
318 135.8820 0.10 122.2938
319 3991.9800 0.00 3991.9800
320 275.9400 0.00 275.9400
321 360.0000 0.00 360.0000
322 43.5700 0.00 43.5700
323 7.1600 0.00 7.1600
324 251.5200 0.20 201.2160
325 99.9900 0.00 99.9900
326 15.9920 0.20 12.7936
327 290.8980 0.40 174.5388
328 54.2240 0.20 43.3792
329 786.7440 0.30 550.7208
330 100.2400 0.20 80.1920
331 37.7640 0.70 11.3292
332 82.8000 0.40 49.6800
333 20.7240 0.70 6.2172
[reached 'max' / getOption("max.print") -- omitted 9661 rows]
> superstore_logic <- superstore_clean %>%
+ mutate(
+ Profit_Label = ifelse(Profit > 100, "High Profit", "Low Profit"),
+ Sales_Category = ifelse(Sales > 500, "Premium Sale", "Regular Sale")
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Home Downloads dataset
Name Size Modified
insurance.csv 54.3 KB Dec 1, 2025, 12:14 PM
Sample - Superstore.csv 2.2 MB Dec 1, 2025, 12:27 PM
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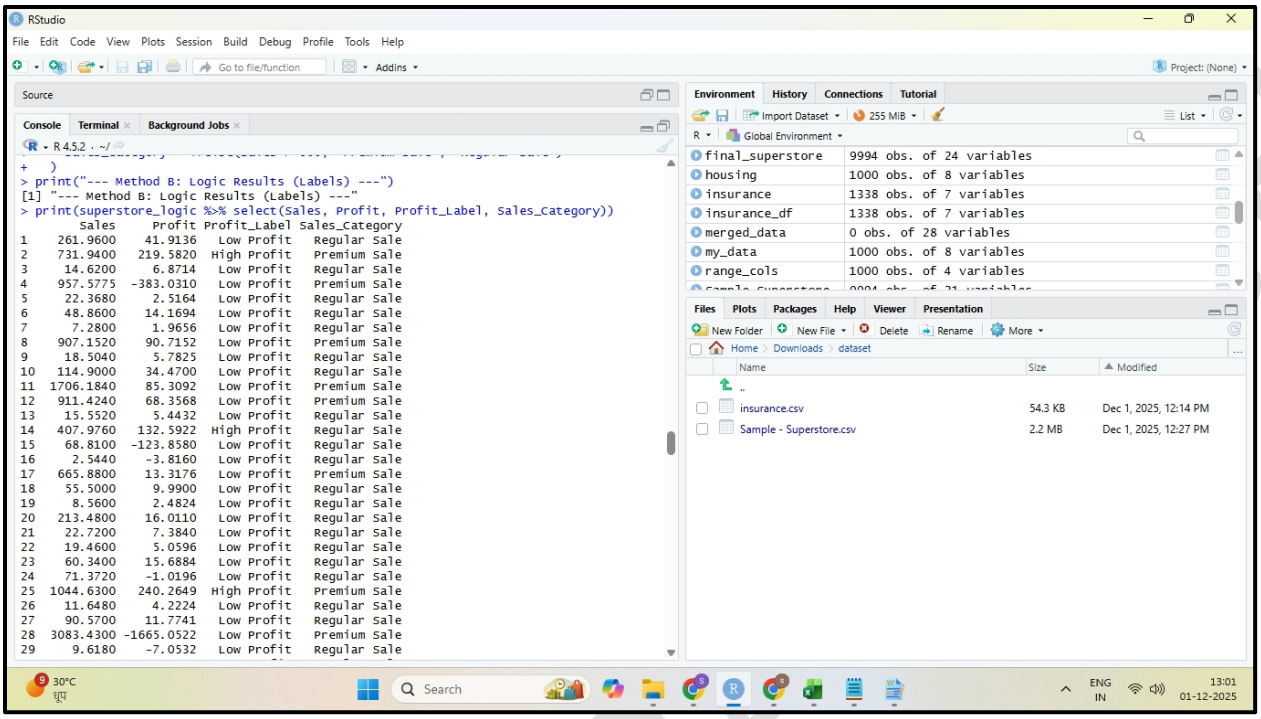
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+)
> print("--- Method B: Logic Results (Labels) ---")
[1] "--- Method B: Logic Results (Labels) ---"
> print(superstore_logic %>% select(Sales, Profit, Profit_Label, Sales_Category))
Sales Profit Profit_Label Sales_Category
1 261.9600 41.9136 Low Profit Regular Sale
2 731.9400 219.5820 High Profit Premium Sale
3 14.6200 6.8714 Low Profit Regular Sale
4 957.5775 -383.0310 Low Profit Premium Sale
5 22.3680 2.5164 Low Profit Regular Sale
6 48.8600 14.1694 Low Profit Regular Sale
7 7.2800 1.9656 Low Profit Regular Sale
8 907.1520 90.7152 Low Profit Premium Sale
9 18.5040 5.7825 Low Profit Regular Sale
10 114.9000 34.4700 Low Profit Regular Sale
11 1706.1840 85.3092 Low Profit Premium Sale
12 911.4240 68.3568 Low Profit Premium Sale
13 15.5520 5.4432 Low Profit Regular Sale
14 407.9760 132.5922 High Profit Regular Sale
15 68.8100 -123.8580 Low Profit Regular Sale
16 2.5440 -3.8160 Low Profit Regular Sale
17 665.8800 13.3176 Low Profit Premium Sale
18 55.5000 9.9900 Low Profit Regular Sale
19 8.5600 2.4824 Low Profit Regular Sale
20 213.4800 16.0110 Low Profit Regular Sale
21 22.7200 7.3840 Low Profit Regular Sale
22 19.4600 5.0596 Low Profit Regular Sale
23 60.3400 15.6884 Low Profit Regular Sale
24 71.3720 -1.0196 Low Profit Regular Sale
25 1044.6300 240.2649 High Profit Premium Sale
26 11.6480 4.2224 Low Profit Regular Sale
27 90.5700 11.7741 Low Profit Regular Sale
28 3083.4300 -1665.0522 Low Profit Premium Sale
29 9.6180 -7.0532 Low Profit Regular Sale
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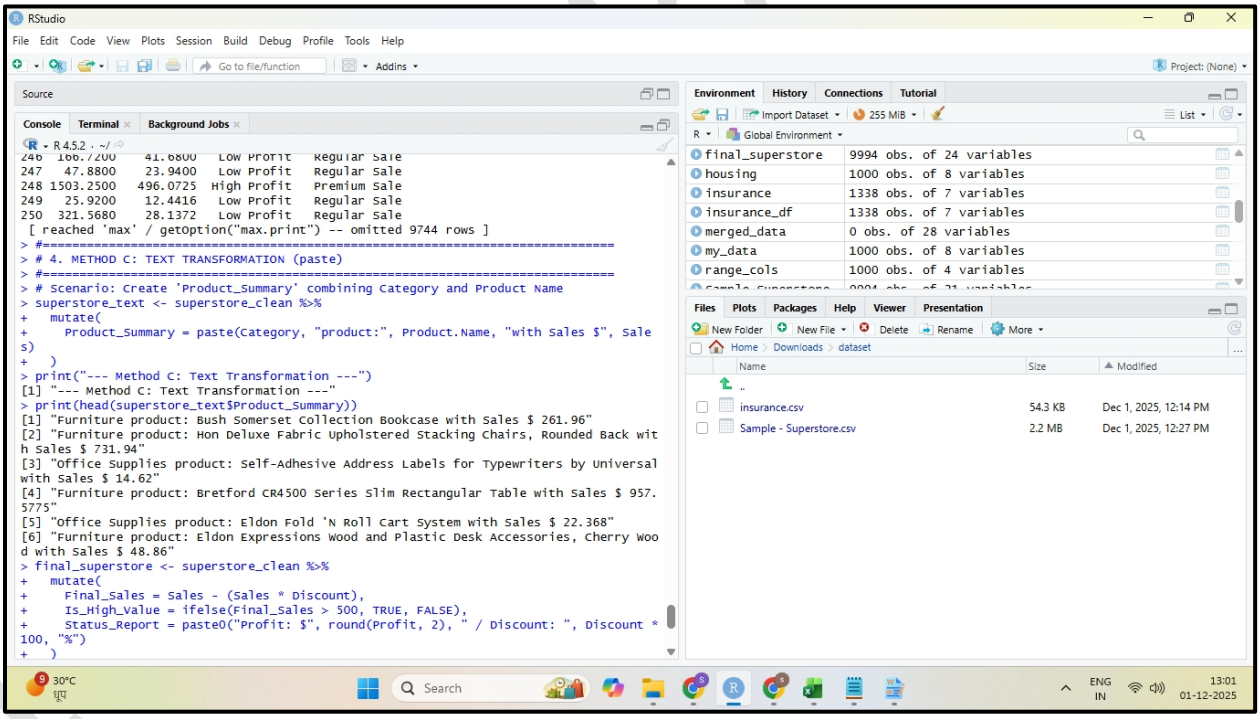
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247 47.8800 23.9400 Low Profit Regular Sale
248 1503.2500 496.0725 High Profit Premium Sale
249 25.9200 12.4416 Low Profit Regular Sale
250 321.5680 28.1372 Low Profit Regular Sale
[reached 'max' / getOption("max.print") -- omitted 9744 rows]
> #===
> # 4. METHOD C: TEXT TRANSFORMATION (paste)
> #===
> # Scenario: Create 'Product_Summary' combining Category and Product Name
> superstore_text <- superstore_clean %>%
+ mutate(
+ Product_Summary = paste(Category, "product:", Product.Name, "with Sales $", Sale
s)
+)
> print("--- Method C: Text Transformation ---")
[1] "--- Method C: Text Transformation ---"
> print(head(superstore_text$Product_Summary))
[1] "Furniture product: Bush Somerset Collection Bookcase with Sales $ 261.96"
[2] "Furniture product: Hon Deluxe Fabric Upholstered Stacking Chairs, Rounded Back Wit
h Sales $ 731.94"
[3] "Office Supplies product: Self-Adhesive Address Labels for Typewriters by Universal
with Sales $ 14.62"
[4] "Furniture product: Bretford CR4500 Series Slim Rectangular Table with Sales $ 957.
5775"
[5] "Office Supplies product: Eldon Fold 'N Roll Cart System with Sales $ 22.368"
[6] "Furniture product: Eldon Expressions Wood and Plastic Desk Accessories, Cherry Woo
d with Sales $ 48.86"
> final_superstore <- superstore_clean %>%
+ mutate(
+ Final_Sales = Sales - (Sales * Discount),
+ Is_High_Value = ifelse(Final_Sales > 500, TRUE, FALSE),
+ Status_Report = paste0("Profit: $", round(Profit, 2), " / Discount: ", Discount *
100, "%")
+)
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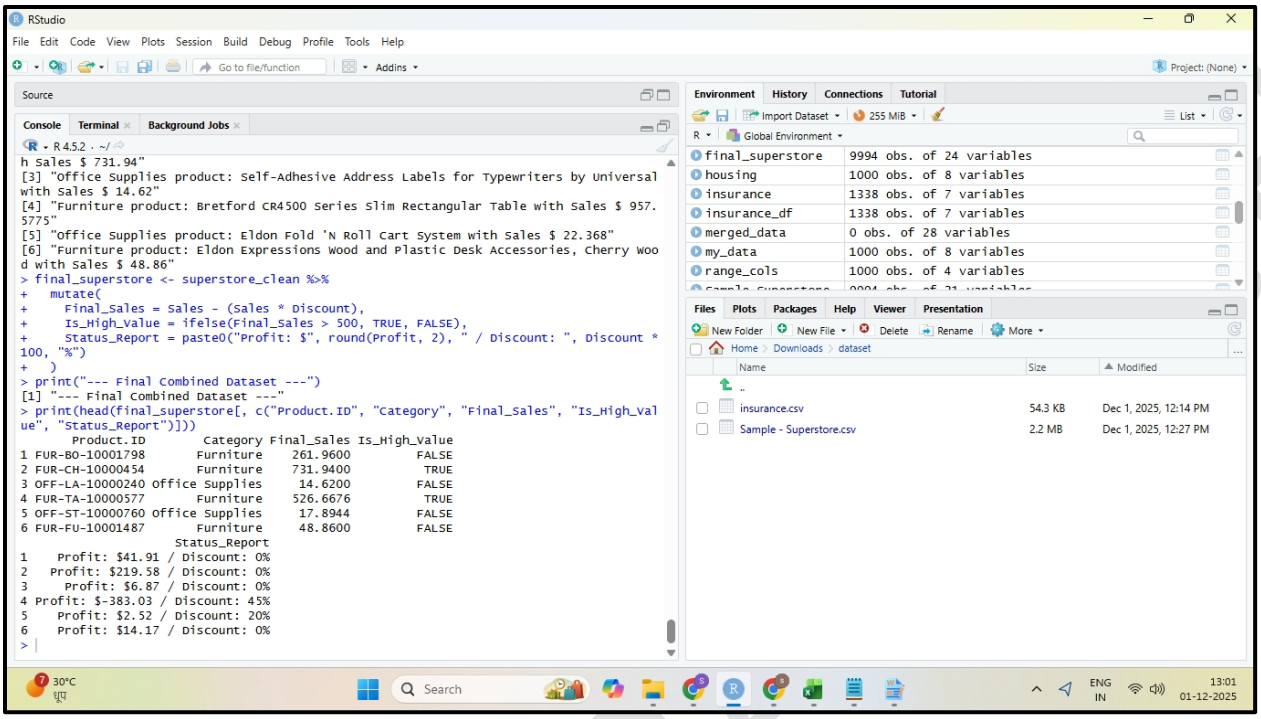

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