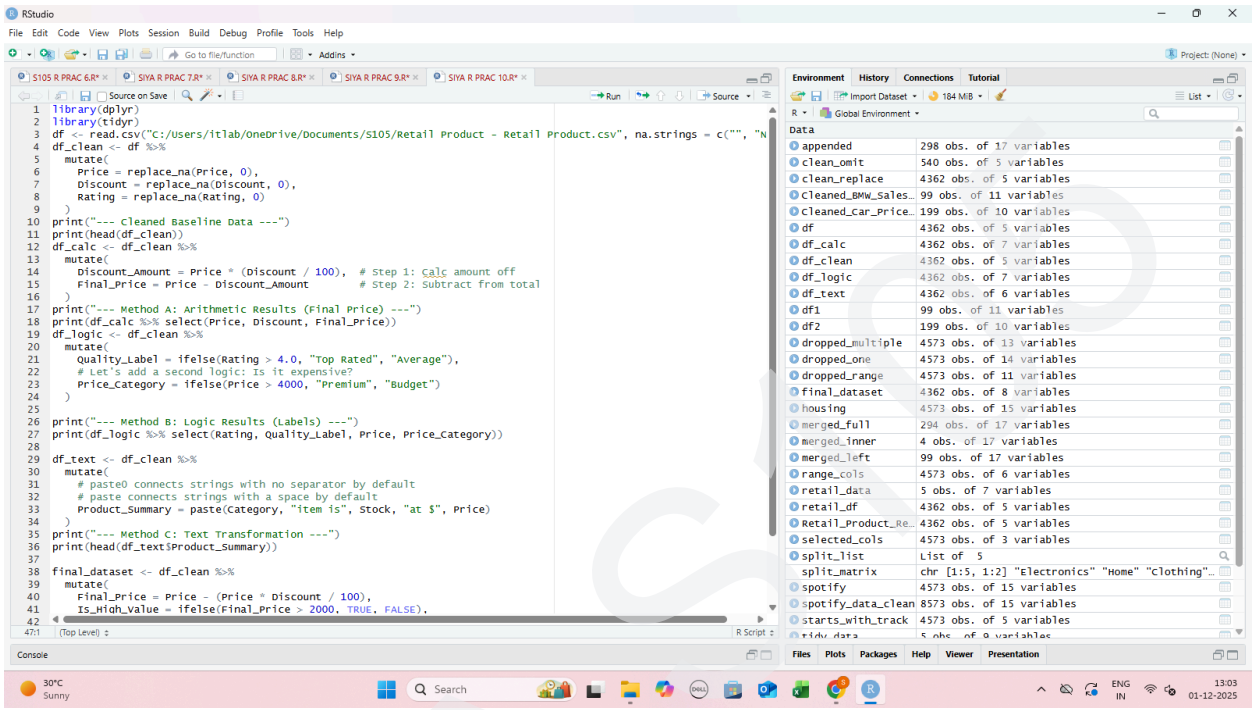
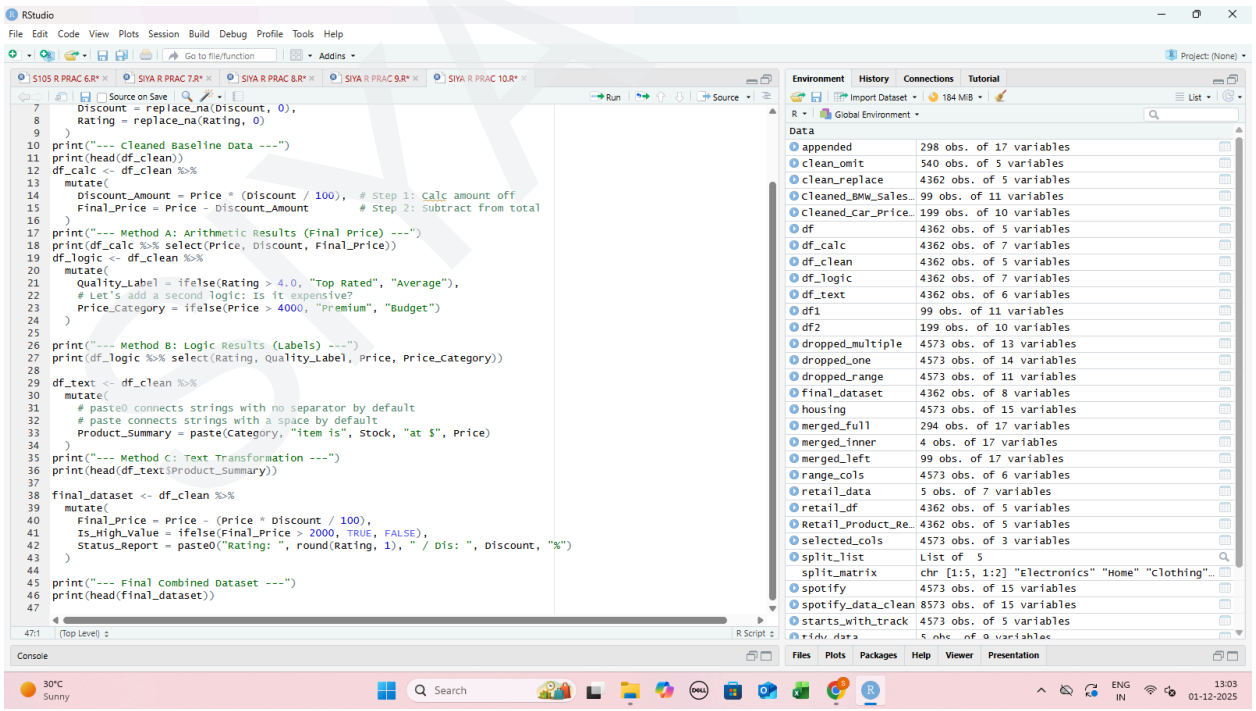
MVLU COLLEGE
PRACTICAL NO. 10

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





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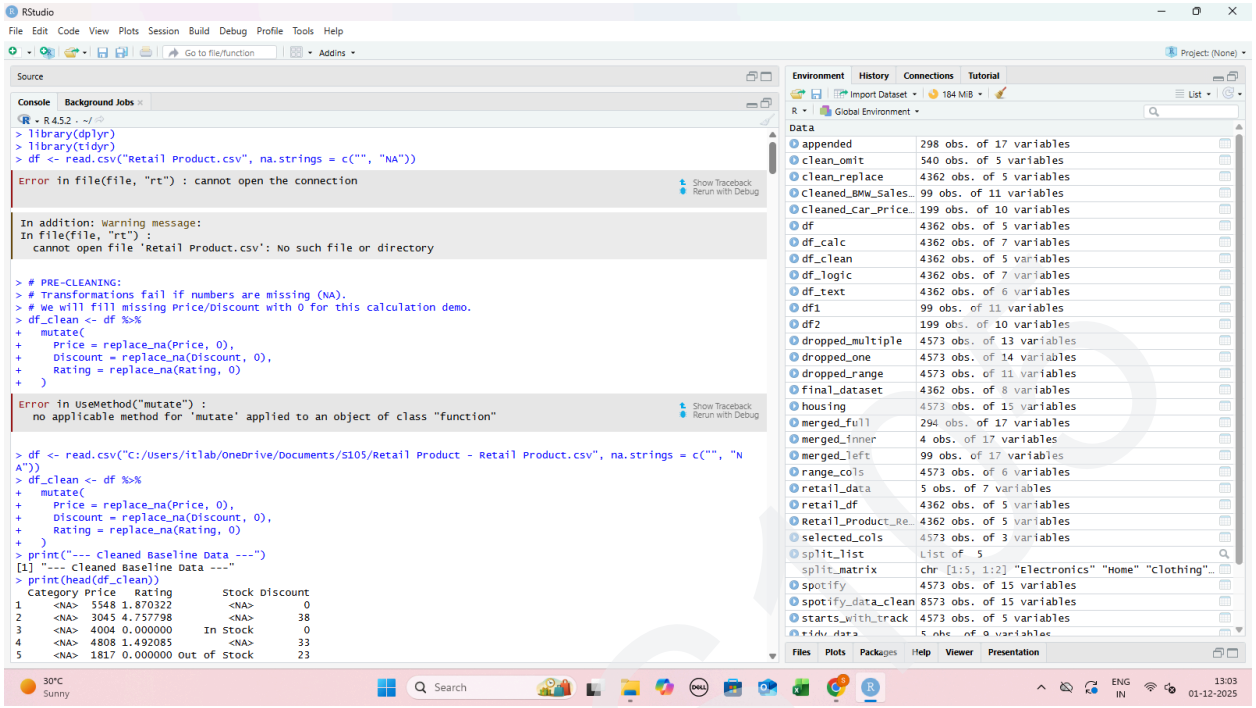

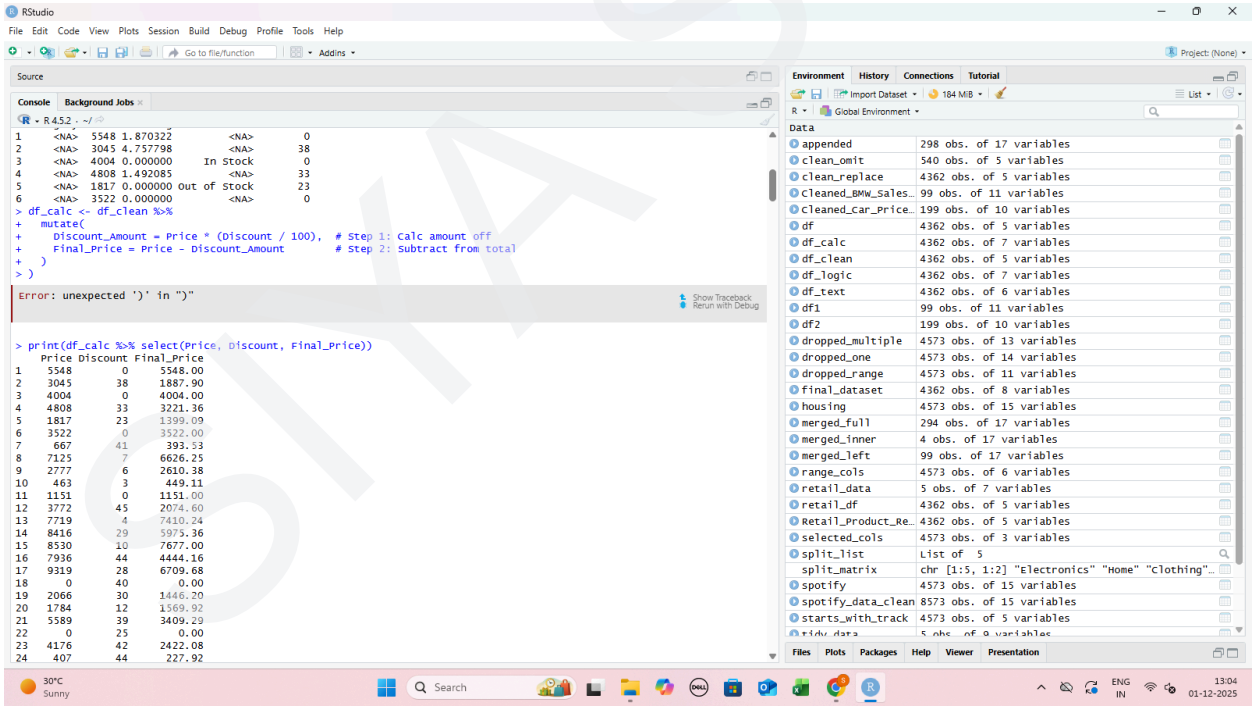

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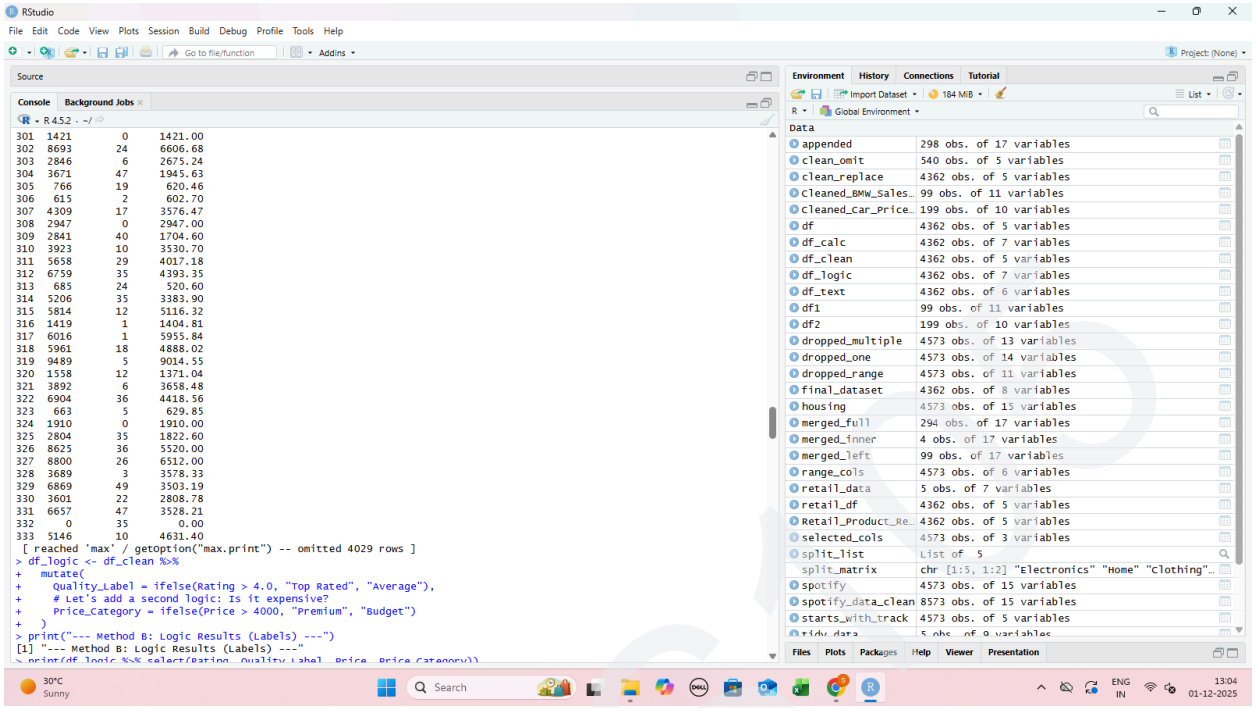
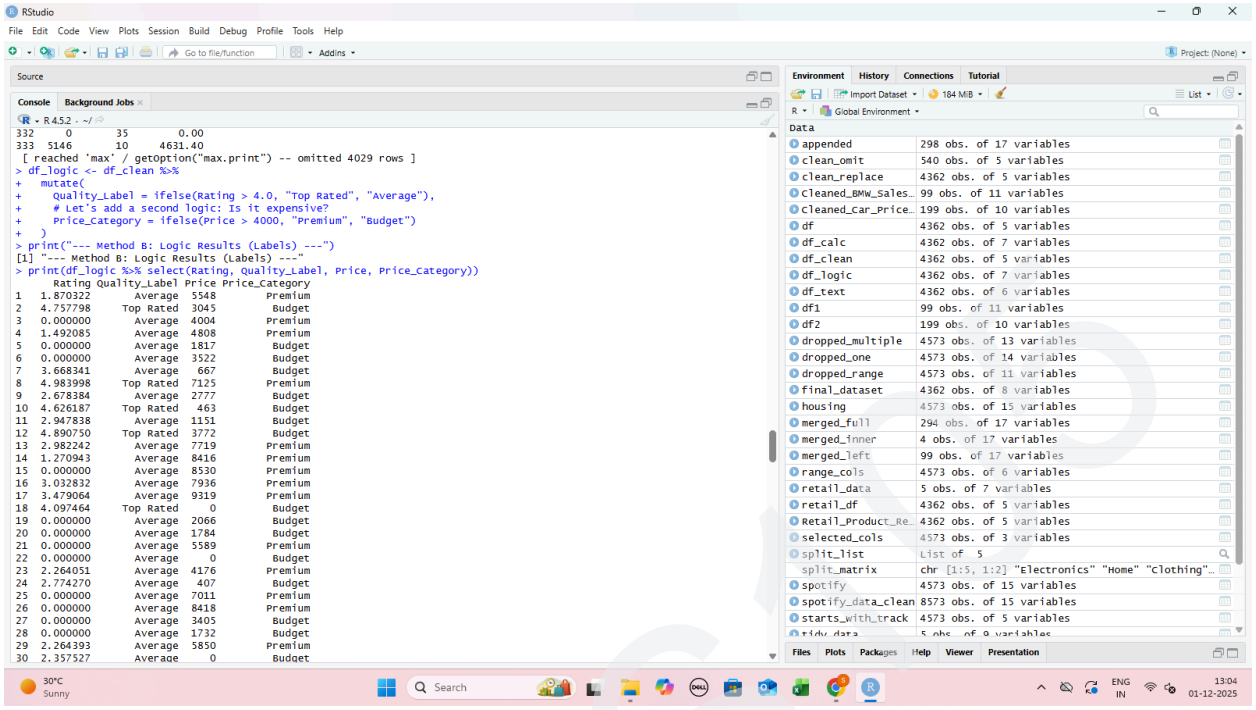
PRACTICAL NO. 10

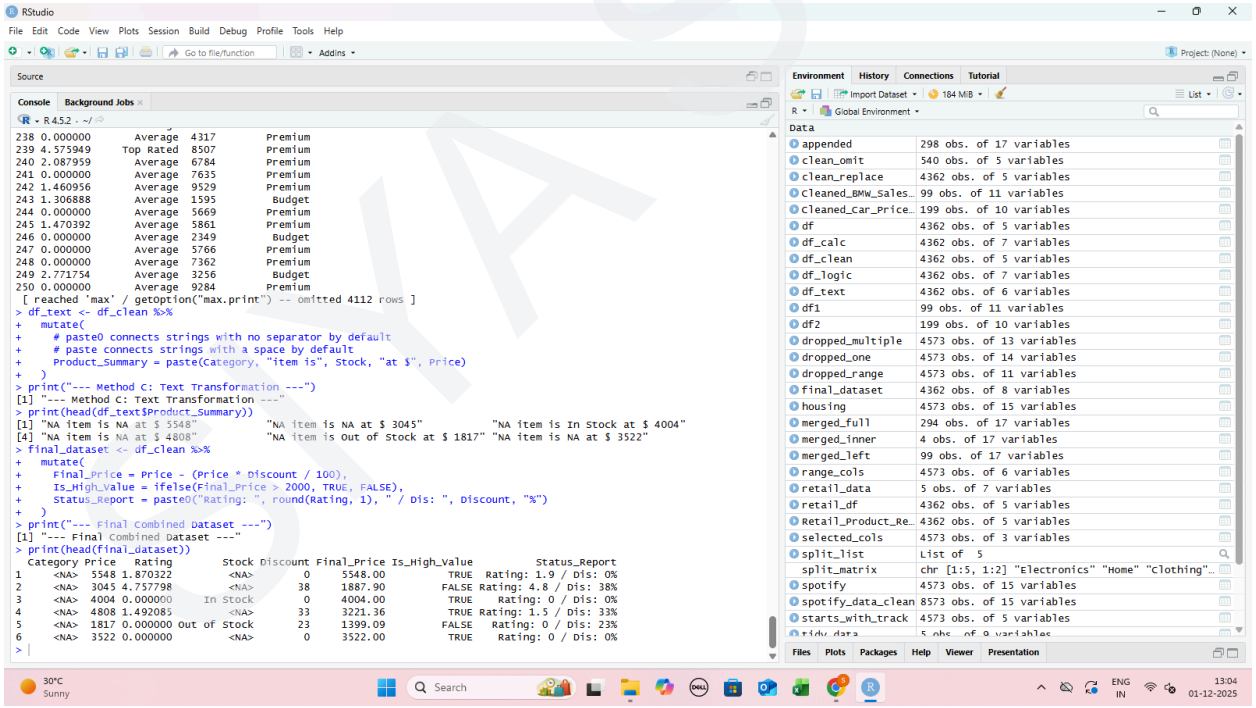


SIYA S105

MVLU COLLEGE
PRACTICAL NO. 10



```
332     0       35        0.00
333  5146       10     4631.40
 [ reached 'max' / getOption("max.print") -- omitted 4029 rows ]
> df_logic <- df_clean %>%
+   mutate(
+     Quality_Label = ifelse(Rating > 4.0, "Top Rated", "Average"),
+     # Let's add a second logic: Is it expensive?
+     Price_Category = ifelse(Price > 4000, "Premium", "Budget")
+   )
> print("--- Method B: Logic Results (Labels) ---")
[1] "--- Method B: Logic Results (Labels) ---"
> print(df_logic %>% select(Rating, Quality_Label, Price, Price_Category))
      Rating Quality_Label Price Price_Category
1   1.870322       Average  5548        Premium
2   4.757798     Top Rated  3045         Budget
3   0.000000       Average  4004        Premium
4   1.492085       Average  4808        Premium
5   0.000000       Average  1817         Budget
6   0.000000       Average  3522         Budget
7   3.668341       Average   667         Budget
8   4.983998     Top Rated  7125        Premium
9   2.678384       Average  2777         Budget
10  4.626187     Top Rated   463         Budget
11  2.947838       Average  1151         Budget
12  4.890750     Top Rated  3772         Budget
13  2.982242       Average  7719        Premium
14  1.270943       Average  8416        Premium
15  0.000000       Average  8530        Premium
16  3.032832       Average  7936        Premium
17  3.479064       Average  9319        Premium
18  4.097464     Top Rated     0         Budget
19  0.000000       Average  2066         Budget
20  0.000000       Average  1784         Budget
21  0.000000       Average  5589        Premium
22  0.000000       Average     0         Budget
23  2.264051       Average  4176        Premium
24  2.774270       Average   407         Budget
25  0.000000       Average  7011        Premium
26  0.000000       Average  8418        Premium
27  0.000000       Average  3405         Budget
28  0.000000       Average  1732         Budget
29  2.264393       Average  5850        Premium
30  2.357527       Average     0         Budget
```



```
238 0.000000       Average  4317        Premium
239 4.575949     Top Rated  8507        Premium
240 2.087959       Average  6784        Premium
241 0.000000       Average  7635        Premium
242 1.460956       Average  9529        Premium
243 1.306888       Average  1595         Budget
244 0.000000       Average  5669        Premium
245 1.470392       Average  5861        Premium
246 0.000000       Average  2349         Budget
247 0.000000       Average  5766        Premium
248 0.000000       Average  7362        Premium
249 2.771754       Average  3256         Budget
250 0.000000       Average  9284        Premium
 [ reached 'max' / getOption("max.print") -- omitted 4112 rows ]
> df_text <- df_clean %>%
+   mutate(
+     # paste0 connects strings with no separator by default
+     # paste connects strings with a space by default
+     Product_Summary = paste(Category, "item is", Stock, "at $", Price)
+   )
> print("--- Method C: Text Transformation ---")
[1] "--- Method C: Text Transformation ---"
> print(head(df_text$Product_Summary))
[1] "NA item is NA at $ 5548"          "NA item is NA at $ 3045"          "NA item is In Stock at $ 4004"
[4] "NA item is NA at $ 4808"          "NA item is Out of Stock at $ 1817" "NA item is NA at $ 3522"
> final_dataset <- df_clean %>%
+   mutate(
+     Final_Price = Price - (Price * Discount / 100),
+     Is_High_Value = ifelse(Final_Price > 2000, TRUE, FALSE),
+     Status_Report = paste0("Rating: ", round(Rating, 1), " / Dis: ", Discount, "%")
+   )
> print("--- Final Combined Dataset ---")
[1] "--- Final Combined Dataset ---"
> print(head(final_dataset))
  Category Price    Rating        Stock Discount Final_Price Is_High_Value          Status_Report
1     <NA>  5548 1.870322         <NA>        0     5548.00          TRUE  Rating: 1.9 / Dis: 0%
2     <NA>  3045 4.757798         <NA>       38     1887.90         FALSE Rating: 4.8 / Dis: 38%
3     <NA>  4004 0.000000     In Stock        0     4004.00          TRUE    Rating: 0 / Dis: 0%
4     <NA>  4808 1.492085         <NA>       33     3221.36          TRUE Rating: 1.5 / Dis: 33%
5     <NA>  1817 0.000000 Out of Stock       23     1399.09         FALSE   Rating: 0 / Dis: 23%
6     <NA>  3522 0.000000         <NA>        0     3522.00          TRUE    Rating: 0 / Dis: 0%
>
```