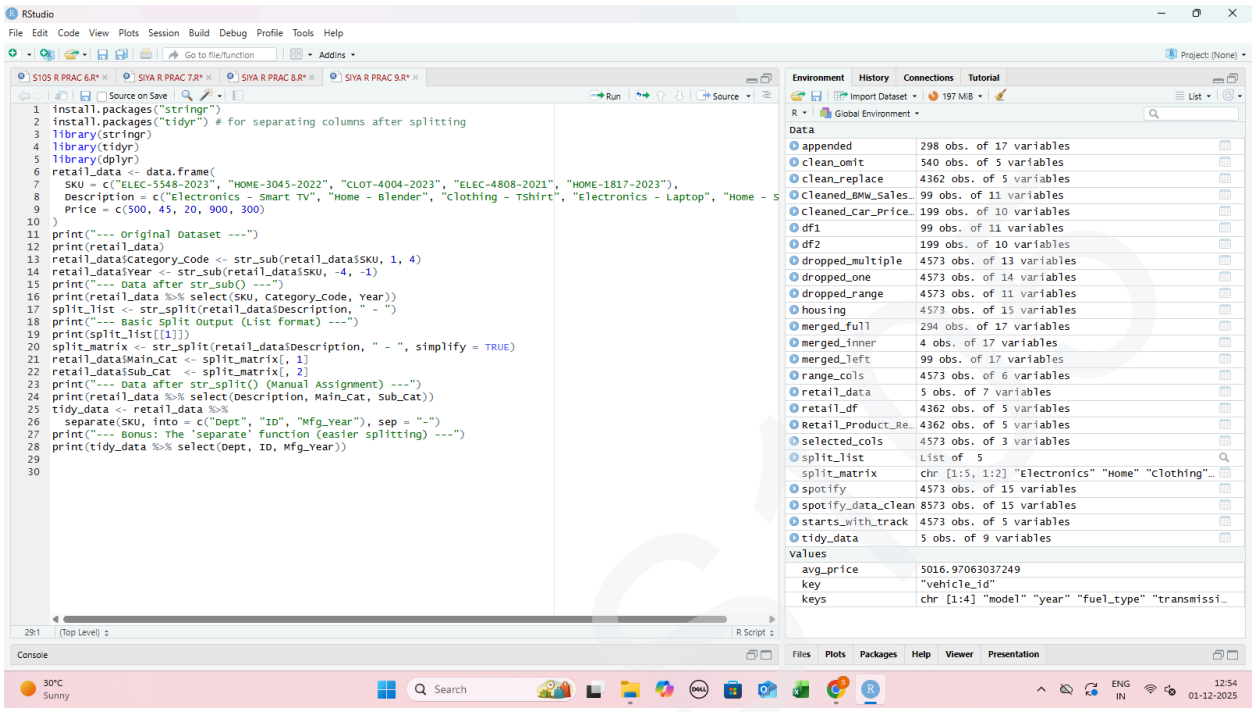
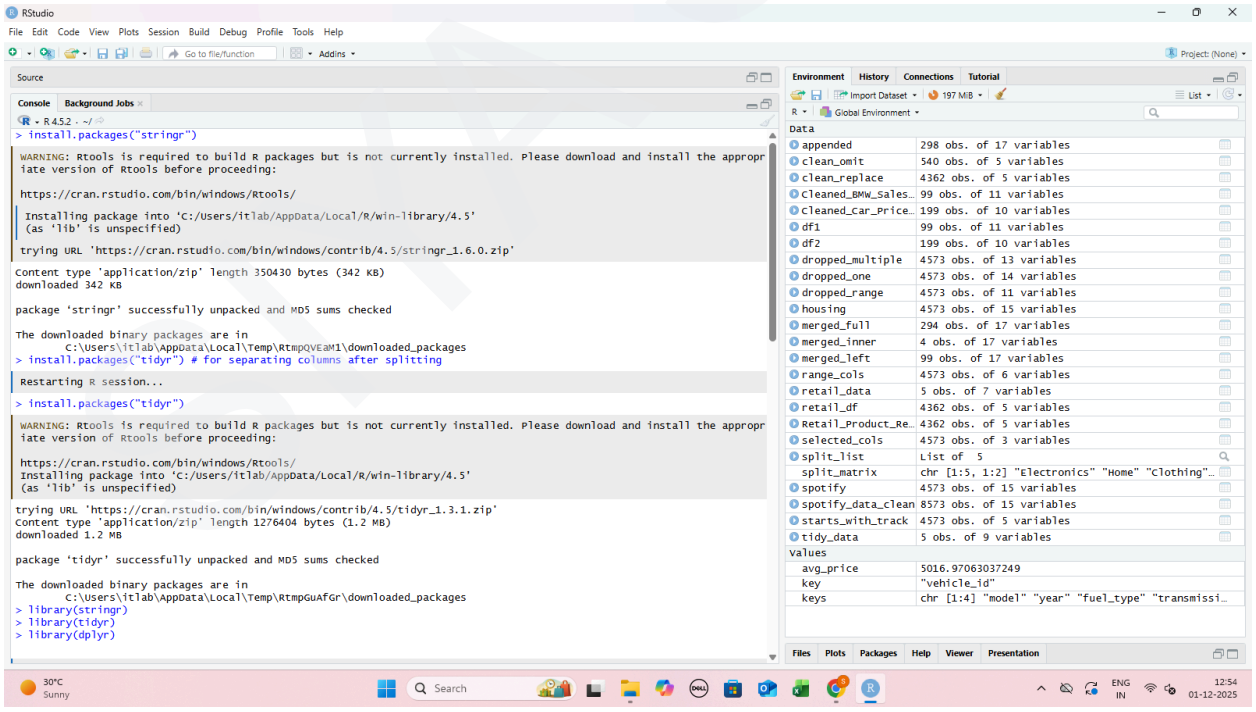
MVLU COLLEGE
PRACTICAL NO. 9

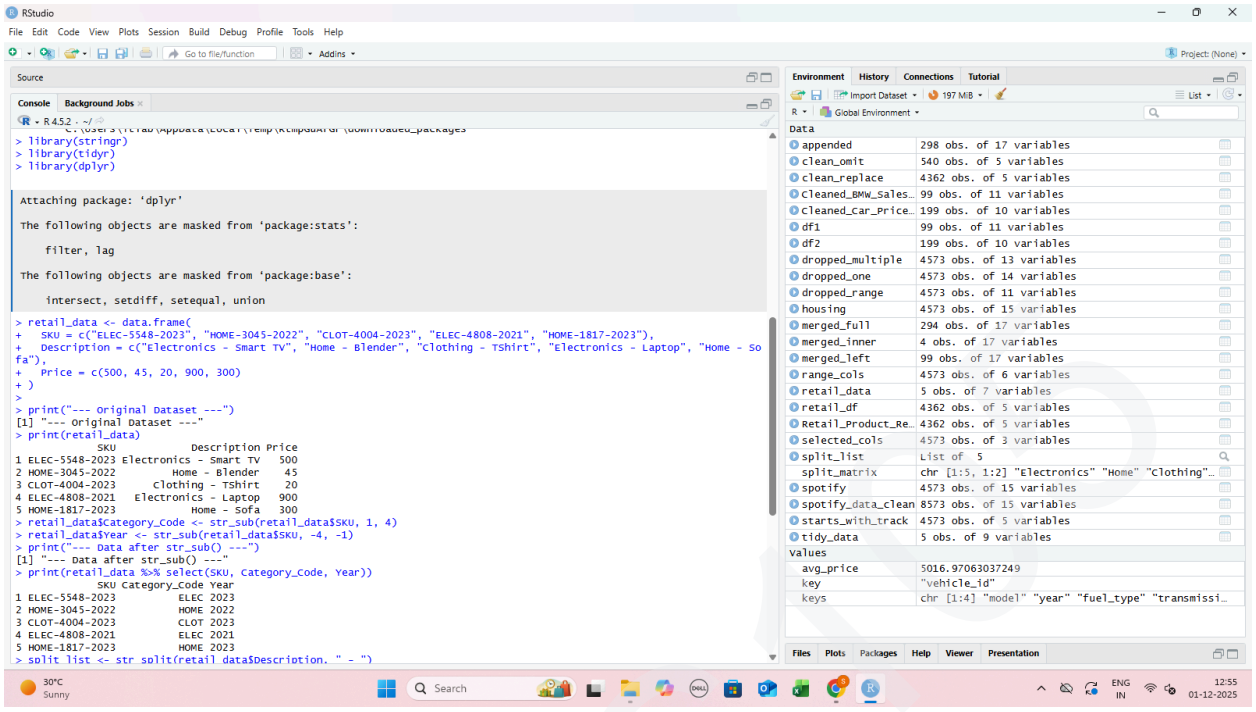
AIM: Performing text manipulation using str_sub(), str_split() (R). import dataset.



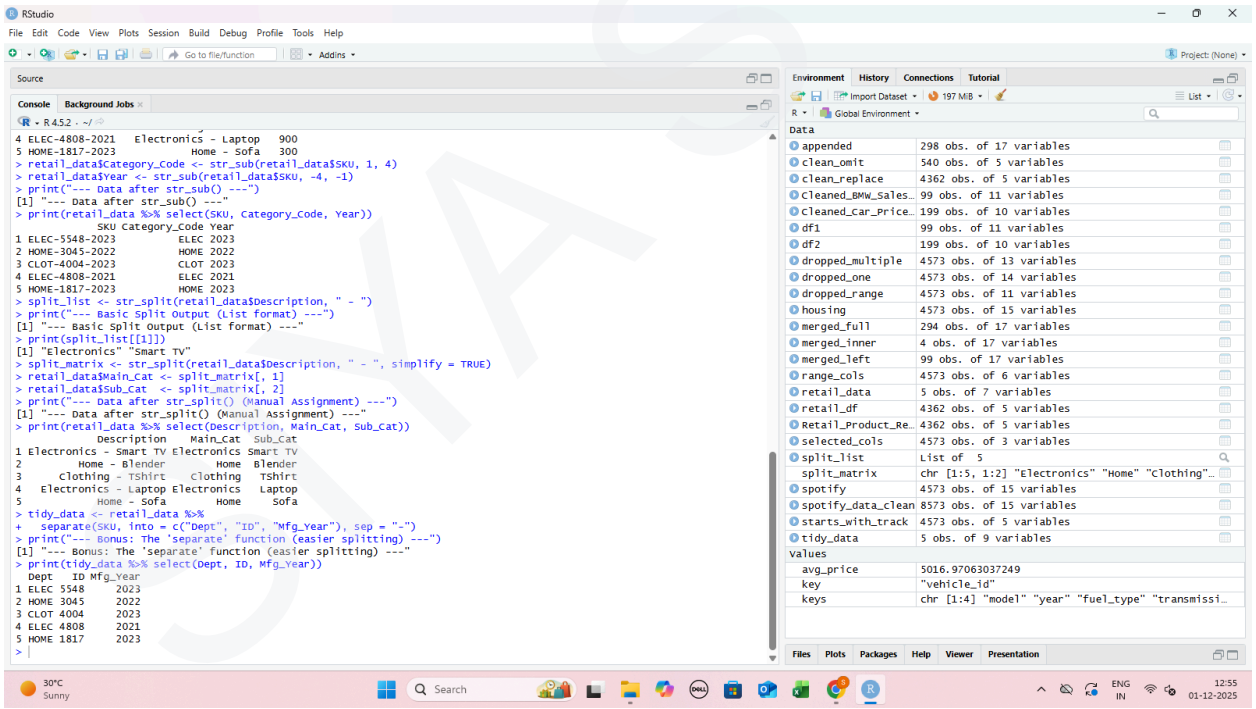


SIYA S105
R PROGRAMMING

MVLU COLLEGE
PRACTICAL NO. 9



```
> library(stringr)
> library(tidyr)
> library(dplyr)

Attaching package: 'dplyr'

The following objects are masked from 'package:stats':

    filter, lag

The following objects are masked from 'package:base':

    intersect, setdiff, setequal, union

> retail_data <- data.frame(
+   SKU = c("ELEC-5548-2023", "HOME-3045-2022", "CLOT-4004-2023", "ELEC-4808-2021", "HOME-1817-2023"),
+   Description = c("Electronics - Smart TV", "Home - Blender", "Clothing - TShirt", "Electronics - Laptop", "Home - Sofa"),
+   Price = c(500, 45, 20, 900, 300)
+ )
>
> print("--- Original Dataset ---")
[1] "--- Original Dataset ---"
> print(retail_data)
            SKU             Description Price
1 ELEC-5548-2023 Electronics - Smart TV   500
2 HOME-3045-2022         Home - Blender    45
3 CLOT-4004-2023       Clothing - TShirt    20
4 ELEC-4808-2021   Electronics - Laptop   900
5 HOME-1817-2023           Home - Sofa   300
> retail_data$Category_Code <- str_sub(retail_data$SKU, 1, 4)
> retail_data$Year <- str_sub(retail_data$SKU, -4, -1)
> print("--- Data after str_sub() ---")
[1] "--- Data after str_sub() ---"
> print(retail_data %>% select(SKU, Category_Code, Year))
            SKU Category_Code Year
1 ELEC-5548-2023          ELEC 2023
2 HOME-3045-2022          HOME 2022
3 CLOT-4004-2023          CLOT 2023
4 ELEC-4808-2021          ELEC 2021
5 HOME-1817-2023          HOME 2023
> split_list <- str_split(retail_data$Description, " - ")
```



```
4 ELEC-4808-2021   Electronics - Laptop   900
5 HOME-1817-2023           Home - Sofa   300
> retail_data$Category_Code <- str_sub(retail_data$SKU, 1, 4)
> retail_data$Year <- str_sub(retail_data$SKU, -4, -1)
> print("--- Data after str_sub() ---")
[1] "--- Data after str_sub() ---"
> print(retail_data %>% select(SKU, Category_Code, Year))
            SKU Category_Code Year
1 ELEC-5548-2023          ELEC 2023
2 HOME-3045-2022          HOME 2022
3 CLOT-4004-2023          CLOT 2023
4 ELEC-4808-2021          ELEC 2021
5 HOME-1817-2023          HOME 2023
> split_list <- str_split(retail_data$Description, " - ")
> print("--- Basic Split Output (List format) ---")
[1] "--- Basic Split Output (List format) ---"
> print(split_list[[1]])
[1] "Electronics" "Smart TV"
> split_matrix <- str_split(retail_data$Description, " - ", simplify = TRUE)
> retail_data$Main_Cat <- split_matrix[, 1]
> retail_data$Sub_Cat  <- split_matrix[, 2]
> print("--- Data after str_split() (Manual Assignment) ---")
[1] "--- Data after str_split() (Manual Assignment) ---"
> print(retail_data %>% select(Description, Main_Cat, Sub_Cat))
             Description    Main_Cat  Sub_Cat
1 Electronics - Smart TV Electronics Smart TV
2         Home - Blender        Home   Blender
3      Clothing - TShirt    Clothing    TShirt
4   Electronics - Laptop Electronics    Laptop
5           Home - Sofa        Home      Sofa
> tidy_data <- retail_data %>%
+   separate(SKU, into = c("Dept", "ID", "Mfg_Year"), sep = "-")
> print("--- Bonus: The 'separate' function (easier splitting) ---")
[1] "--- Bonus: The 'separate' function (easier splitting) ---"
> print(tidy_data %>% select(Dept, ID, Mfg_Year))
   Dept   ID Mfg_Year
1 ELEC 5548     2023
2 HOME 3045     2022
3 CLOT 4004     2023
4 ELEC 4808     2021
5 HOME 1817     2023
>
```

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