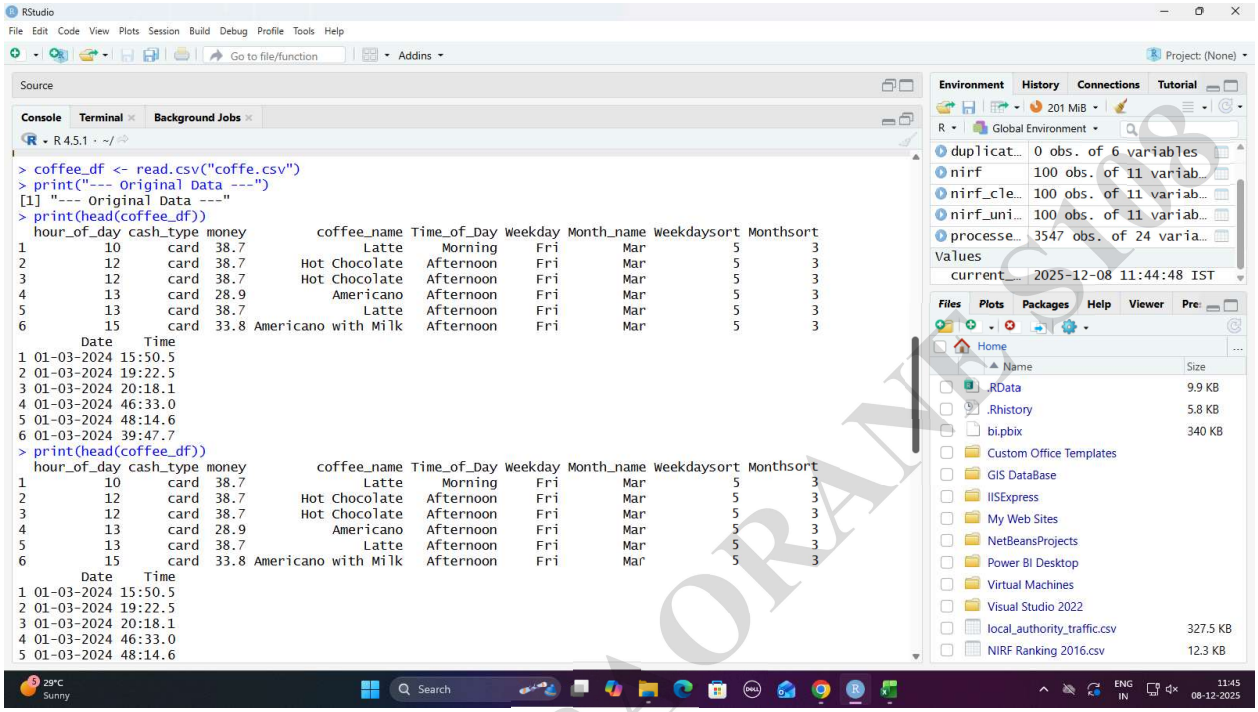
SHETH L.U.J & SIR M.V COLLEGE OF SCIENCE

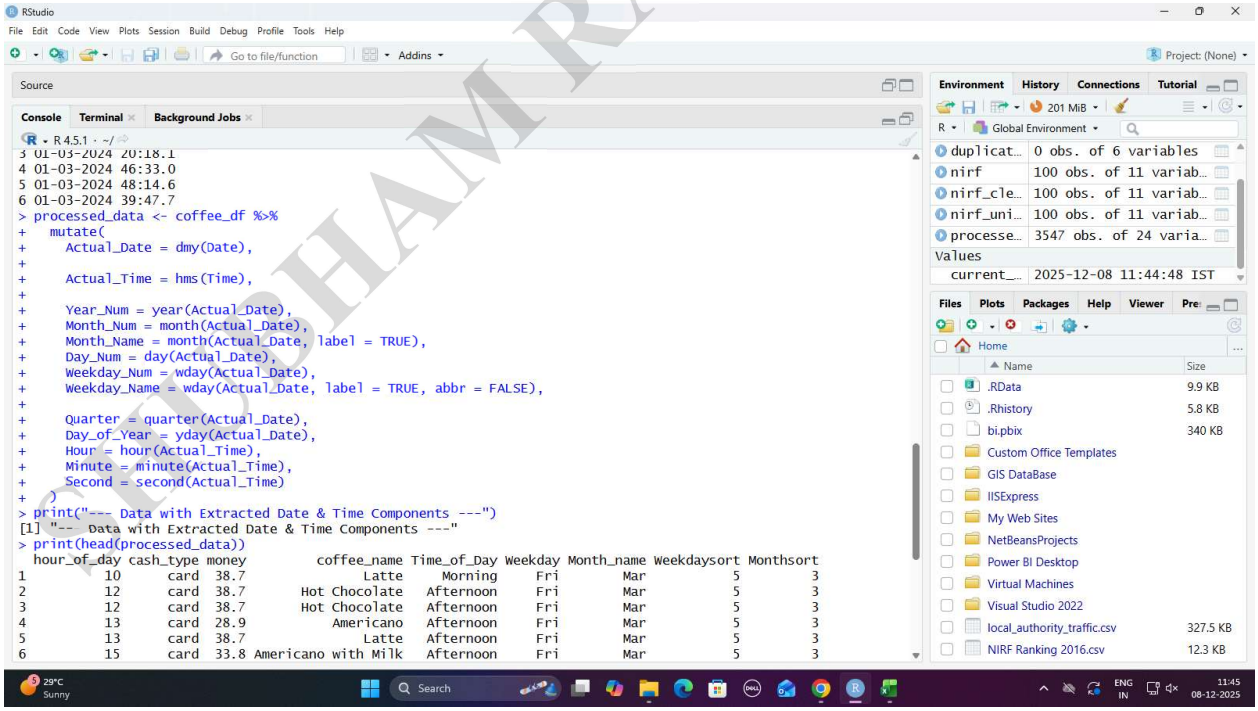
SUBJECT : Data Analysis with SAS / SPSS /R

AIM : Extracting date components using lubridate:: functions (R).

OUTPUT



```
> coffee_df <- read.csv("coffe.csv")
> print("--- Original Data ---")
[1] "--- Original Data ---"
> print(head(coffee_df))
  hour_of_day cash_type money         coffee_name Time_of_Day Weekday Month_name Weekdaysort Monthsort
1          10      card  38.7               Latte     Morning     Fri        Mar           5          3
2          12      card  38.7       Hot Chocolate   Afternoon     Fri        Mar           5          3
3          12      card  38.7       Hot Chocolate   Afternoon     Fri        Mar           5          3
4          13      card  28.9           Americano   Afternoon     Fri        Mar           5          3
5          13      card  38.7               Latte   Afternoon     Fri        Mar           5          3
6          15      card  33.8 Americano with Milk   Afternoon     Fri        Mar           5          3
        Date    Time
1 01-03-2024 15:50.5
2 01-03-2024 19:22.5
3 01-03-2024 20:18.1
4 01-03-2024 46:33.0
5 01-03-2024 48:14.6
6 01-03-2024 39:47.7
> print(head(coffee_df))
  hour_of_day cash_type money         coffee_name Time_of_Day Weekday Month_name Weekdaysort Monthsort
1          10      card  38.7               Latte     Morning     Fri        Mar           5          3
2          12      card  38.7       Hot Chocolate   Afternoon     Fri        Mar           5          3
3          12      card  38.7       Hot Chocolate   Afternoon     Fri        Mar           5          3
4          13      card  28.9           Americano   Afternoon     Fri        Mar           5          3
5          13      card  38.7               Latte   Afternoon     Fri        Mar           5          3
6          15      card  33.8 Americano with Milk   Afternoon     Fri        Mar           5          3
        Date    Time
1 01-03-2024 15:50.5
2 01-03-2024 19:22.5
3 01-03-2024 20:18.1
4 01-03-2024 46:33.0
5 01-03-2024 48:14.6
```



```
4 01-03-2024 46:33.0
5 01-03-2024 48:14.6
6 01-03-2024 39:47.7
> processed_data <- coffee_df %>%
+   mutate(
+     Actual_Date = dmy(Date),
+
+     Actual_Time = hms(Time),
+
+     Year_Num = year(Actual_Date),
+     Month_Num = month(Actual_Date),
+     Month_Name = month(Actual_Date, label = TRUE),
+     Day_Num = day(Actual_Date),
+     Weekday_Num = wday(Actual_Date),
+     Weekday_Name = wday(Actual_Date, label = TRUE, abbr = FALSE),
+
+     Quarter = quarter(Actual_Date),
+     Day_of_Year = yday(Actual_Date),
+     Hour = hour(Actual_Time),
+     Minute = minute(Actual_Time),
+     Second = second(Actual_Time)
+   )
> print("--- Data with Extracted Date & Time Components ---")
[1] "--- Data with Extracted Date & Time Components ---"
> print(head(processed_data))
  hour_of_day cash_type money         coffee_name Time_of_Day Weekday Month_name Weekdaysort Monthsort
1          10      card  38.7               Latte     Morning     Fri        Mar           5          3
2          12      card  38.7       Hot Chocolate   Afternoon     Fri        Mar           5          3
3          12      card  38.7       Hot Chocolate   Afternoon     Fri        Mar           5          3
4          13      card  28.9           Americano   Afternoon     Fri        Mar           5          3
5          13      card  38.7               Latte   Afternoon     Fri        Mar           5          3
6          15      card  33.8 Americano with Milk   Afternoon     Fri        Mar           5          3
```

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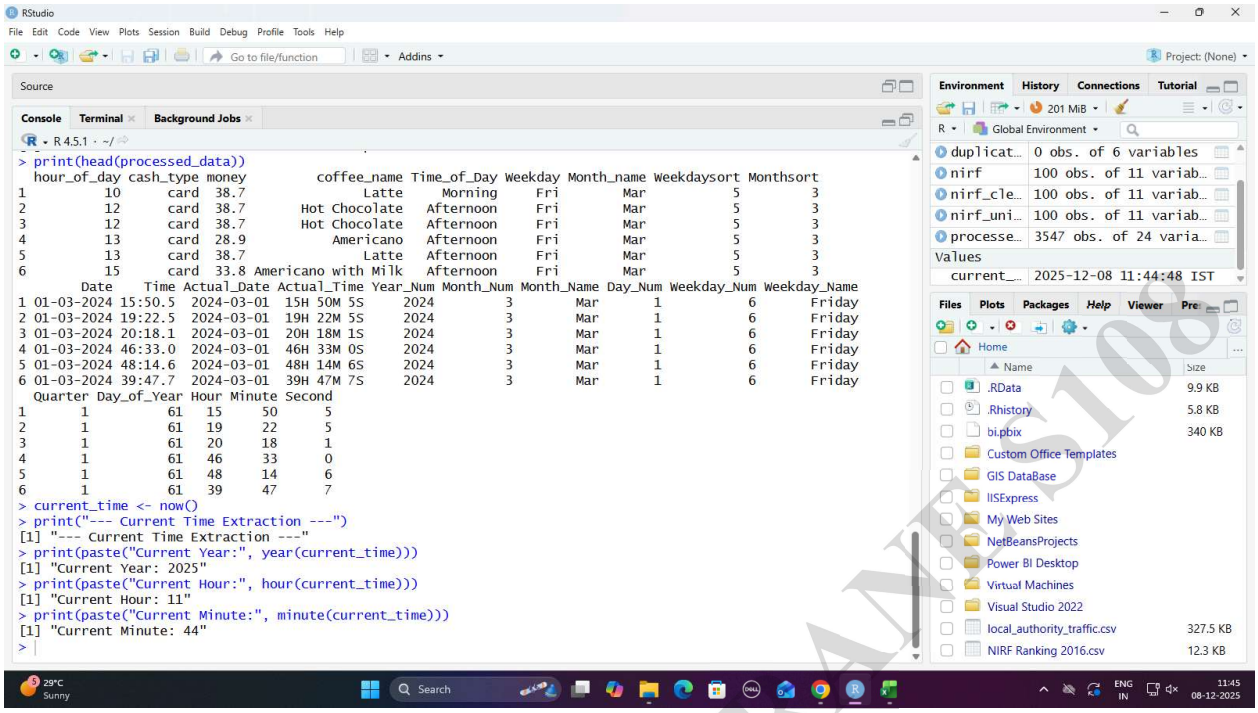
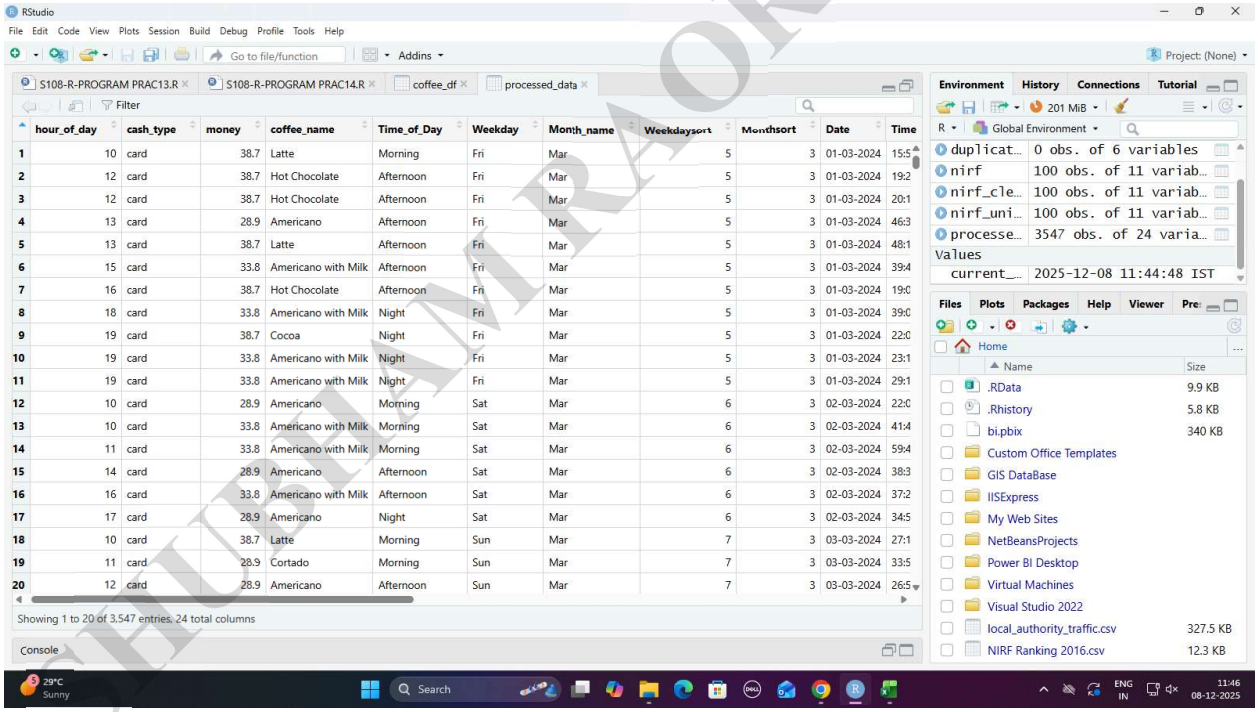


```
> print(head(processed_data))
  hour_of_day cash_type money          coffee_name Time_of_Day Weekday Month_name Weekdaysort Monthsort
1          10      card  38.7                Latte     Morning     Fri        Mar           5         3
2          12      card  38.7      Hot Chocolate   Afternoon     Fri        Mar           5         3
3          12      card  38.7      Hot Chocolate   Afternoon     Fri        Mar           5         3
4          13      card  28.9           Americano   Afternoon     Fri        Mar           5         3
5          13      card  38.7                Latte   Afternoon     Fri        Mar           5         3
6          15      card  33.8 Americano with Milk   Afternoon     Fri        Mar           5         3
         Date     Time Actual_Date Actual_Time Year_Num Month_Num Month_Name Day_Num Weekday_Num Weekday_Name
1 01-03-2024 15:50.5  2024-03-01  15H 50M 5S     2024         3        Mar       1           6       Friday
2 01-03-2024 19:22.5  2024-03-01  19H 22M 5S     2024         3        Mar       1           6       Friday
3 01-03-2024 20:18.1  2024-03-01  20H 18M 1S     2024         3        Mar       1           6       Friday
4 01-03-2024 46:33.0  2024-03-01  46H 33M 0S     2024         3        Mar       1           6       Friday
5 01-03-2024 48:14.6  2024-03-01  48H 14M 6S     2024         3        Mar       1           6       Friday
6 01-03-2024 39:47.7  2024-03-01  39H 47M 7S     2024         3        Mar       1           6       Friday
  Quarter Day_of_Year Hour Minute Second
1       1          61   15     50      5
2       1          61   19     22      5
3       1          61   20     18      1
4       1          61   46     33      0
5       1          61   48     14      6
6       1          61   39     47      7
> current_time <- now()
> print("--- Current Time Extraction ---")
[1] "--- Current Time Extraction ---"
> print(paste("Current Year:", year(current_time)))
[1] "Current Year: 2025"
> print(paste("Current Hour:", hour(current_time)))
[1] "Current Hour: 11"
> print(paste("Current Minute:", minute(current_time)))
[1] "Current Minute: 44"
>
```



	hour_of_day	cash_type	money	coffee_name	Time_of_Day	Weekday	Month_name	Weekdaysort	Monthsort	Date	Time
1	10	card	38.7	Latte	Morning	Fri	Mar	5	3	01-03-2024	15:5
2	12	card	38.7	Hot Chocolate	Afternoon	Fri	Mar	5	3	01-03-2024	19:2
3	12	card	38.7	Hot Chocolate	Afternoon	Fri	Mar	5	3	01-03-2024	20:1
4	13	card	28.9	Americano	Afternoon	Fri	Mar	5	3	01-03-2024	46:3
5	13	card	38.7	Latte	Afternoon	Fri	Mar	5	3	01-03-2024	48:1
6	15	card	33.8	Americano with Milk	Afternoon	Fri	Mar	5	3	01-03-2024	39:4
7	16	card	38.7	Hot Chocolate	Afternoon	Fri	Mar	5	3	01-03-2024	19:0
8	18	card	33.8	Americano with Milk	Night	Fri	Mar	5	3	01-03-2024	39:0
9	19	card	38.7	Cocoa	Night	Fri	Mar	5	3	01-03-2024	22:0
10	19	card	33.8	Americano with Milk	Night	Fri	Mar	5	3	01-03-2024	23:1
11	19	card	33.8	Americano with Milk	Night	Fri	Mar	5	3	01-03-2024	29:1
12	10	card	28.9	Americano	Morning	Sat	Mar	6	3	02-03-2024	22:0
13	10	card	33.8	Americano with Milk	Morning	Sat	Mar	6	3	02-03-2024	41:4
14	11	card	33.8	Americano with Milk	Morning	Sat	Mar	6	3	02-03-2024	59:4
15	14	card	28.9	Americano	Afternoon	Sat	Mar	6	3	02-03-2024	38:3
16	16	card	33.8	Americano with Milk	Afternoon	Sat	Mar	6	3	02-03-2024	37:2
17	17	card	28.9	Americano	Night	Sat	Mar	6	3	02-03-2024	34:5
18	10	card	38.7	Latte	Morning	Sun	Mar	7	3	03-03-2024	27:1
19	11	card	28.9	Cortado	Morning	Sun	Mar	7	3	03-03-2024	33:5
20	12	card	28.9	Americano	Afternoon	Sun	Mar	7	3	03-03-2024	26:5

Showing 1 to 20 of 3,547 entries, 24 total columns

SHUBHAM RAORANE S108

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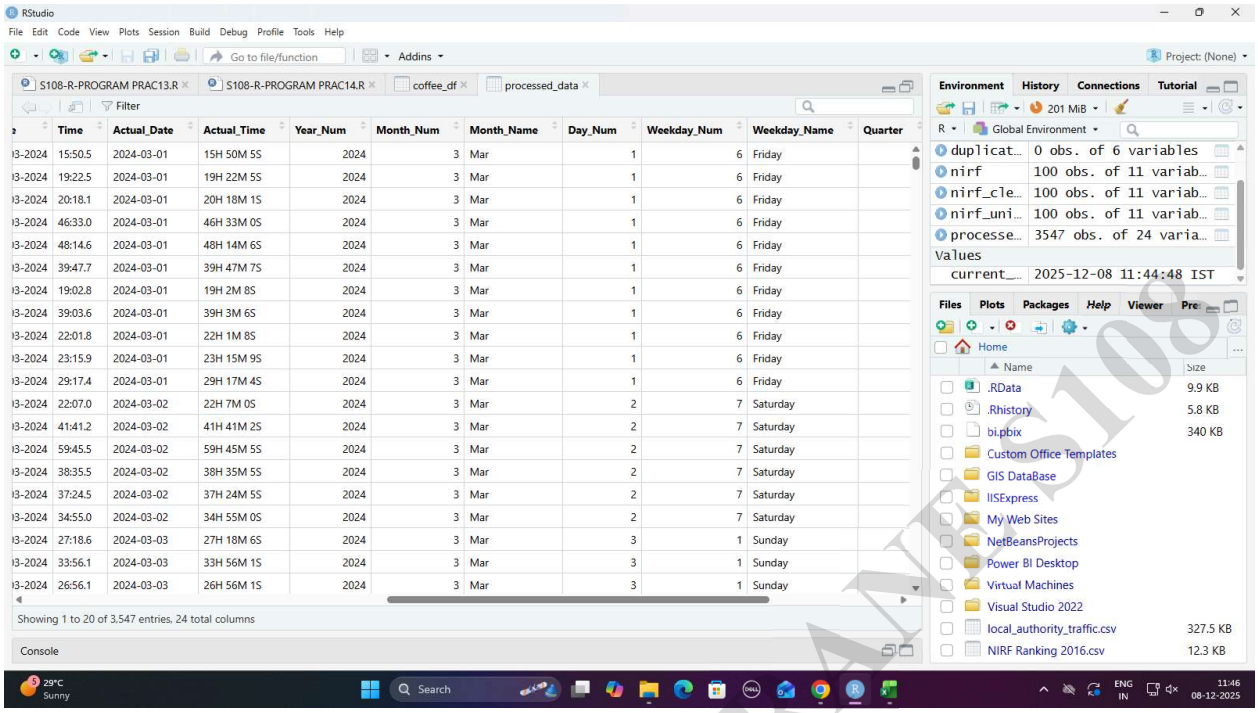

SHUBHAM RAORANE S108