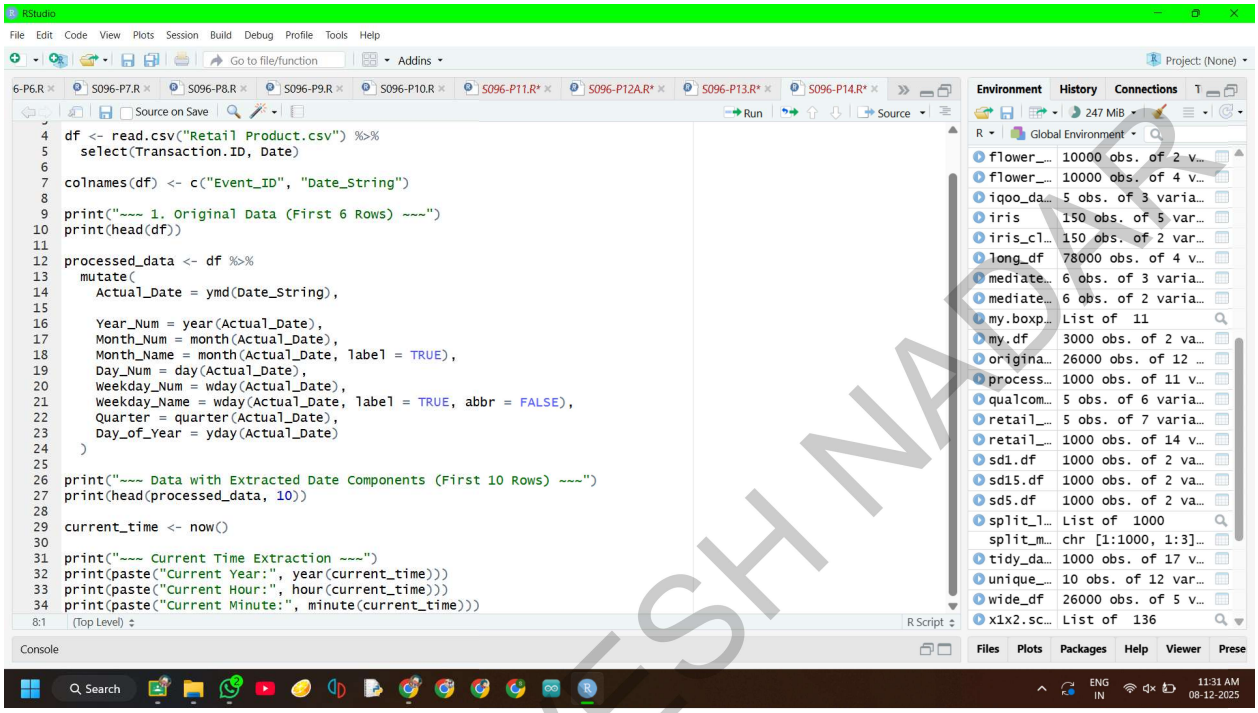
SHETH L.U.J. AND SIR M.V. COLLEGE
DATA ANALYSIS WITH SAS/SPSS/R

PRACTICAL NO:14

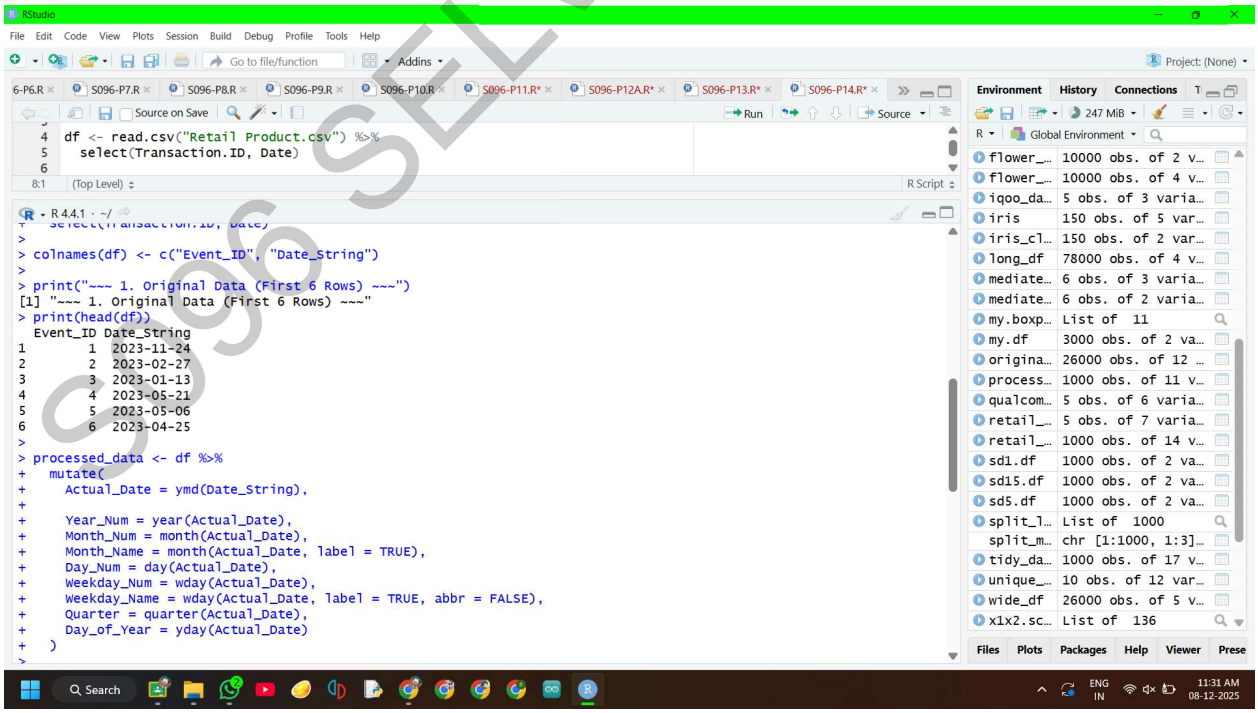
AIM: Extracting date components using lubridate:: functions (R).

CODE:



```
df <- read.csv("Retail Product.csv") %>%
  select(Transaction.ID, Date)

colnames(df) <- c("Event_ID", "Date_String")

print("~~~ 1. Original Data (First 6 Rows) ~~~")
print(head(df))

processed_data <- df %>%
  mutate(
    Actual_Date = ymd(Date_String),

    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)
  )

print("~~~ Data with Extracted Date Components (First 10 Rows) ~~~")
print(head(processed_data, 10))

current_time <- now()

print("~~~ Current Time Extraction ~~~")
print(paste("Current Year:", year(current_time)))
print(paste("Current Hour:", hour(current_time)))
print(paste("Current Minute:", minute(current_time)))
```

OUTPUT:



```
> df <- read.csv("Retail Product.csv") %>%
+   select(Transaction.ID, Date)
>
> colnames(df) <- c("Event_ID", "Date_String")
>
> print("~~~ 1. Original Data (First 6 Rows) ~~~")
[1] "~~~ 1. Original Data (First 6 Rows) ~~~"
> print(head(df))
  Event_ID Date_String
1        1  2023-11-24
2        2  2023-02-27
3        3  2023-01-13
4        4  2023-05-21
5        5  2023-05-06
6        6  2023-04-25
>
> processed_data <- df %>%
+   mutate(
+     Actual_Date = ymd(Date_String),
+
+     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)
+   )
>
```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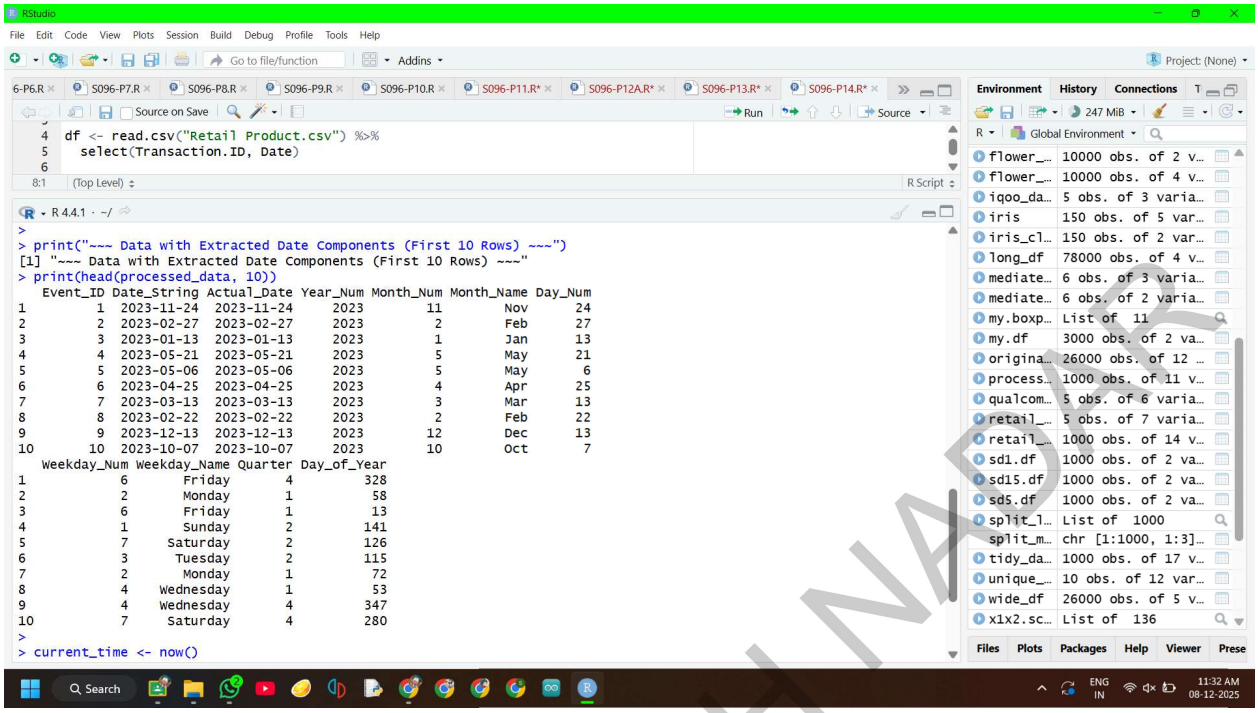
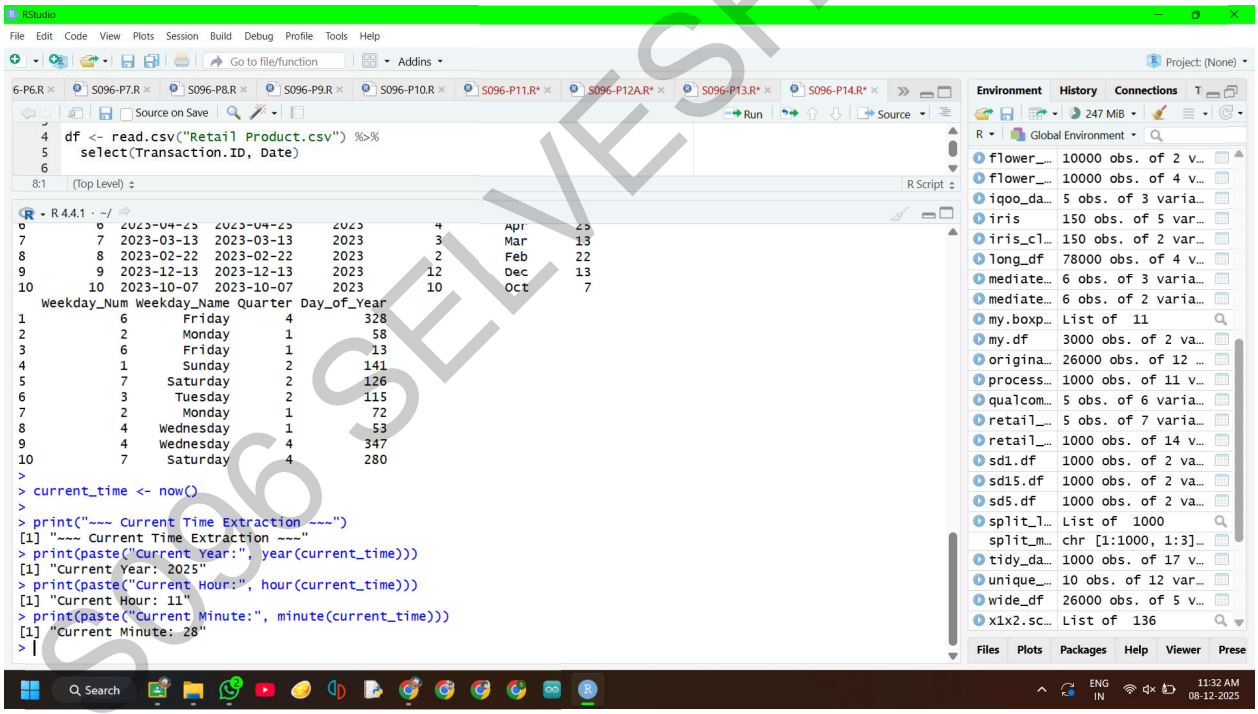


```
df <- read.csv("Retail Product.csv") %>%
  select(Transaction.ID, Date)

> print("~~~ Data with Extracted Date Components (First 10 Rows) ~~~")
[1] "~~~ Data with Extracted Date Components (First 10 Rows) ~~~"
> print(head(processed_data, 10))
   Event_ID Date_String Actual_Date Year_Num Month_Num Month_Name Day_Num
1         1  2023-11-24  2023-11-24     2023        11        Nov      24
2         2  2023-02-27  2023-02-27     2023         2        Feb      27
3         3  2023-01-13  2023-01-13     2023         1        Jan      13
4         4  2023-05-21  2023-05-21     2023         5        May      21
5         5  2023-05-06  2023-05-06     2023         5        May       6
6         6  2023-04-25  2023-04-25     2023         4        Apr      25
7         7  2023-03-13  2023-03-13     2023         3        Mar      13
8         8  2023-02-22  2023-02-22     2023         2        Feb      22
9         9  2023-12-13  2023-12-13     2023        12        Dec      13
10       10  2023-10-07  2023-10-07     2023        10        Oct       7
   Weekday_Num Weekday_Name Quarter Day_of_Year
1            6       Friday       4          328
2            2       Monday       1           58
3            6       Friday       1           13
4            1       Sunday       2          141
5            7     Saturday       2          126
6            3      Tuesday       2          115
7            2       Monday       1           72
8            4    Wednesday       1           53
9            4    Wednesday       4          347
10           7     Saturday       4          280
>
> current_time <- now()
```



```
df <- read.csv("Retail Product.csv") %>%
  select(Transaction.ID, Date)

7         7  2023-03-13  2023-03-13     2023         3        Mar      13
8         8  2023-02-22  2023-02-22     2023         2        Feb      22
9         9  2023-12-13  2023-12-13     2023        12        Dec      13
10       10  2023-10-07  2023-10-07     2023        10        Oct       7
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6            3      Tuesday       2          115
7            2       Monday       1           72
8            4    Wednesday       1           53
9            4    Wednesday       4          347
10           7     Saturday       4          280
>
> 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: 28"
>
```