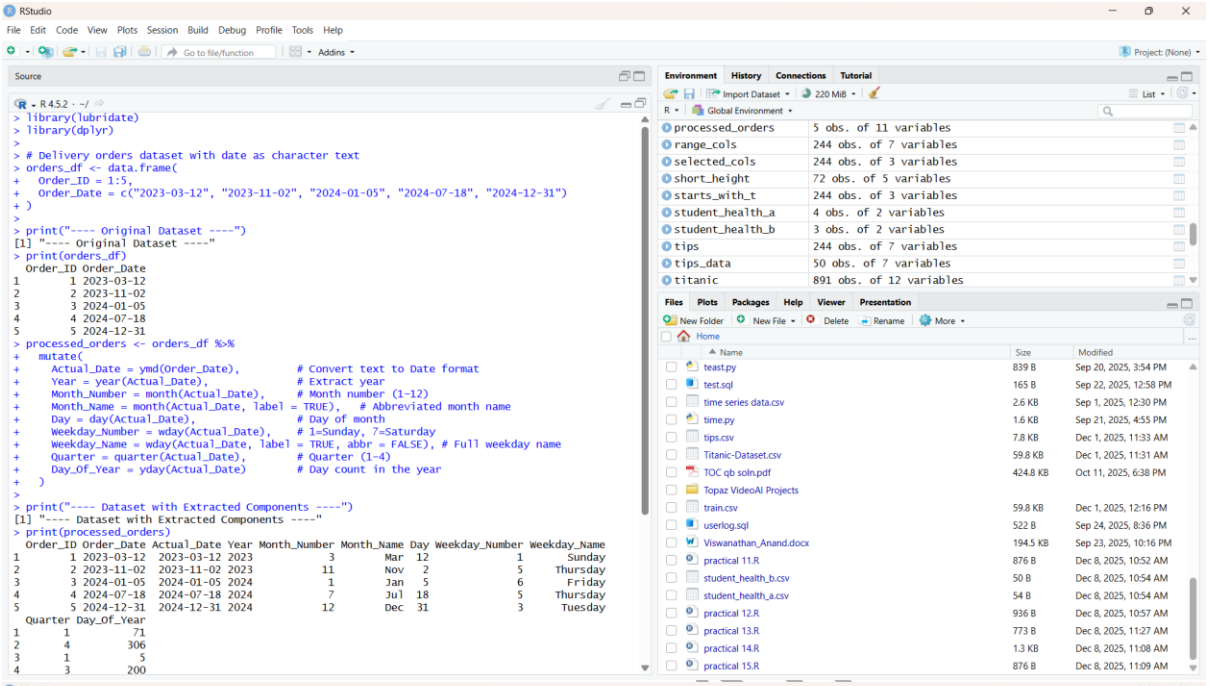
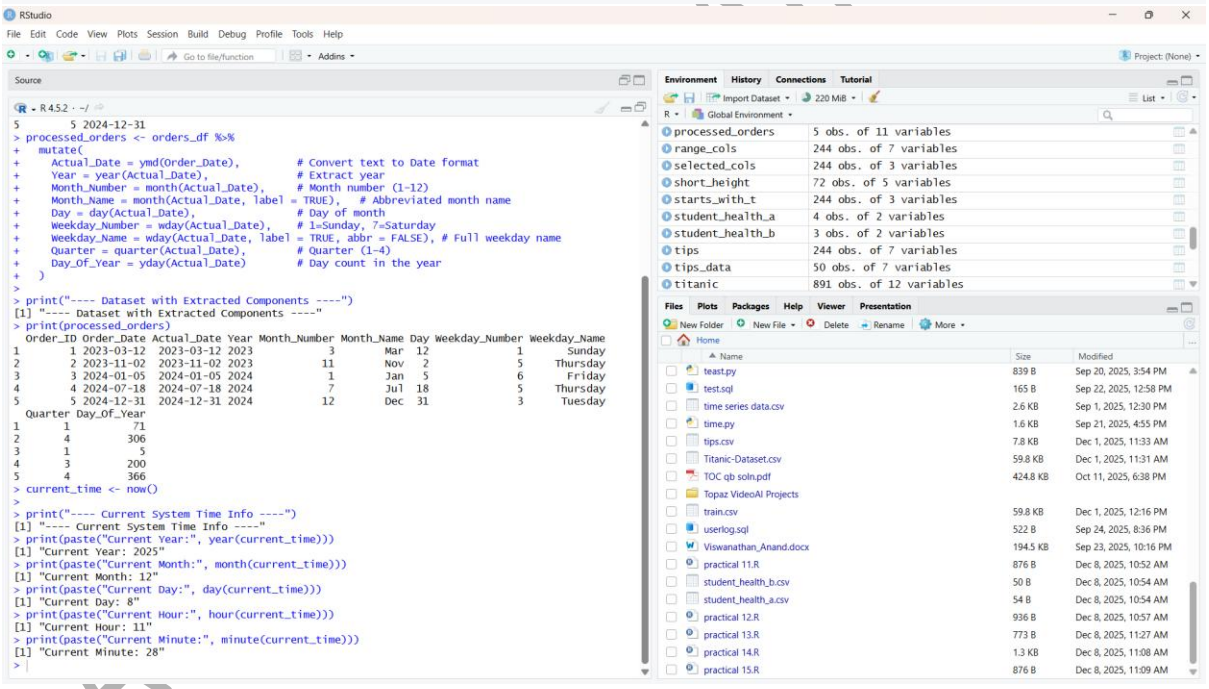
PRACTICAL NO 14

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



```
> library(lubridate)
> library(dplyr)
>
> # Delivery orders dataset with date as character text
> orders_df <- data.frame(
+   Order_ID = 1:5,
+   Order_Date = c("2023-03-12", "2023-11-02", "2024-01-05", "2024-07-18", "2024-12-31")
+ )
>
> print("---- Original Dataset ----")
[1] "---- Original Dataset ----"
> print(orders_df)
  Order_ID Order_Date
1        1 2023-03-12
2        2 2023-11-02
3        3 2024-01-05
4        4 2024-07-18
5        5 2024-12-31
> processed_orders <- orders_df %>%
+   mutate(
+     Actual_Date = ymd(Order_Date),          # Convert text to Date format
+     Year = year(Actual_Date),               # Extract year
+     Month_Number = month(Actual_Date),      # Month number (1-12)
+     Month_Name = month(Actual_Date, label = TRUE),   # Abbreviated month name
+     Day = day(Actual_Date),                 # Day of month
+     Weekday_Number = wday(Actual_Date),     # 1=Sunday, 7=Saturday
+     Weekday_Name = wday(Actual_Date, label = TRUE, abbr = FALSE), # Full weekday name
+     Quarter = quarter(Actual_Date),         # Quarter (1-4)
+     Day_Of_Year = yday(Actual_Date)         # Day count in the year
+   )
>
> print("---- Dataset with Extracted Components ----")
[1] "---- Dataset with Extracted Components ----"
> print(processed_orders)
  Order_ID Order_Date Actual_Date Year Month_Number Month_Name Day Weekday_Number Weekday_Name
1        1 2023-03-12  2023-03-12 2023           3        Mar  12              1       Sunday
2        2 2023-11-02  2023-11-02 2023          11        Nov   2              5     Thursday
3        3 2024-01-05  2024-01-05 2024           1        Jan   5              6       Friday
4        4 2024-07-18  2024-07-18 2024           7        Jul  18              5     Thursday
5        5 2024-12-31  2024-12-31 2024          12        Dec  31              3      Tuesday
  Quarter Day_Of_Year
1       1          71
2       4         306
3       1           5
4       3         200
```



```
5        5 2024-12-31
> processed_orders <- orders_df %>%
+   mutate(
+     Actual_Date = ymd(Order_Date),          # Convert text to Date format
+     Year = year(Actual_Date),               # Extract year
+     Month_Number = month(Actual_Date),      # Month number (1-12)
+     Month_Name = month(Actual_Date, label = TRUE),   # Abbreviated month name
+     Day = day(Actual_Date),                 # Day of month
+     Weekday_Number = wday(Actual_Date),     # 1=Sunday, 7=Saturday
+     Weekday_Name = wday(Actual_Date, label = TRUE, abbr = FALSE), # Full weekday name
+     Quarter = quarter(Actual_Date),         # Quarter (1-4)
+     Day_Of_Year = yday(Actual_Date)         # Day count in the year
+   )
>
> print("---- Dataset with Extracted Components ----")
[1] "---- Dataset with Extracted Components ----"
> print(processed_orders)
  Order_ID Order_Date Actual_Date Year Month_Number Month_Name Day Weekday_Number Weekday_Name
1        1 2023-03-12  2023-03-12 2023           3        Mar  12              1       Sunday
2        2 2023-11-02  2023-11-02 2023          11        Nov   2              5     Thursday
3        3 2024-01-05  2024-01-05 2024           1        Jan   5              6       Friday
4        4 2024-07-18  2024-07-18 2024           7        Jul  18              5     Thursday
5        5 2024-12-31  2024-12-31 2024          12        Dec  31              3      Tuesday
  Quarter Day_Of_Year
1       1          71
2       4         306
3       1           5
4       3         200
5       4         366
> current_time <- now()
>
> print("---- Current System Time Info ----")
[1] "---- Current System Time Info ----"
> print(paste("Current Year:", year(current_time)))
[1] "Current Year: 2025"
> print(paste("Current Month:", month(current_time)))
[1] "Current Month: 12"
> print(paste("Current Day:", day(current_time)))
[1] "Current Day: 8"
> print(paste("Current Hour:", hour(current_time)))
[1] "Current Hour: 11"
> print(paste("Current Minute:", minute(current_time)))
[1] "Current Minute: 28"
>
```

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