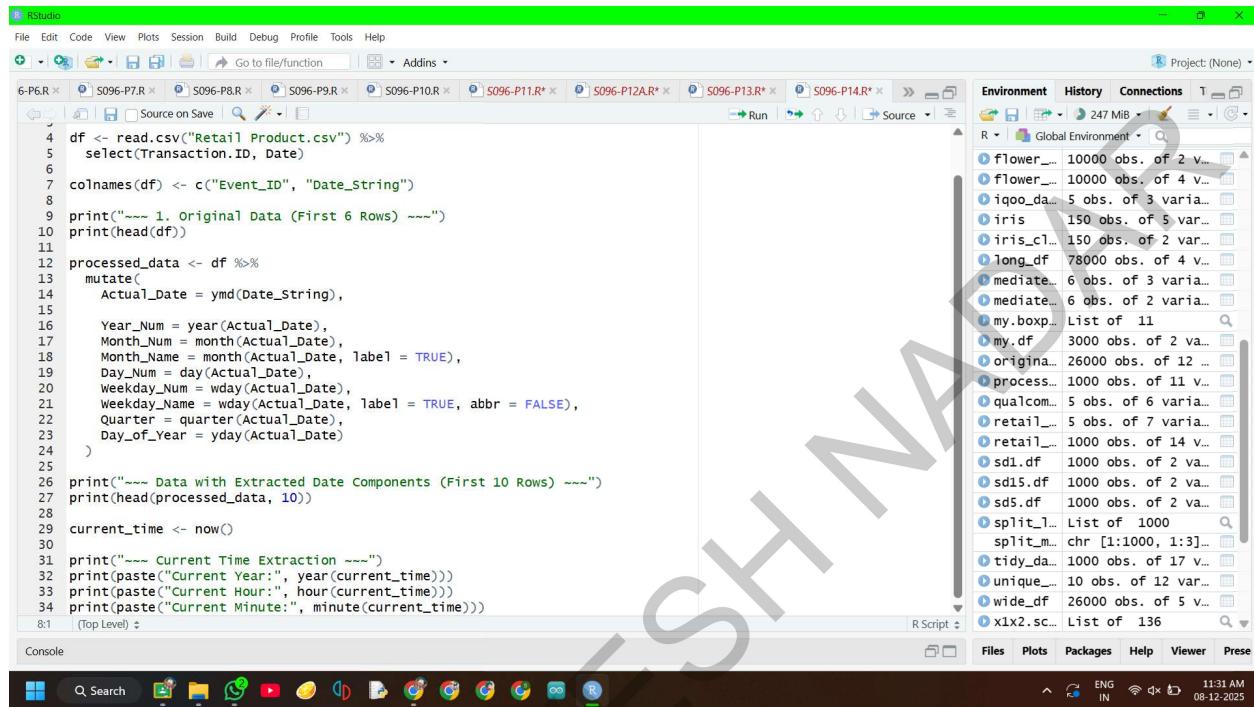


SHETH L.U.J. AND SIR M.V. COLLEGE
DATA ANALYSIS WITH SAS/SPSS/R

PRACTICAL NO:14

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

CODE:



The screenshot shows the RStudio interface with the following code in the script pane:

```
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, label = TRUE, abbr = FALSE),
    Quarter = quarter(Actual_Date),
    Day_of_Year = yday(Actual_Date)
  )

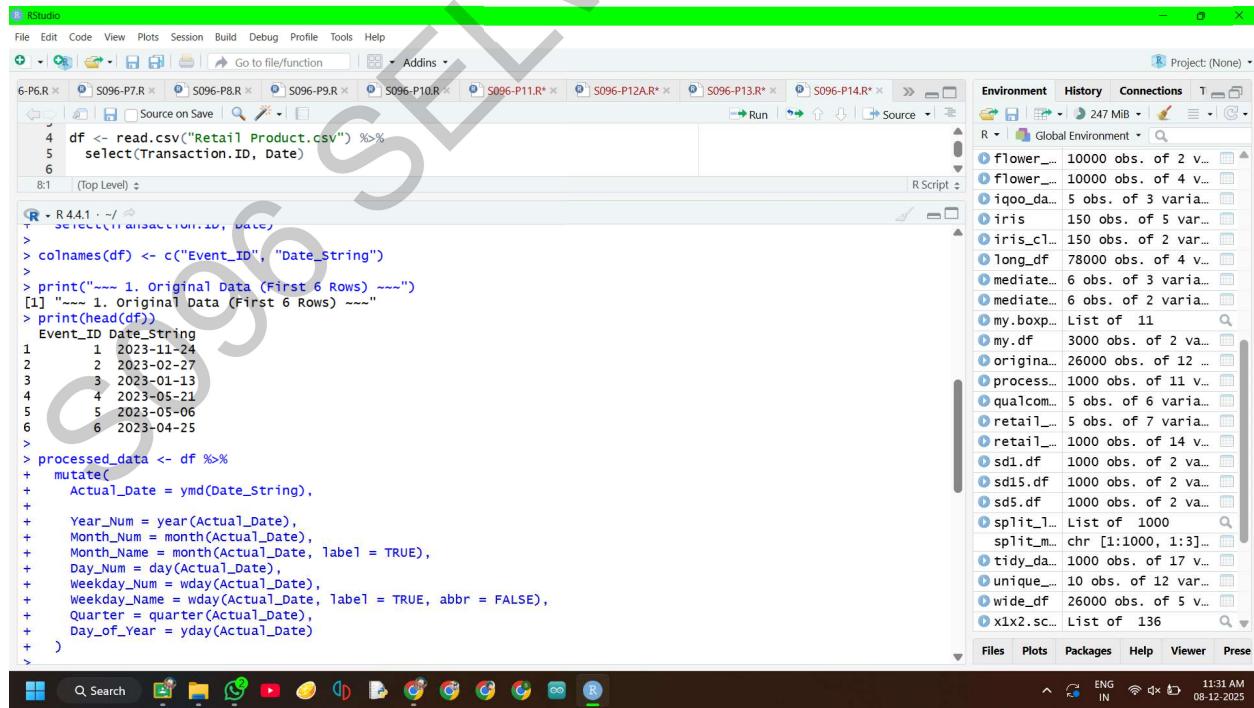
print("~~~ Data with Extracted Date Components (First 10 Rows) ~~~")
print(head(processed_data, 10))

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)))
```

The environment pane shows various datasets loaded, including flower, iris, long_df, and retail. The status bar at the bottom right indicates the date and time as 08-12-2025.

OUTPUT:



The screenshot shows the RStudio interface with the following output in the console pane:

```
R441: ~/R> 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 2023-11-24
2 2023-02-27
3 2023-01-13
4 2023-05-21
5 2023-05-06
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, label = TRUE, abbr = FALSE),
+     Quarter = quarter(Actual_Date),
+     Day_of_Year = yday(Actual_Date)
+   )
```

The environment pane shows various datasets loaded, including flower, iris, long_df, and retail. The status bar at the bottom right indicates the date and time as 08-12-2025.

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DATA ANALYSIS WITH SAS/SPSS/R

The screenshot shows the RStudio interface with the following components:

- File Bar:** File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help.
- Toolbar:** Includes icons for file operations like Open, Save, Print, and a search bar labeled "Go to file/function".
- Script Editor:** Displays an R script with code for reading a CSV file and printing its first 10 rows. The output shows the data with extracted date components and weekday names.
- Console:** Shows the R session history, including the command to print the data and the resulting output.
- Environment Browser:** A tree view of the global environment containing various objects like flower, iris, long_df, and retail.
- Bottom Navigation:** Files, Plots, Packages, Help, Viewer, and Print.
- Status Bar:** Shows the current time as 11:32 AM, network status (ENG IN), battery level (81%), and a timestamp of 08-12-2023.

The screenshot shows an RStudio interface with the following details:

- File menu:** File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help.
- Addins:** A dropdown menu showing various addins like R Commander, Rattle, and DSS.
- Code Editor:** An R script window with the following code:

```
6-P6.R x S096-P7.R x S096-P8.R x S096-P9.R x S096-P10.R x S096-P11.R* x S096-P12.R* x S096-P13.R* x S096-P14.R* x > Run > Source >
4 df <- read.csv("Retail_Product.csv") %>%
5   select(Transaction.ID, Date)
6
8:1 (Top Level) <--
```

R 4.4.1 · /

	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_Numerical 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()
>
> 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"
> |
```
- Environment:** Shows the global environment with objects like flower, iris, long_df, and retail.
- Plots:** A placeholder for plots.
- Packages:** A placeholder for packages.
- Help:** A placeholder for help.
- Viewer:** A placeholder for viewer output.
- Prese:** A placeholder for presentation.
- Bottom Bar:** Includes icons for search, file, and system status.
- Bottom Right:** Shows the date (08-12-2023), time (11:32 AM), and network status (ENG IN).

