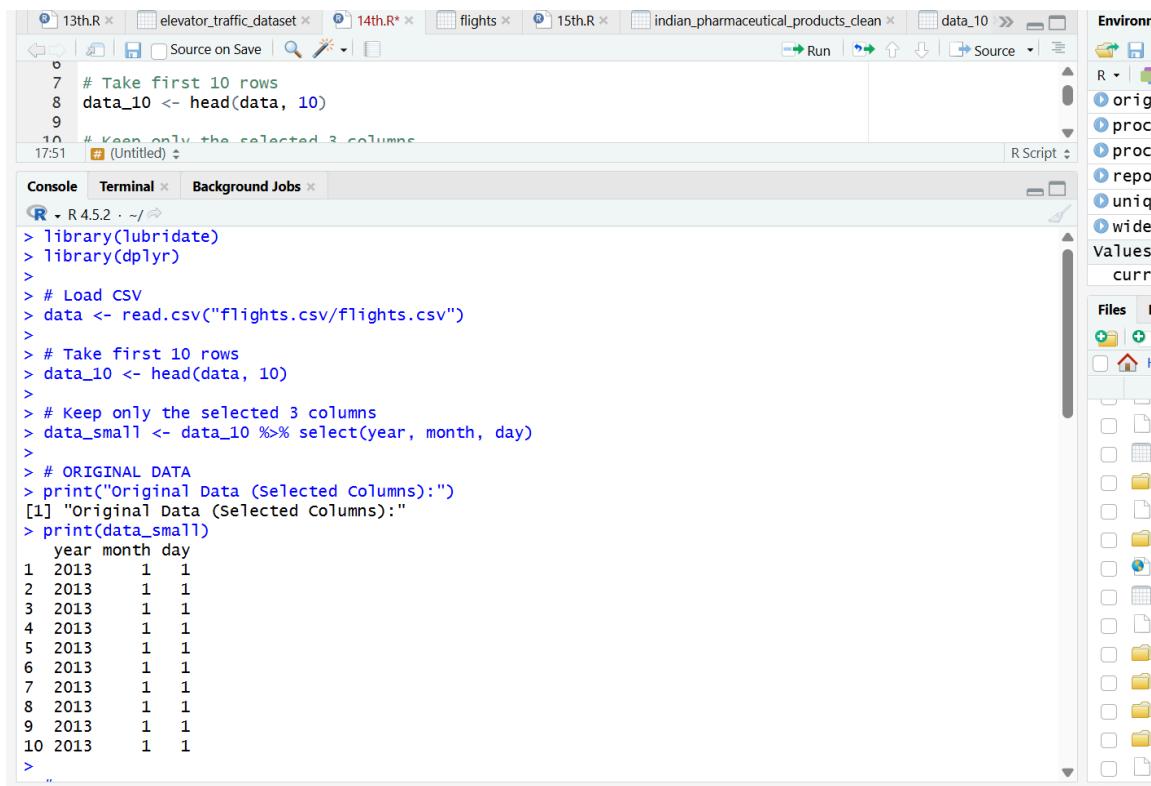


Sheth I.u.j. And sir m.v. college of arts science and commerce

Practical no.14th

Aim: Extracting date components using DATE functions (SAS), Date & Time Wizard (SPSS), and lubridate:: functions (R).



The screenshot shows the RStudio interface with the following details:

- File Bar:** 13th.R, elevator_traffic_dataset, 14th.R*, flights, 15th.R, indian_pharmaceutical_products_clean, data_10.
- Environment View:** Shows variables: orig, proc, proc, repo, uniq, wide, Values, curr.
- Files View:** Shows a tree view of files and folders.
- Console View:** Displays R code and its output.

```
R 4.5.2 --/→
> library(lubridate)
> library(dplyr)
>
> # Load CSV
> data <- read.csv("flights.csv/flights.csv")
>
> # Take first 10 rows
> data_10 <- head(data, 10)
>
> # Keep only the selected 3 columns
> data_small <- data_10 %>% select(year, month, day)
>
> # ORIGINAL DATA
> print("Original Data (Selected Columns):")
[1] "Original Data (Selected Columns):"
> print(data_small)
  year month day
1  2013     1    1
2  2013     1    1
3  2013     1    1
4  2013     1    1
5  2013     1    1
6  2013     1    1
7  2013     1    1
8  2013     1    1
9  2013     1    1
10 2013     1    1
>
```

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The screenshot shows the RStudio interface with the following details:

- File Menu:** File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help.
- Toolbar:** Includes icons for file operations like Open, Save, Run, and Addins.
- Environment Tab:** Shows the global environment with objects like `original`, `processed_...`, `report`, etc.
- Console Tab:** Displays R code and its output. The code involves extracting date components from a dataset and printing them. The output shows the first 10 rows of the processed data.
- Terminal Tab:** Displays the current R session environment.
- Background Jobs Tab:** Shows no active background jobs.
- File Explorer:** Shows the project structure with files like `elevator_traffic_d`, `flights.csv`, and `greenplant`.
- Code Editor:** Shows the R script being edited, which includes code for date extraction and current time extraction.

```
File Edit Code View Plots Session Build Debug Profile Tools Help
+ 13th.R ✎ elevator_traffic_dataset ✎ 14th.R* ✎ flights ✎ 15th.R ✎ indian_pharmaceutical_products_clean ✎ data_10 > Environment History
+ Source on Save | Run | Source | Addins
+ 7 # Take first 10 rows
+ 8 data_10 <- head(data, 10)
+
+ 10 # Keep only the selected 3 columns
17:51 # (Untitled) ✎ R Script
+ mutate(
+   Actual_Date = make_date(year, month, day), # create Date from year, month, day
+
+   Year_Num = year(Actual_Date),
+   Month_Num = 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("--- 2. Data with Extracted Date Components ---")
[1] "--- 2. Data with Extracted Date Components ---"
> print(processed_data)
  year month day Actual_Date Year_Num Month_Name Day_Num Weekday_Num Weekday_Name Quarter
1 2013    1    1 2013-01-01    2013        1     Jan      1       3     Tuesday      1
2 2013    1    1 2013-01-01    2013        1     Jan      1       3     Tuesday      1
3 2013    1    1 2013-01-01    2013        1     Jan      1       3     Tuesday      1
4 2013    1    1 2013-01-01    2013        1     Jan      1       3     Tuesday      1
5 2013    1    1 2013-01-01    2013        1     Jan      1       3     Tuesday      1
6 2013    1    1 2013-01-01    2013        1     Jan      1       3     Tuesday      1
7 2013    1    1 2013-01-01    2013        1     Jan      1       3     Tuesday      1
8 2013    1    1 2013-01-01    2013        1     Jan      1       3     Tuesday      1
9 2013    1    1 2013-01-01    2013        1     Jan      1       3     Tuesday      1
10 # Keep only the selected 3 columns
17:51 # (Untitled) ✎ R Script
+ R 4.5.2 · ~/🔗
9 2013    1    1 2013-01-01    2013        1     Jan      1       3     Tuesday      1
10 2013    1    1 2013-01-01    2013        1     Jan      1       3     Tuesday      1
  Day_of_Year
1          1
2          1
3          1
4          1
5          1
6          1
7          1
8          1
9          1
10         1
> # -----
> # 3. Current Time Extraction
> # -----
> current_time <- now()
>
> print("--- 3. Current Time Extraction ---")
[1] "--- 3. Current Time Extraction ---"
> 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: 10"
>
```