

MVLU COLLEGE.

PRACTICAL NO :- 14

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

CODE :-

```
install.packages("lubridate")
```

```
library(lubridate)
```

```
library(dplyr)
```

```
events_df <- data.frame(
```

```
  EventCode = c("E101", "E102", "E103", "E104"),
```

```
  EventDate = c("2022-05-10", "2023-08-19", "2024-11-05", "2025-03-21")
```

```
)
```

2. PARSE AND EXTRACT DATE COMPONENTS

```
processed_data <- events_df %>%
```

```
  mutate(
```

```
    Parsed_Date = ymd(EventDate),          # Convert text to date format
```

```
    Year = year(Parsed_Date),              # Extract year
```

```
    Month_No = month(Parsed_Date),         # Extract month number
```

```
    Month_Name = month(Parsed_Date, label = TRUE), # Extract short month name
```

```
    Day_No = day(Parsed_Date),             # Extract day of month
```

```
    Weekday_No = wday(Parsed_Date),        # 1=Sun, 7=Sat
```

```
    Weekday_Name = wday(Parsed_Date, label = TRUE, abbr = FALSE), # Full weekday name
```

```
    Quarter = quarter(Parsed_Date),        # Quarter (1–4)
```

```
    Day_of_Year = yday(Parsed_Date)        # Day number (1–366)
```

```
)
```

```
print("--- Extracted Components from New Dataset ---")
```

```
print(processed_data)
```

3. SYSTEM DATE / CURRENT DATE-TIME EXTRACTION

```
current_time <- now()
```

```
print("--- Current System Time Components ---")
```

```
print(paste("Current Year:", year(current_time)))
```

```
print(paste("Current Month:", month(current_time)))
```

```
print(paste("Current Day:", day(current_time)))
```

```
print(paste("Current Hour:", hour(current_time)))
```

```
print(paste("Current Minute:", minute(current_time)))
```

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The image displays two screenshots of the RStudio interface, showing the process of installing the 'lubridate' package and performing date-related operations.

Top Screenshot:

- Console:** Shows the installation of 'lubridate' and the creation of a dataset 'events_df' with columns 'EventCode' and 'EventDate'. It also shows the creation of 'processed_data' using 'mutate()' to extract date components.
- Environment:** Lists installed packages and their sizes. The 'Data' section shows 'clean_exact' (5 obs. of 3 variables) and 'values' (current_time: 2025-12-08 11:12:04 IST).

Bottom Screenshot:

- Console:** Shows the execution of 'print(processed_data)' and 'current_time <- now()'. It also shows the extraction of system time components (Year, Month, Day, Hour, Minute) and the creation of a new dataset 'events_df'.
- Environment:** Lists installed packages and their sizes. The 'Data' section shows 'clean_exact' (5 obs. of 3 variables) and 'values' (current_time: 2025-12-08 11:12:04 IST).