

SHETH L.U.J AND M.V COLLEGE
PRACTICAL NO .14
SUBJECT - DATA ANALYSIS

AIM- 14. Extracting date components using lubridate:: functions (R).
INPUT -

```
1 install.packages("lubridate")
2 install.packages("dplyr")
3
4 library(lubridate)
5 library(dplyr)
6
7 # Read your Walmart Sales dataset
8 data <- read.csv("Walmart_Sales.csv")
9
10 # Ensure the column name matches the CSV (change if needed)
11 # Suppose the date column is named "date"
12 data_processed <- data %>%
13   mutate(
14     Actual_Date = ymd(Date),
15     Year_Num = year(Actual_Date),
16     Month_Num = month(Actual_Date),
17     Month_Name = month(Actual_Date, label = TRUE),
18     Day_Num = day(Actual_Date),
19     Weekday_Num = wday(Actual_Date),
20     Weekday_Name = wday(Actual_Date, label = TRUE, abbr = FALSE),
21     Quarter = quarter(Actual_Date),
22     Day_of_Year = yday(Actual_Date)
23   )
24
25 print(data_processed)
26
27 current_time <- now()
28 print(paste("Current Year:", year(current_time)))
29 print(paste("Current Hour:", hour(current_time)))
30 print(paste("Current Minute:", minute(current_time)))
31
```

OUTPUT-

```
> # Ensure the column name matches the CSV (change if needed)
> # Suppose the date column is named "date"
> data_processed <- data %>%
+   mutate(
+     Actual_Date = ymd(Date),
+     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)
+   )
+
Warning message:
There was 1 warning in `mutate()`.
In argument: `Actual_Date = ymd(Date)`.
Caused by warning:
! All formats failed to parse. No formats found.
>
> print(data_processed)
```

	Store	Date	Weekly_Sales	Holiday_Flag	Temperature	Fuel_Price	CPI	Unemployment	Actual_Date	Year_Num	Month_Num
1	1	05-02-2010	1643691	0	42.31	2.572	211.0964	8.106	<NA>	NA	NA
2	1	12-02-2010	1641957	1	38.51	2.548	211.2422	8.106	<NA>	NA	NA
3	1	19-02-2010	1611968	0	39.93	2.514	211.2891	8.106	<NA>	NA	NA
4	1	26-02-2010	1409728	0	46.63	2.561	211.3196	8.106	<NA>	NA	NA
5	1	05-03-2010	1354807	0	46.50	2.625	211.3501	8.106	<NA>	NA	NA
6	1	12-03-2010	1439542	0	57.79	2.667	211.3806	8.106	<NA>	NA	NA
7	1	19-03-2010	1472516	0	54.58	2.720	211.2156	8.106	<NA>	NA	NA
8	1	26-03-2010	1404430	0	51.45	2.732	211.0180	8.106	<NA>	NA	NA
9	1	02-04-2010	1594968	0	62.27	2.719	210.8204	7.808	<NA>	NA	NA
10	1	09-04-2010	1545419	0	65.86	2.770	210.6229	7.808	<NA>	NA	NA
11	1	16-04-2010	1466058	0	66.32	2.808	210.4887	7.808	<NA>	NA	NA
12	1	23-04-2010	1391256	0	64.84	2.795	210.4391	7.808	<NA>	NA	NA
13	1	30-04-2010	1425101	0	67.41	2.780	210.3895	7.808	<NA>	NA	NA
14	1	07-05-2010	1603955	0	72.55	2.835	210.3400	7.808	<NA>	NA	NA
15	1	14-05-2010	1494252	0	74.78	2.854	210.3374	7.808	<NA>	NA	NA
16	1	21-05-2010	1399662	0	76.44	2.826	210.6171	7.808	<NA>	NA	NA
17	1	28-05-2010	1432070	0	80.44	2.759	210.8968	7.808	<NA>	NA	NA
18	1	04-06-2010	1615525	0	80.69	2.705	211.1764	7.808	<NA>	NA	NA
19	1	11-06-2010	1542661	0	80.43	2.668	211.4561	7.808	<NA>	NA	NA
20	1	18-06-2010	1503284	0	84.11	2.637	211.4538	7.808	<NA>	NA	NA
21	1	25-06-2010	1422712	0	84.34	2.653	211.3387	7.808	<NA>	NA	NA

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The image displays two screenshots of the RStudio environment, showing data analysis work.

Top Screenshot: The RStudio window shows a data frame with columns: `Month_Name`, `Day_Num`, `weekday_num`, `weekday_Name`, `Quarter`, and `Day_of_Year`. The data is displayed in a table format. The Environment pane on the right shows the loaded data frame and its variables.

Bottom Screenshot: The RStudio window shows the same data frame. The Environment pane on the right shows the loaded data frame and its variables. The console output shows the execution of the following R code:

```
[1] "reached 'max' / 'getOption('max.print')' -- omitted 6377 rows"
>
> current_time <- now()
> 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: 47"
```

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