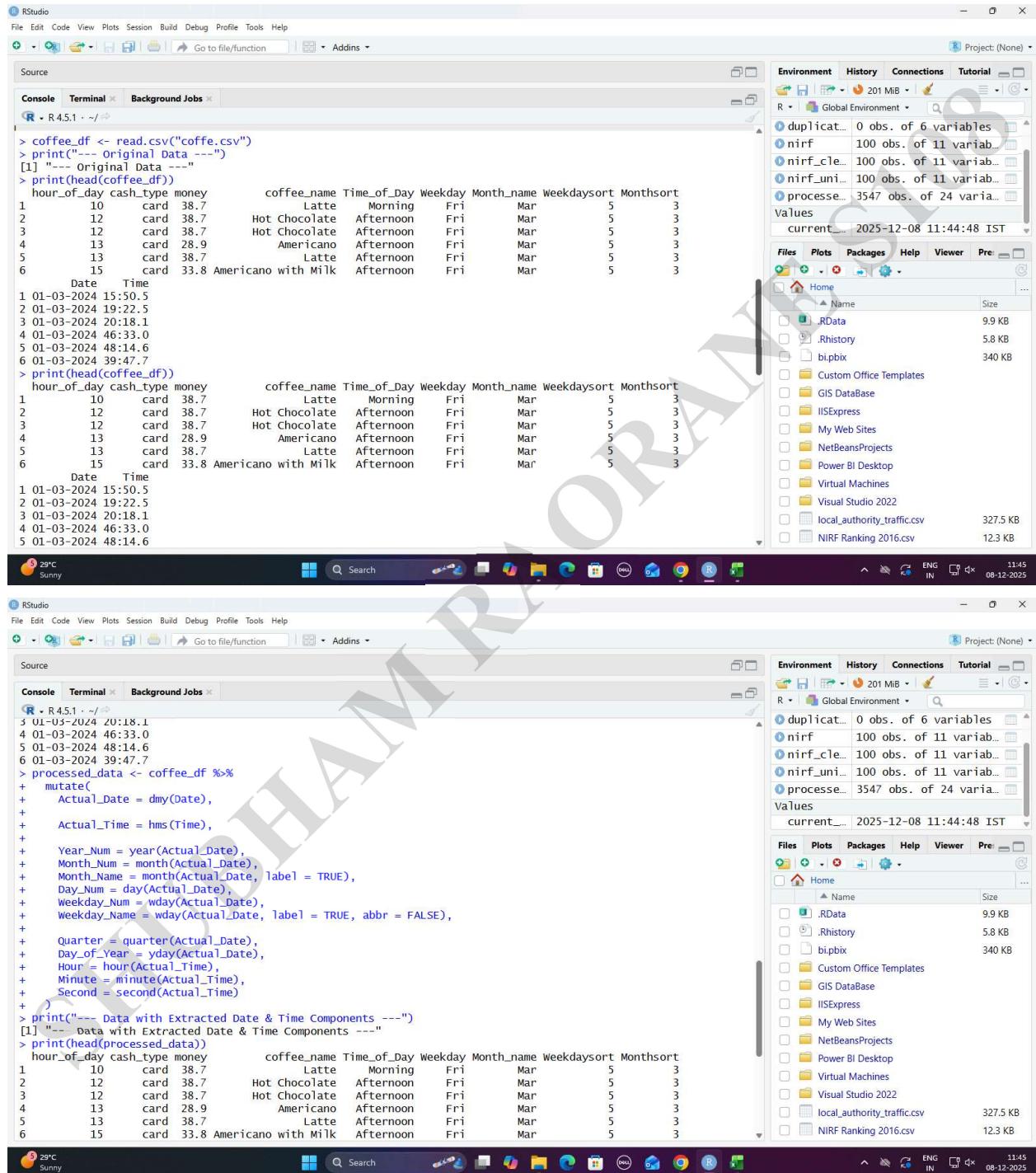


SHETH L.U.J & SIR M.V COLLEGE OF SCIENCE

SUBJECT : Data Analysis with SAS / SPSS /R

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

OUTPUT



The screenshot shows two instances of the RStudio interface running on a Windows desktop. Both instances have the same setup: a 'Console' tab active in the top-left, a 'Source' tab in the bottom-left, and a 'Project' panel on the right containing files like 'RData', '.Rhistory', 'bipbip', 'Custom Office Templates', 'GIS DataBase', 'IISExpress', 'My Web Sites', 'NetBeansProjects', 'Power BI Desktop', 'Virtual Machines', 'Visual Studio 2022', 'local_authority_traffic.csv', and 'NIRF Ranking 2016.csv'. The system tray at the bottom indicates it's 11:45 AM on 08-12-2025, the weather is 29°C and sunny, and the language is ENG IN.

Top Instance (Original Data):

```

> coffee_df <- read.csv("coffee.csv")
> print("--- Original Data ---")
[1] "-- Original Data --"
> print(head(coffee_df))
#> #> #> #> #>
  hour_of_day cash_type money      coffee_name Time_of_Day Weekday Month_name Weekdaysort Monthsort
 1          10   card    38.7        Latte     Morning   Fri    Mar       5           3
 2          12   card    38.7  Hot Chocolate Afternoon   Fri    Mar       5           3
 3          12   card    38.7  Hot Chocolate Afternoon   Fri    Mar       5           3
 4          13   card    28.9   Americano Afternoon   Fri    Mar       5           3
 5          13   card    38.7        Latte     Afternoon  Fri    Mar       5           3
 6          15   card   33.8 Americano with Milk Afternoon  Fri    Mar       5           3
#> #> #> #> #>
#> Date      Time
#> 1 01-03-2024 15:50:5
#> 2 01-03-2024 19:22:5
#> 3 01-03-2024 20:18:1
#> 4 01-03-2024 46:33:0
#> 5 01-03-2024 48:14:6
#> 6 01-03-2024 39:47:7
> print(head(coffee_df))
#> #> #> #> #>
  hour_of_day cash_type money      coffee_name Time_of_Day Weekday Month_name Weekdaysort Monthsort
 1          10   card    38.7        Latte     Morning   Fri    Mar       5           3
 2          12   card    38.7  Hot Chocolate Afternoon   Fri    Mar       5           3
 3          12   card    38.7  Hot Chocolate Afternoon   Fri    Mar       5           3
 4          13   card    28.9   Americano Afternoon   Fri    Mar       5           3
 5          13   card    38.7        Latte     Afternoon  Fri    Mar       5           3
 6          15   card   33.8 Americano with Milk Afternoon  Fri    Mar       5           3
#> #> #> #> #>
#> Date      Time
#> 1 01-03-2024 15:50:5
#> 2 01-03-2024 19:22:5
#> 3 01-03-2024 20:18:1
#> 4 01-03-2024 46:33:0
#> 5 01-03-2024 48:14:6

```

Bottom Instance (Extracted Components):

```

3 01-03-2024 20:18:1
4 01-03-2024 46:33:0
5 01-03-2024 48:14:6
6 01-03-2024 39:47:7
> processed_data <- coffee_df %>%
+   mutate(
+     Actual_Date = dmy(Date),
+     Actual_Time = hms(Time),
+     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),
+     Hour = hour(Actual_Time),
+     Minute = minute(Actual_Time),
+     Second = second(Actual_Time)
+   )
> print("--- Data with Extracted Date & Time Components ---")
[1] "-- Data with Extracted Date & Time Components --"
> print(head(processed_data))
#> #> #> #> #>
  hour_of_day cash_type money      coffee_name Time_of_Day Weekday Month_name Weekdaysort Monthsort
 1          10   card    38.7        Latte     Morning   Fri    Mar       5           3
 2          12   card    38.7  Hot Chocolate Afternoon   Fri    Mar       5           3
 3          12   card    38.7  Hot Chocolate Afternoon   Fri    Mar       5           3
 4          13   card    28.9   Americano Afternoon   Fri    Mar       5           3
 5          13   card    38.7        Latte     Afternoon  Fri    Mar       5           3
 6          15   card   33.8 Americano with Milk Afternoon  Fri    Mar       5           3
#> #> #> #> #>
#> Date      Time
#> 1 01-03-2024 15:50:5
#> 2 01-03-2024 19:22:5
#> 3 01-03-2024 20:18:1
#> 4 01-03-2024 46:33:0
#> 5 01-03-2024 48:14:6

```

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SUBJECT : Data Analysis with SAS / SPSS /R

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

Project: (None)

Source

Console Terminal Background Jobs

```
> print(head(processed_data))
#> #> hour_of_day cash_type money coffee_name Time_of_Day Weekday Month_name Weekdaysort Monthsort
#> 1 10 card 38.7 Latte Morning Fri Mar 5 3
#> 2 12 card 38.7 Hot Chocolate Afternoon Fri Mar 5 3
#> 3 12 card 38.7 Hot Chocolate Afternoon Fri Mar 5 3
#> 4 13 card 28.9 Americano Afternoon Fri Mar 5 3
#> 5 13 card 38.7 Latte Afternoon Fri Mar 5 3
#> 6 15 card 33.8 Americano with Milk Afternoon Fri Mar 5 3
#>
#> Date Time Actual_Date Actual_Time Year_Num Month_Num Month_Name Day_Num Weekday_Num Weekday_Name
#> 1 01-03-2024 15:50.5 2024-03-01 15H 50M 5S 2024 3 Mar 1 6 Friday
#> 2 01-03-2024 19:22.5 2024-03-01 19H 22M 5S 2024 3 Mar 1 6 Friday
#> 3 01-03-2024 20:18.1 2024-03-01 20H 18M 1S 2024 3 Mar 1 6 Friday
#> 4 01-03-2024 46:33.0 2024-03-01 46H 33M 0S 2024 3 Mar 1 6 Friday
#> 5 01-03-2024 48:14.6 2024-03-01 48H 14M 6S 2024 3 Mar 1 6 Friday
#> 6 01-03-2024 39:47.7 2024-03-01 39H 47M 7S 2024 3 Mar 1 6 Friday
#>
#> Quarter Day_of_Year Hour Minute Second
#> 1 1 61 15 50 5
#> 2 1 61 19 22 5
#> 3 1 61 20 18 1
#> 4 1 61 46 33 0
#> 5 1 61 48 14 6
#> 6 1 61 39 47 7
#> 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: 44"
#>
```

29°C Sunny

Search

Files Plots Packages Help Viewer Pre

Environment History Connections Tutorial

duplicate... 0 obs. of 6 variables

nirf 100 obs. of 11 variables

nirf_cle... 100 obs. of 11 variables

nirf_uni... 100 obs. of 11 variables

process... 3547 obs. of 24 variables

Values current... 2025-12-08 11:44:48 IST

current... 2025-12-08 11:44:48 IST

Files Plots Packages Help Viewer Pre

Home

Name Size

- RData 9.9 KB
- .Rhistory 5.8 KB
- bipbis 340 KB
- Custom Office Templates
- GIS DataBase
- IISExpress
- My Web Sites
- NetBeansProjects
- Power BI Desktop
- Virtual Machines
- Visual Studio 2022
- local_authority_traffic.csv 327.5 KB
- NIR Ranking 2016.csv 12.3 KB

11:45 08-12-2025

RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

Project: (None)

Source

S108-R-PROGRAM PRAC13.R S108-R-PROGRAM PRAC14.R coffee_df processed_data

Filter

	hour_of_day	cash_type	money	coffee_name	Time_of_Day	Weekday	Month_name	Weekdaysort	Monthsort	Date	Time
1	10	card	38.7	Latte	Morning	Fri	Mar	5	3	01-03-2024	15:55
2	12	card	38.7	Hot Chocolate	Afternoon	Fri	Mar	5	3	01-03-2024	19:2
3	12	card	38.7	Hot Chocolate	Afternoon	Fri	Mar	5	3	01-03-2024	20:1
4	13	card	28.9	Americano	Afternoon	Fri	Mar	5	3	01-03-2024	46:3
5	13	card	38.7	Latte	Afternoon	Fri	Mar	5	3	01-03-2024	48:1
6	15	card	33.8	American with Milk	Afternoon	Fri	Mar	5	3	01-03-2024	39:4
7	16	card	38.7	Hot Chocolate	Afternoon	Fri	Mar	5	3	01-03-2024	19:0
8	18	card	33.8	American with Milk	Night	Fri	Mar	5	3	01-03-2024	39:0
9	19	card	38.7	Cocoa	Night	Fri	Mar	5	3	01-03-2024	22:0
10	19	card	33.8	American with Milk	Night	Fri	Mar	5	3	01-03-2024	23:1
11	19	card	33.8	American with Milk	Night	Fri	Mar	5	3	01-03-2024	29:1
12	10	card	28.9	Americano	Morning	Sat	Mar	6	3	02-03-2024	22:0
13	10	card	33.8	American with Milk	Morning	Sat	Mar	6	3	02-03-2024	41:4
14	11	card	33.8	American with Milk	Morning	Sat	Mar	6	3	02-03-2024	59:4
15	14	card	28.9	Americano	Afternoon	Sat	Mar	6	3	02-03-2024	38:3
16	16	card	33.8	American with Milk	Afternoon	Sat	Mar	6	3	02-03-2024	37:2
17	17	card	28.9	Americano	Night	Sat	Mar	6	3	02-03-2024	34:5
18	10	card	38.7	Latte	Morning	Sun	Mar	7	3	03-03-2024	27:1
19	11	card	28.9	Cortado	Morning	Sun	Mar	7	3	03-03-2024	33:5
20	12	card	28.9	Americano	Afternoon	Sun	Mar	7	3	03-03-2024	26:5

Showing 1 to 20 of 3,547 entries, 24 total columns

Console

29°C Sunny

Search

Files Plots Packages Help Viewer Pre

Environment History Connections Tutorial

duplicate... 0 obs. of 6 variables

nirf 100 obs. of 11 variables

nirf_cle... 100 obs. of 11 variables

nirf_uni... 100 obs. of 11 variables

process... 3547 obs. of 24 variables

Values current... 2025-12-08 11:44:48 IST

current... 2025-12-08 11:44:48 IST

Files Plots Packages Help Viewer Pre

Home

Name Size

- RData 9.9 KB
- .Rhistory 5.8 KB
- bipbis 340 KB
- Custom Office Templates
- GIS DataBase
- IISExpress
- My Web Sites
- NetBeansProjects
- Power BI Desktop
- Virtual Machines
- Visual Studio 2022
- local_authority_traffic.csv 327.5 KB
- NIR Ranking 2016.csv 12.3 KB

11:46 08-12-2025

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SUBJECT : Data Analysis with SAS / SPSS /R

The screenshot shows an RStudio interface with the following details:

- File Bar:** File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help.
- Project Bar:** Project: (None)
- Session View:** Displays two files: \$108-R-PROGRAM PRAC13.R and \$108-R-PROGRAM PRAC14.R. Below them is a "coffee_df" dataset and a "processed_data" dataset.
- Data View:** A large data grid showing a dataset with columns: Time, Actual_Date, Actual_Time, Year_Num, Month_Num, Month_Name, Day_Num, Weekday_Num, Weekday_Name, and Quarter. The data spans from March 2024, showing various time points and days of the week.
- Environment View:** Shows the global environment with objects like "duplicat...", "nirf", "nirf_cle...", "nirf_uni...", "processes...", and "current...".
- Files View:** Shows the file structure with folders like "Home", ".RData", ".Rhistory", "bi.pptx", "Custom Office Templates", "GIS DataBase", "IISExpress", "My Web Sites", "NetBeansProjects", "Power BI Desktop", "Virtual Machines", "Visual Studio 2022", "local_authority_traffic.csv", and "NIRF Ranking 2016.csv".
- Console View:** Shows the command "Console" at the bottom.
- System View:** Shows the taskbar with icons for File Explorer, Edge, Task View, File History, Task Scheduler, Task Manager, Power, Control Panel, and Start. The system tray shows the date and time as 08-12-2025 11:46.