

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

## SUBJECT : Data Analysis with SAS / SPSS / R

**AIM :** Combining and appending datasets using merge() or bind\_rows() in R.

### OUTPUT

The image shows two separate instances of the RStudio IDE running on a Windows operating system. Both instances have identical layouts with tabs for 'Source', 'Console', and 'Background Jobs'. The 'Console' tab displays R code and its output, while the 'Source' and 'Background Jobs' tabs are empty.

**Session 1 (Top Window):**

```

> midterm <- data.frame(
+   Student_ID = c(101, 102, 103),
+   Name = c("Aarya", "Bhavin", "Chirag"),
+   Midterm_Score = c(78, 85, 92)
+ )
> final <- data.frame(
+   Student_ID = c(101, 102, 103),
+   Name = c("Aarya", "Bhavin", "Chirag"),
+   Final_Score = c(81, 88, 95)
+ )
> new_students <- data.frame(
+   Student_ID = c(104, 105),
+   Name = c("Disha", "Eshan"),
+   Midterm_Score = c(74, 80)
+ )
> print("--- Midterm Exam Data ---")
[1] "--- Midterm Exam Data ---"
> print(midterm)
  Student_ID Name Midterm_Score
1        101 Aarya          78
2        102 Bhavin          85
3        103 Chirag          92
> print("--- Final Exam Data ---")
[1] "--- Final Exam Data ---"
> print(final)
  Student_ID Name Final_Score
1        101 Aarya          81
2        102 Bhavin          88
3        103 Chirag          95
> merged_data <- merge(midterm, final, by = c("Student_ID", "Name"))
> print("--- Merged Data (Columns Added) ---")
[1] "--- Merged Data (Columns Added) ---"
> print(merged_data)
  Student_ID Name Midterm_Score Final_Score
1        101 Aarya          78          81
2        102 Bhavin          85          88
3        103 Chirag          92          95

```

**Session 2 (Bottom Window):**

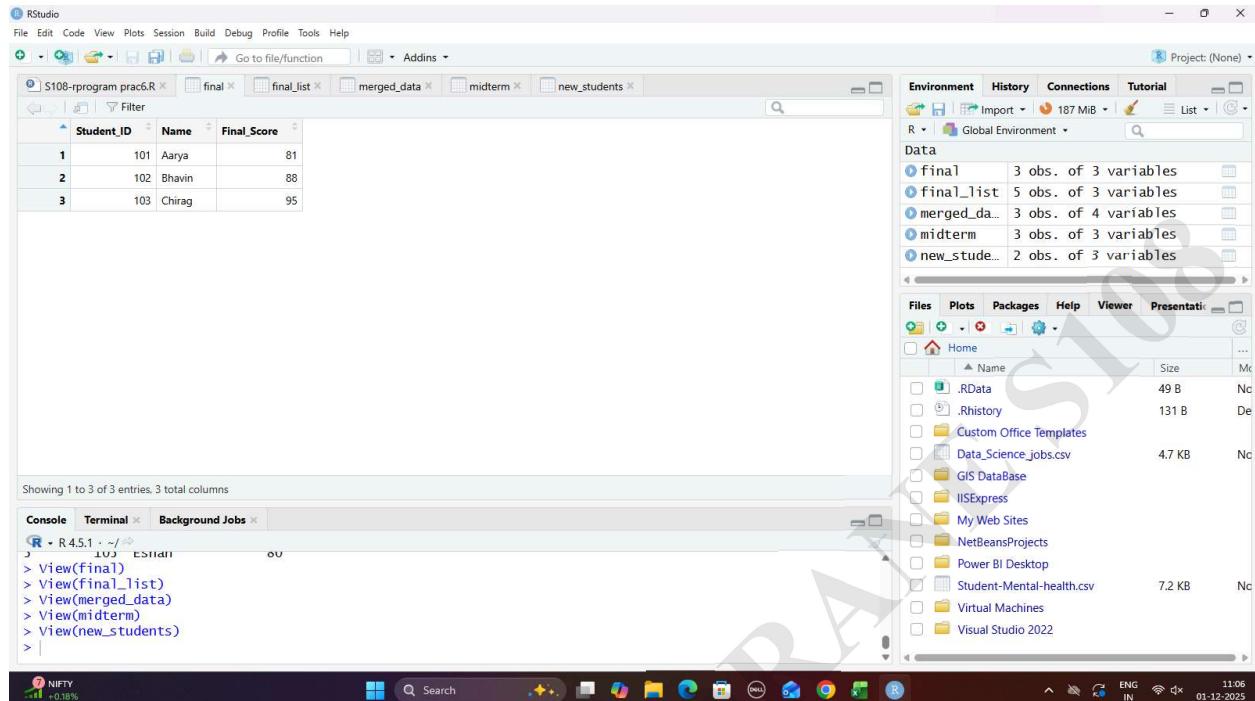
```

> print("--- Midterm Exam Data ---")
[1] "--- Midterm Exam Data ---"
> print(midterm)
  Student_ID Name Midterm_Score
1        101 Aarya          78
2        102 Bhavin          85
3        103 Chirag          92
> print("--- Final Exam Data ---")
[1] "--- Final Exam Data ---"
> print(final)
  Student_ID Name Final_Score
1        101 Aarya          81
2        102 Bhavin          88
3        103 Chirag          95
> merged_data <- merge(midterm, final, by = c("Student_ID", "Name"))
> print("--- Merged Data (Columns Added) ---")
[1] "--- Merged Data (Columns Added) ---"
> print(merged_data)
  Student_ID Name Midterm_Score Final_Score
1        101 Aarya          78          81
2        102 Bhavin          85          88
3        103 Chirag          92          95
> final_list <- bind_rows(midterm, new_students)
> print("--- Appended Data (Rows Added) ---")
[1] "--- Appended Data (Rows Added) ---"
> print(final_list)
  Student_ID Name Midterm_Score
1        101 Aarya          78
2        102 Bhavin          85
3        103 Chirag          92
4        104 Disha           74
5        105 Eshan           80
> view(final)
> view(final_list)
> view(merged_data)
> view(midterm)
> view(new_students)

```

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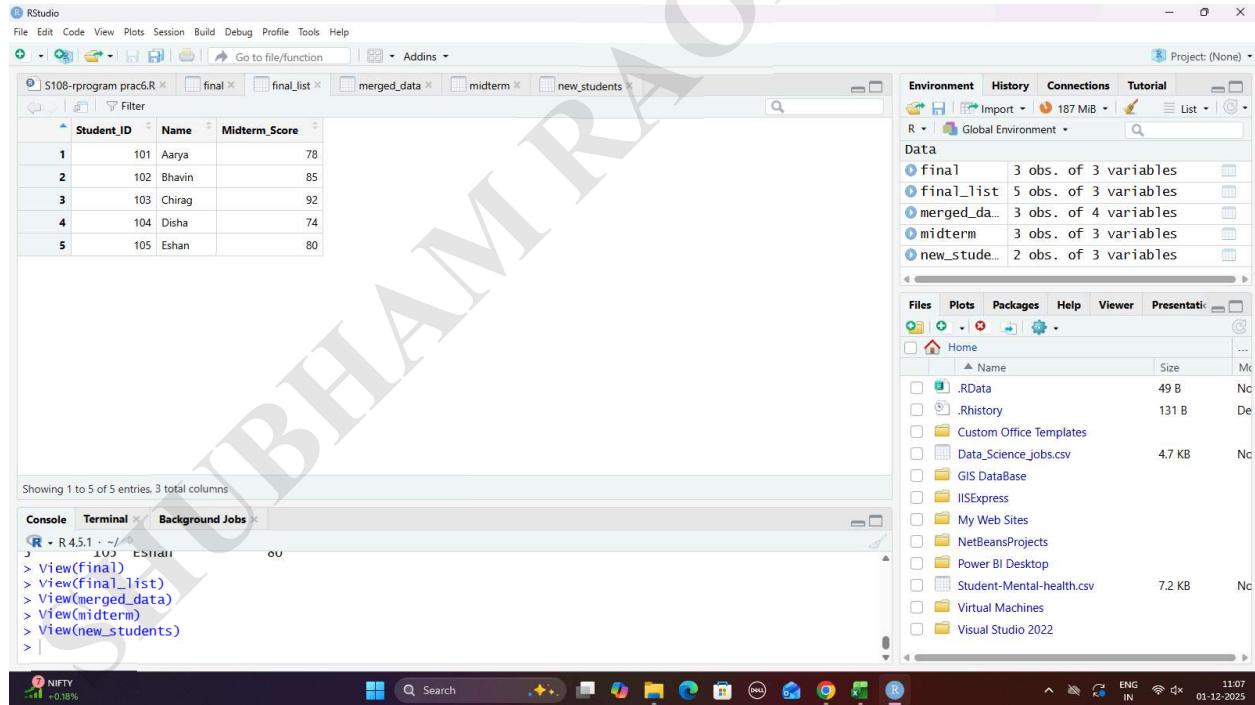
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The screenshot shows the RStudio interface with the following details:

- Data View:** A table titled "final" showing student data:
 

Student_ID	Name	Final_Score
1	Aarya	81
2	Bhavin	88
3	Chirag	95
- Console View:** Shows R session history with commands like "View(final)" and "View(midterm)".
- File Explorer:** Displays various R objects and files in the "Home" directory.
- System Tray:** Shows system information including "NIFTY +0.16%", "ENG IN", and the date "01-12-2025".

The screenshot shows the RStudio interface with the following details:

- Data View:** A table titled "midterm" showing student data:
 

Student_ID	Name	Midterm_Score
1	Aarya	78
2	Bhavin	85
3	Chirag	92
4	Disha	74
5	Eshan	80
- Console View:** Shows R session history with commands like "View(final)" and "View(midterm)".
- File Explorer:** Displays various R objects and files in the "Home" directory.
- System Tray:** Shows system information including "NIFTY +0.16%", "ENG IN", and the date "01-12-2025".

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The screenshot shows the RStudio interface with two sessions displayed. Both sessions show the same data frame:

Student_ID	Name	Midterm_Score	Final_Score
1	Aarya	78	81
2	Bhavin	85	88
3	Chirag	92	95

The R console output in both sessions is identical:

```
R - R 4.5.1 ~/Desktop/ESTM&R> View(final)
> View(final_list)
> View(merged_data)
> View(midterm)
> View(new_students)
```

A Snipping Tool window is open, indicating that a screenshot has been copied to the clipboard.

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