

## PRACTICAL NO 11

AIM: Reshaping data using pivot\_longer()/pivot\_wider() (R).

The image shows two side-by-side RStudio sessions. Both sessions have the following header:

```
R - R 4.5.2 · ~/ ~
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins ·
```

**Session 1 (Left):**

```
> library(dplyr)
> library(tidyr)
>
> fitness_df <- data.frame(
+   UserID = 1:5,
+   Steps = c(3500, 7800, 12000, 5600, 9100),
+   Calories = c(180, 320, 450, 250, 390)
+ )
>
> print("Original Wide Data:")
[1] "Original Wide Data:"
> print(fitness_df)
UserID Steps Calories
1      1    3500     180
2      2    7800     320
3      3   12000     450
4      4    5600     250
5      5    9100     390
> long_df <- fitness_df %>%
+   pivot_longer(
+     cols = c(Steps, Calories),
+     names_to = "Activity_Type",
+     values_to = "Activity_Value"
+   )
>
> print("Long Format Data:")
[1] "Long Format Data:"
> print(long_df)
# A tibble: 10 × 3
 UserID Activity_Type Activity_Value
<int> <chr>           <dbl>
1      1 Steps            3500
2      1 Calories          180
3      2 Steps            7800
4      2 Calories          320
5      3 Steps           12000
6      3 Calories          450
7      4 Steps            5600
8      4 Calories          250
9      5 Steps            9100
10     5 Calories          390
> wide_df <- long_df %>%
+   pivot_wider(
+     names_from = Activity_Type,
+     values_from = Activity_Value
+   )

```

**Session 2 (Right):**

```
R - R 4.5.2 · ~/ ~
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins ·
```

The right session shows the environment and file browser. The environment pane lists various datasets and objects:

- student\_health\_a: 4 obs. of 2 variables
- student\_health\_b: 3 obs. of 2 variables
- tips: 244 obs. of 7 variables
- tips\_data: 50 obs. of 7 variables
- titanic: 891 obs. of 12 variables
- Titanic\_Dataset: 891 obs. of 12 variables
- titanic\_no\_na: 183 obs. of 12 variables
- train: 891 obs. of 12 variables
- unique\_students: 4 obs. of 3 variables
- wide\_df: 5 obs. of 3 variables

The file browser pane shows the following files:

Name	Size	Modified
test.py	839 B	Sep 20, 2025, 3:54 PM
test.sql	165 B	Sep 22, 2025, 12:58 PM
time series data.csv	2.6 KB	Sep 1, 2025, 12:30 PM
time.py	1.6 KB	Sep 21, 2025, 4:55 PM
tips.csv	7.8 KB	Dec 1, 2025, 11:31 AM
Titanic-Dataset.csv	59.8 KB	Dec 1, 2025, 11:31 AM
TOC qb soln.pdf	424.8 KB	Oct 11, 2025, 6:38 PM
Topaz VideoAI Projects	59.8 KB	Dec 1, 2025, 12:16 PM
train.csv	522 B	Sep 24, 2025, 8:36 PM
userlog.sql	194.5 KB	Sep 23, 2025, 10:16 PM
Viswanathan_Anand.docx	876 B	Dec 8, 2025, 10:52 AM
practical 11.R	50 B	Dec 8, 2025, 10:54 AM
student_health_b.csv	54 B	Dec 8, 2025, 10:54 AM
student_health_a.csv	936 B	Dec 8, 2025, 10:57 AM
practical 12.R	773 B	Dec 8, 2025, 10:59 AM
practical 13.R	1.3 KB	Dec 8, 2025, 11:00 AM
practical 14.R	876 B	Dec 8, 2025, 11:00 AM
practical 15.R	876 B	Dec 8, 2025, 11:00 AM