

SHETH L.U.J AND M.V COLLEGE

PRACTICAL NO .11

SUBJECT - DATA ANALYSIS

AIM - 11. Reshaping data using pivot_longer() and pivot_wider() (R).

INPUT -

```
library(dplyr)  
library(tidyr)
```

```
df <- read.csv("Walmart_Sales.csv", na.strings = c("", "NA")) %>%  
  mutate(SaleID = dplyr::row_number()) %>%  
  select(SaleID, Store, Weekly_Sales, Temperature)
```

```
print("--- 1. Original Wide Data ---")  
print(head(df))
```

```
long_df <- df %>%  
  pivot_longer(  
    cols = c(Weekly_Sales, Temperature),  
    names_to = "Metric",  
    values_to = "Value"  
)
```

```
print("--- 2. Long Format (pivot_longer) ---")  
print(head(long_df, 6))
```

```
wide_df <- long_df %>%  
  pivot_wider(  
    names_from = Metric,  
    values_from = Value  
)
```

```
print("--- 3. Wide Format (Back to Original) ---")  
print(head(wide_df))
```

```
df_clean <- df %>%  
  mutate(Store = ifelse(is.na(Store), "Unknown", Store))
```

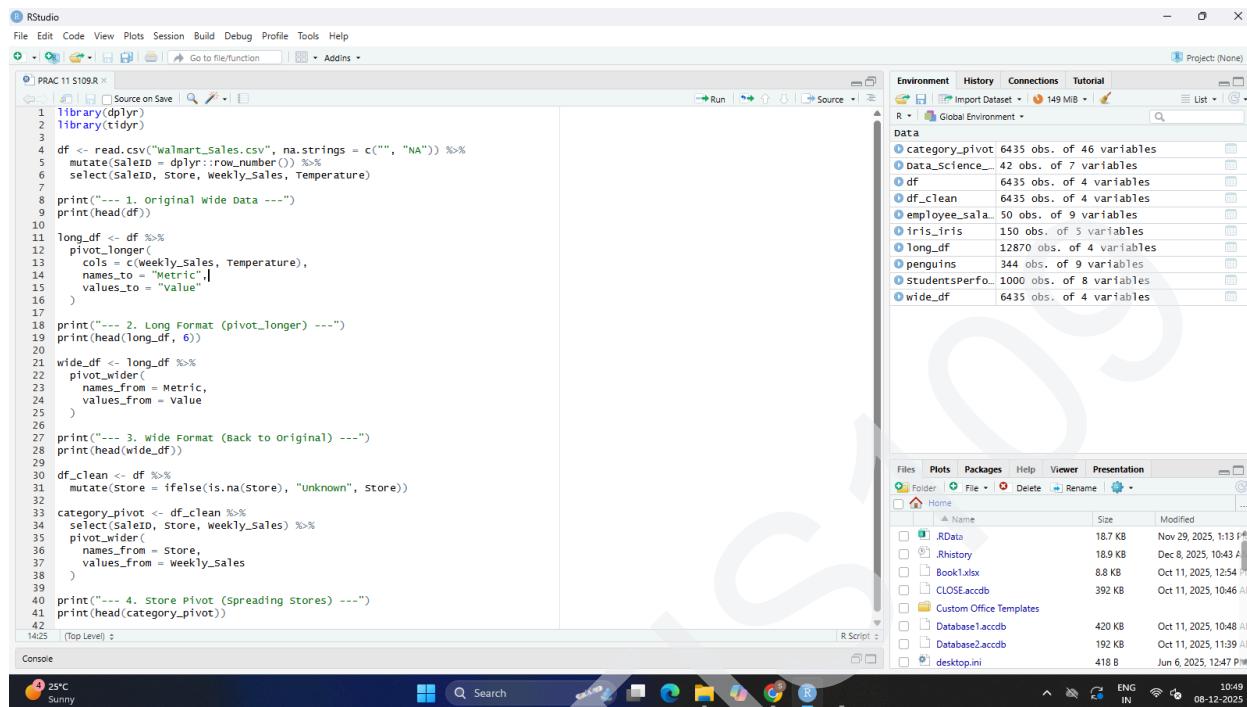
```
category_pivot <- df_clean %>%  
  select(SaleID, Store, Weekly_Sales) %>%  
  pivot_wider(  
    names_from = Store,  
    values_from = Weekly_Sales  
)
```

```
print("--- 4. Store Pivot (Spreading Stores) ---")
```

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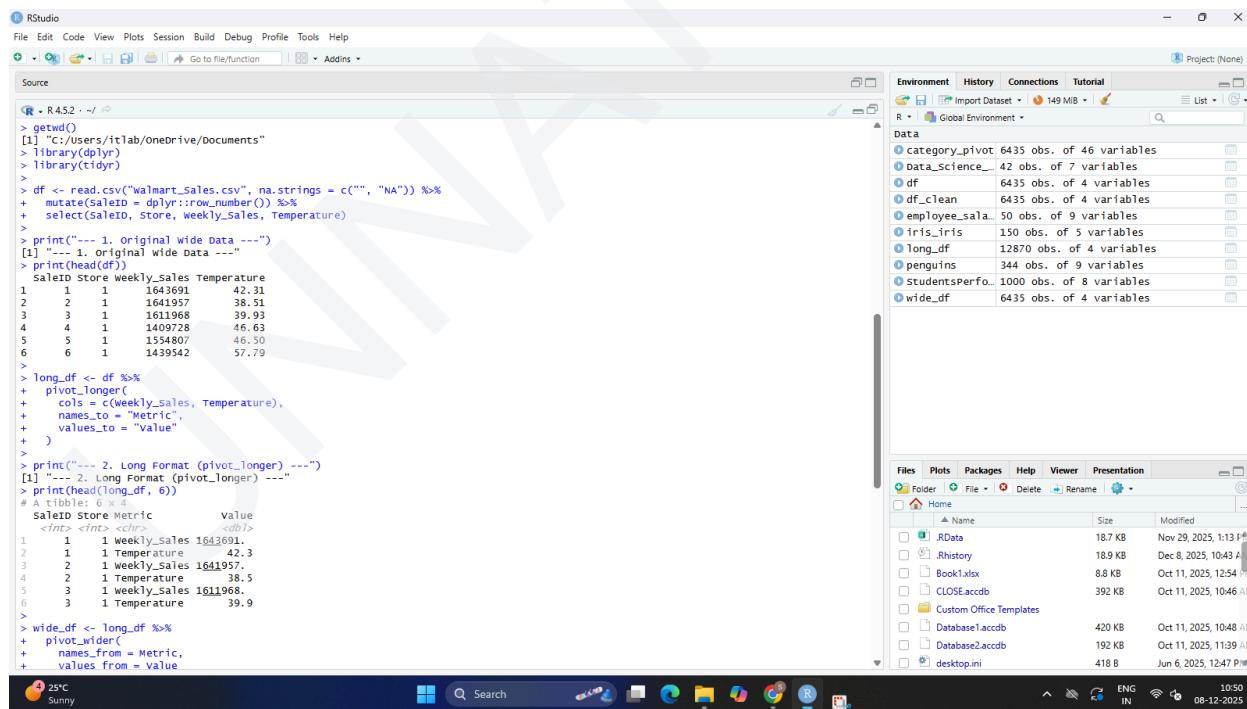
```
print(head(category_pivot))
```



The screenshot shows the RStudio interface with the following details:

- Code Editor:** The script file "PRAC 11 S109.R" contains R code for data manipulation and pivoting. It includes imports for dplyr and tibble, reads a CSV file, and performs various operations like mutate, select, pivot_wider, and print head.
- Environment View:** Shows the global environment with objects like category_pivot, data_science, df, df_clean, employee_sala, iris_iris, long_df, penguins, studentsPerfo, and wide_df.
- File Browser:** Shows files in the current directory including RData, Rhistory, Book1.xlsx, CLOSE.accdb, Custom Office Templates, Database1.accdb, Database2.accdb, and desktop.ini.
- System Status Bar:** Displays system information like battery level (25°C), network (Sunny), and system time (10:49 AM, 08-12-2025).

OUTPUT -



The screenshot shows the RStudio interface with the following details:

- Code Editor:** The R console shows the execution of the R code from the previous screenshot, including the command `print(head(category_pivot))`.
- Output View:** The output shows the resulting data frames:
 - category_pivot:** A wide data frame with columns SaleID, store, weekly_sales, and Temperature.
 - long_df:** A long data frame with columns SaleID, store, Metric, and value.
 - wide_df:** A wide data frame with columns SaleID, store, Metric, and value.
- Environment View:** Shows the global environment with objects like category_pivot, data_science, df, df_clean, employee_sala, iris_iris, long_df, penguins, studentsPerfo, and wide_df.
- File Browser:** Shows files in the current directory including RData, Rhistory, Book1.xlsx, CLOSE.accdb, Custom Office Templates, Database1.accdb, Database2.accdb, and desktop.ini.
- System Status Bar:** Displays system information like battery level (25°C), network (Sunny), and system time (10:50 AM, 08-12-2025).

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RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

Source

```
R> R452 ~/r/rpivot_wider.r
+   names_from = metric,
+   values_from = value
+ }
>
> print("---- 3. wide Format (Back to original) ----")
[1] "---- 3. wide Format (Back to original) ----"
> print(head(wide_df))
# A tibble: 6 x 4
  saleid Store weekly_sales temperature
  <int> <chr>     <dbl>      <dbl>
1     1 1643691.    42.3
2     2 1641957.    38.5
3     3 1611968.    39.9
4     4 1409728.    46.6
5     5 1554807.    46.5
6     6 1439542.    57.8
>
> df_clean <- df %>
+   mutate(store = ifelse(is.na(store), "Unknown", store))
>
> category_pivot <- df_clean %>
+   select(saledid, store, weekly_sales) %>
+   pivot_wider(
+     names_from = store,
+     values_from = weekly_sales
+   )
>
> print("---- 4. Store Pivot (Spreading stores) ----")
[1] "---- 4. Store Pivot (Spreading stores) ----"
> print(head(category_pivot))
# A tibble: 6 x 46
  saleid `1` `2` `3` `4` `5` `6` `7` `8` `9` `10` `11` `12` `13` `14` `15` `16` `17` `18` `19` `20` 
  <int> <dbl> <dbl>
1     1 1643691.  NA  NA 
2     2 1641957.  NA  NA 
3     3 1611968.  NA  NA 
4     4 1409728.  NA  NA 
5     5 1554807.  NA  NA 
6     6 1439542.  NA  NA 
#> 25 more variables: `21` <dbl>, `22` <dbl>, `23` <dbl>, `24` <dbl>, `25` <dbl>, `26` <dbl>, `27` <dbl>, `28` <dbl>, `29` <dbl>,
#> `30` <dbl>, `31` <dbl>, `32` <dbl>, `33` <dbl>, `34` <dbl>, `35` <dbl>, `36` <dbl>, `37` <dbl>, `38` <dbl>, `39` <dbl>,
#> `40` <dbl>, `41` <dbl>, `42` <dbl>, `43` <dbl>, `44` <dbl>, `45` <dbl>
> |
```

Environment History Connections Tutorial

R > Global Environment

Data

- category_pivot 6435 obs. of 46 variables
- data_science_... 42 obs. of 7 variables
- df 6435 obs. of 4 variables
- df_clean 6435 obs. of 4 variables
- employee_sala... 50 obs. of 9 variables
- iris_iris 150 obs. of 5 variables
- long_df 12870 obs. of 4 variables
- penguins 344 obs. of 9 variables
- studentspero... 1000 obs. of 8 variables
- wide_df 6435 obs. of 4 variables

Files Plots Packages Help Viewer Presentation

Home

Name	Size	Modified
.RData	187 KB	Nov 29, 2025, 1:13 PM
.Rhistory	18.9 KB	Dec 8, 2025, 10:43 AM
Book1.xlsx	8.8 KB	Oct 11, 2025, 12:54 PM
CLOSE.accdb	392 KB	Oct 11, 2025, 10:46 AM
Custom Office Templates		
Database1.accdb	420 KB	Oct 11, 2025, 10:48 AM
Database2.accdb	192 KB	Oct 11, 2025, 11:39 AM
desktop.ini	418 B	Jun 6, 2025, 12:47 PM

25°C Sunny

Search

ENG IN

08-12-2025 10:56

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