

# SHETH L.U.J AND SIR M.V COLLEGE

## PRACTICAL NO:15

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

**INPUT:**

```
library(dplyr)
```

```
library(tidyr)
```

```
retail_df <- data.frame(
```

```
  ID = 1:6,
```

```
  Category = c("Electronics", "Home", "Electronics", "Clothing", "Home",  
"Clothing"),
```

```
  Price = c(500.50, 45.00, 900.00, NA, 300.00, 25.00),
```

```
  In_Stock = c(TRUE, TRUE, FALSE, TRUE, FALSE, TRUE),
```

```
  Rating = c(4.5, 3.8, 4.9, 4.0, 3.5, 4.2)
```

```
)
```

```
print("--- Data Loaded ---")
```

```
print("--- OUTPUT OF str() ---")
```

```
str(retail_df)
```

```
print("--- OUTPUT OF summary() [Before Factor Conversion] ---")
```

```
summary(retail_df)
```

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```
retail_df$Category <- as.factor(retail_df$Category)
```

```
print("--- OUTPUT OF summary() [After Factor Conversion] ---")
```

```
summary(retail_df)
```

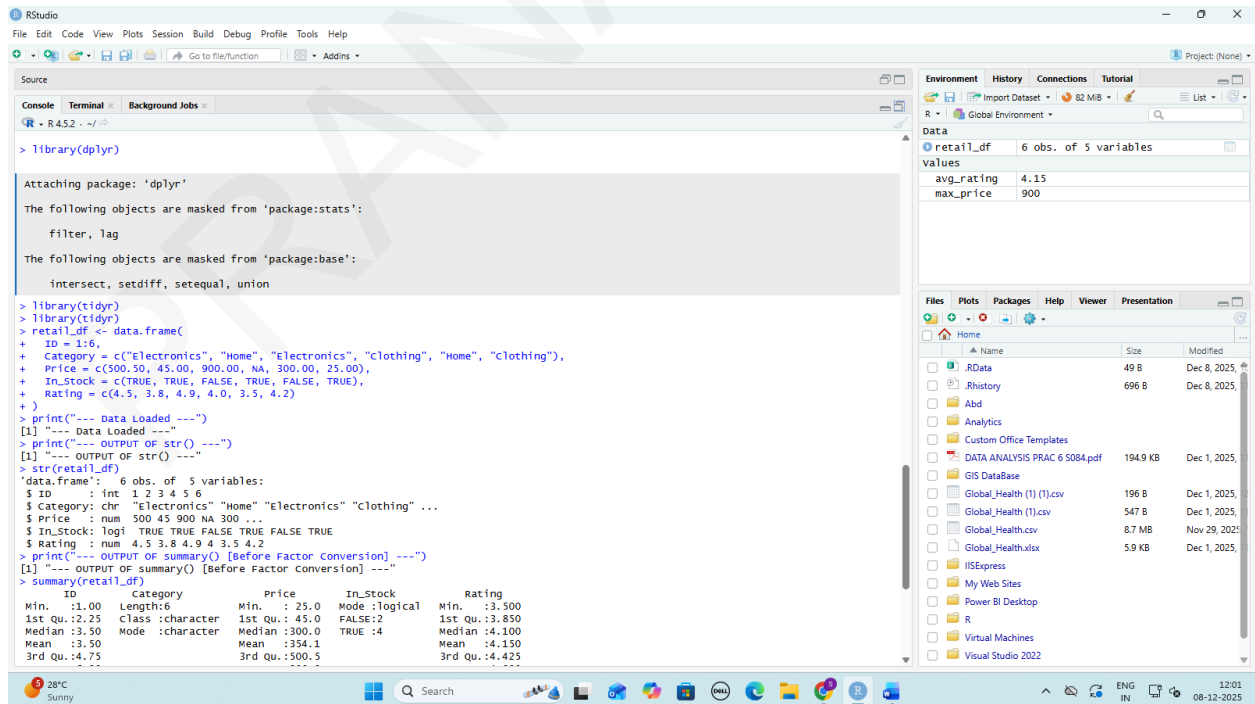
```
avg_rating <- mean(retail_df$Rating)
```

```
max_price <- max(retail_df$Price, na.rm = TRUE)
```

```
print(paste("Average Rating:", avg_rating))
```

```
print(paste("Highest Price:", max_price))
```

## OUTPUT:



The screenshot displays the RStudio interface with the following components:

- Source Pane:** Contains the R script being executed, including library calls, data frame creation, and summary/print statements.
- Console Pane:** Shows the output of the script, including package attachment messages, data frame structure, and the summary output after factor conversion.
- Environment Pane:** Lists the objects in the global environment, including 'retail\_df', 'avg\_rating', and 'max\_price'.
- Files Pane:** Shows the file explorer with various files and folders.

```
> library(dplyr)
Attaching package: 'dplyr'
The following objects are masked from 'package:stats':
  filter, lag
The following objects are masked from 'package:base':
  intersect, setdiff, setequal, union

> library(tidyverse)
> library(tidyverse)
> retail_df <- data.frame(
+   ID = 1:6,
+   Category = c("Electronics", "Home", "Electronics", "Clothing", "Home", "Clothing"),
+   Price = c(500.50, 45.00, 900.00, NA, 300.00, 25.00),
+   In_Stock = c(TRUE, TRUE, FALSE, TRUE, FALSE, TRUE),
+   Rating = c(4.5, 3.8, 4.9, 4.0, 3.5, 4.2)
+ )
> print("--- Data Loaded ---")
[1] "--- Data Loaded ---"
> print("--- OUTPUT OF str() ---")
[1] "--- OUTPUT OF str() ---"
> str(retail_df)
'data.frame':   6 obs. of  5 variables:
 $ ID      : int  1 2 3 4 5 6
 $ Category: chr  "Electronics" "Home" "Electronics" "Clothing" ...
 $ Price   : num  500.45 900 NA 300 ...
 $ In_Stock: logi TRUE TRUE FALSE TRUE FALSE TRUE
 $ Rating  : num  4.5 3.8 4.9 4 3.5 4.2
> print("--- OUTPUT OF summary() [Before Factor Conversion] ---")
[1] "--- OUTPUT OF summary() [Before Factor Conversion] ---"
> summary(retail_df)
   ID      Category      Price      In_Stock      Rating
Min.   :1.00   Length:6    Min.   :25.0   Mode :logical Min.   :3.500
1st Qu.:2.25   Class :character 1st Qu.: 45.0   FALSE:2       1st Qu.:3.850
Median :3.50   Mode  :character   Median :300.0   TRUE :4        Median :4.100
Mean   :3.50               Mean   :354.1   Mean   :4.150
3rd Qu.:4.75               3rd Qu.:500.5   3rd Qu.:4.425
```

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The screenshot shows the RStudio interface with the following content:

**Source**

```
+ )
> print("--- Data Loaded ---")
[1] "--- Data Loaded ---"
> print("--- OUTPUT OF str() ---")
[1] "--- OUTPUT OF str() ---"
> str(retail_df)
'data.frame':   6 obs. of  5 variables:
 $ ID       : int  1 2 3 4 5 6
 $ Category: chr "Electronics" "Home" "Electronics" "Clothing" ...
 $ Price    : num  500 45 900 NA 300 ...
 $ In_Stock: logi TRUE TRUE FALSE TRUE FALSE TRUE
 $ Rating   : num  4.5 3.8 4.9 4.3 5 4.2
> print("--- OUTPUT OF summary() [Before Factor Conversion] ---")
[1] "--- OUTPUT OF summary() [Before Factor Conversion] ---"
> summary(retail_df)
      ID      Category      Price      In_Stock      Rating
Min.   :1.00   Length:6   Min.   : 25.0   Mode :logical   Min.   :3.500
1st Qu.:2.25   Class :character 1st Qu.: 45.0   FALSE:2   1st Qu.:3.850
Median :3.50   Mode :character   Median :300.0   TRUE :4   Median :4.100
Mean   :3.50               Mean :354.1   Mean   :4.150
3rd Qu.:4.75               3rd Qu.:500.5 3rd Qu.:4.425
Max.   :6.00               Max. :900.0   Max.   :4.900
NA's   :1
> retail_df$Category <- as.factor(retail_df$Category)
> print("--- OUTPUT OF summary() [After Factor Conversion] ---")
[1] "--- OUTPUT OF summary() [After Factor Conversion] ---"
> summary(retail_df)
      ID      Category      Price      In_Stock      Rating
Min.   :1.00   Clothing :2   Min.   : 25.0   Mode :logical   Min.   :3.500
1st Qu.:2.25   Electronics:2 1st Qu.: 45.0   FALSE:2   1st Qu.:3.850
Median :3.50   Home       :2   Median :300.0   TRUE :4   Median :4.100
Mean   :3.50               Mean :354.1   Mean   :4.150
3rd Qu.:4.75               3rd Qu.:500.5 3rd Qu.:4.425
Max.   :6.00               Max. :900.0   Max.   :4.900
NA's   :1
> avg_rating <- mean(retail_df$Rating)
> max_price <- max(retail_df$Price, na.rm = TRUE)
> print(paste("Average Rating:", avg_rating))
[1] "Average Rating: 4.15"
> print(paste("Highest Price:", max_price))
[1] "Highest Price: 900"
> |
```

**Environment**

Global Environment

**Data**

retail\_df 6 obs. of 5 variables

Values

Variable	Value
avg_rating	4.15
max_price	900

**Files**

Home

Name	Size	Modified
.RData	49 B	Dec 8, 2025
.Rhstory	696 B	Dec 8, 2025
Abd		
Analytics		
Custom Office Templates		
DATA ANALYSIS PRAC 6 S084.pdf	194.9 KB	Dec 1, 2025
GIS DataBase		
Global_Health (1) (1).csv	196 B	Dec 1, 2025
Global_Health (1).csv	547 B	Dec 1, 2025
Global_Health.csv	8.7 MB	Nov 29, 2025
Global_Health.xlsx	5.9 KB	Dec 1, 2025
ISExpress		
My Web Sites		
Power BI Desktop		
R		
Virtual Machines		
Visual Studio 2022		

**Taskbar**

28°C Sunny Search 12:01 08-12-2025