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 -

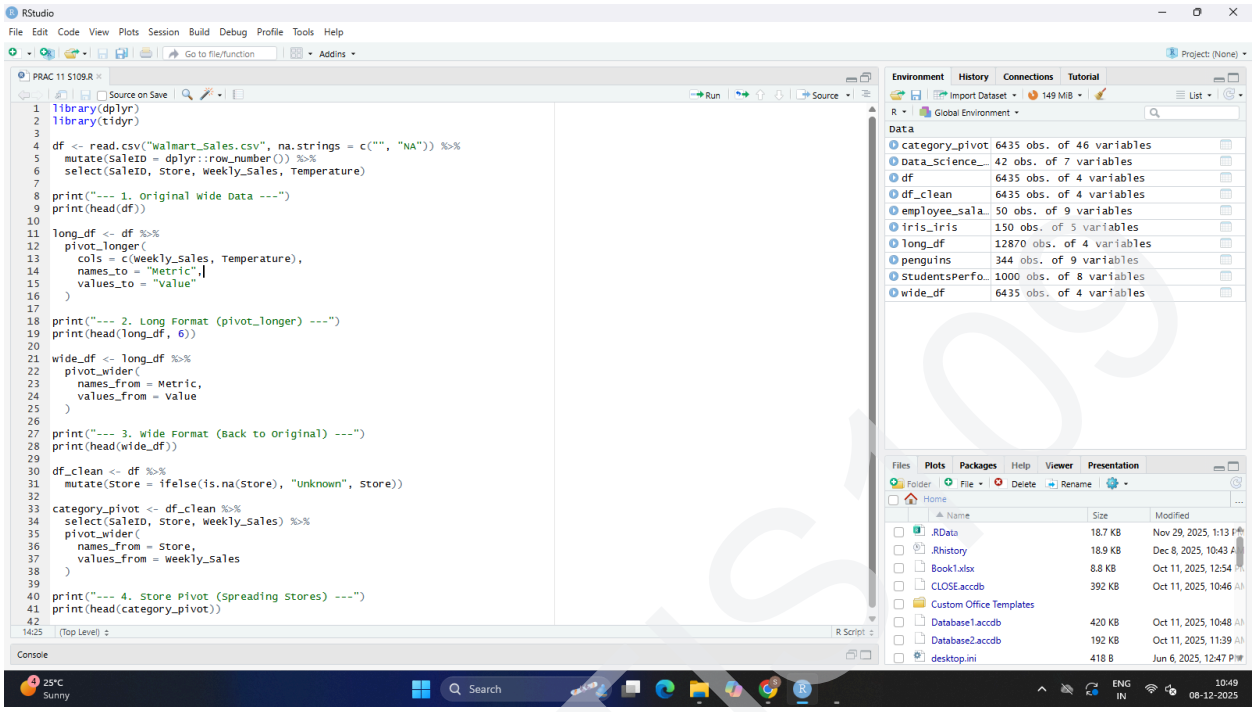
```
library(dplyr)
library(tidyr)

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) ---")
```

NAME - UNNATI RATHOD
ROLL-S109

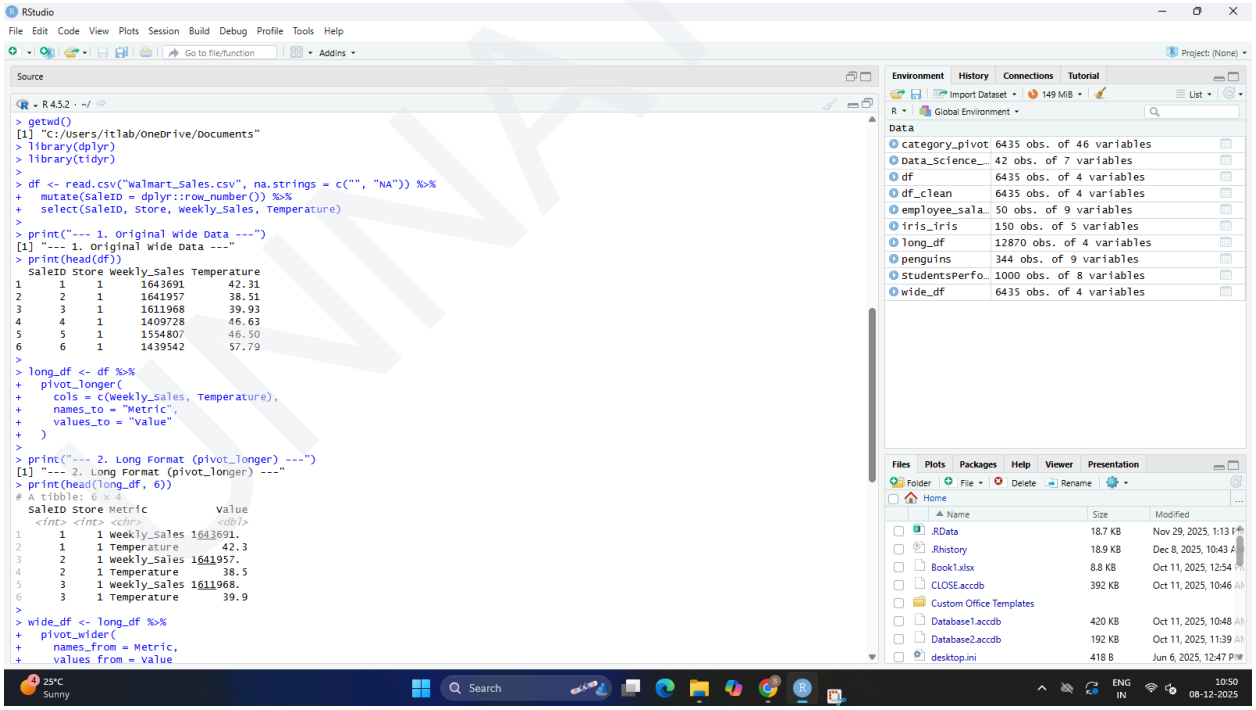
UNNATIS109

SHETH L.U.J AND M.V COLLEGE
PRACTICAL NO .11
SUBJECT - DATA ANALYSIS

print(head(category_pivot))

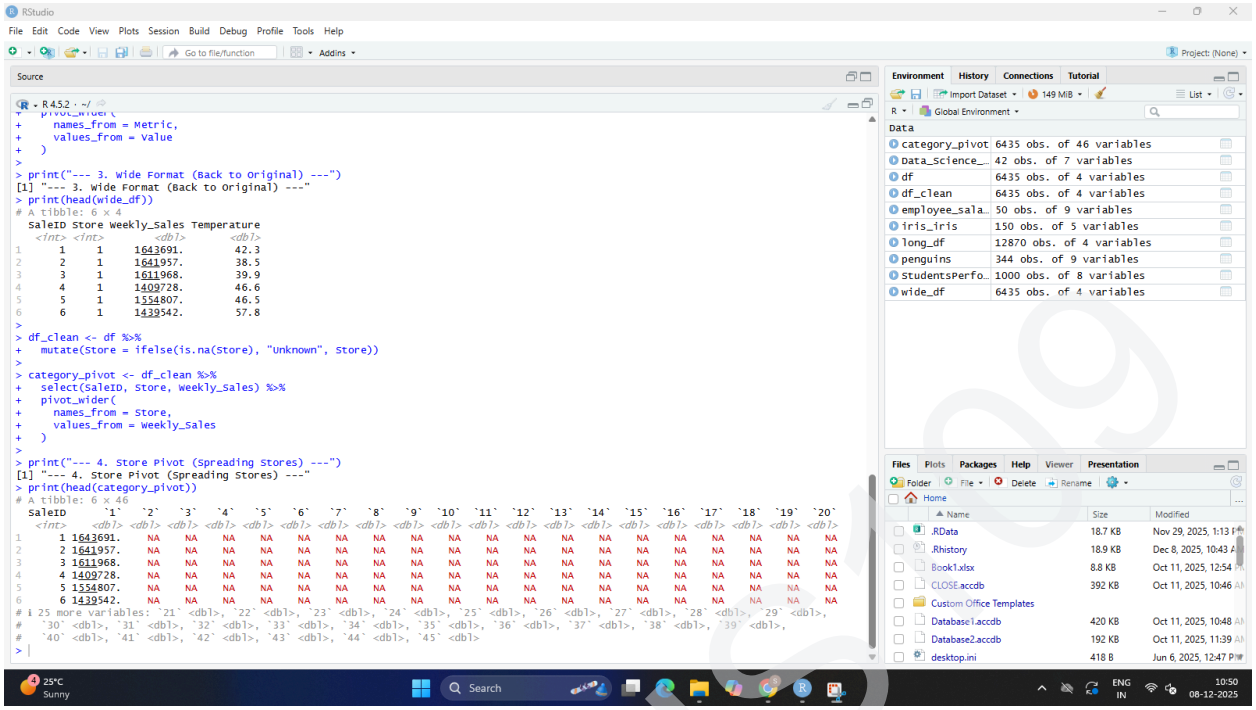


OUTPUT -



NAME - UNNATI RATHOD
ROLL-S109

SHETH L.U.J AND M.V COLLEGE
PRACTICAL NO .11
SUBJECT - DATA ANALYSIS



```
+     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> <int>        <dbl>       <dbl>
1      1     1      1643691.        42.3
2      2     1      1641957.        38.5
3      3     1      1611968.        39.9
4      4     1      1409728.        46.6
5      5     1      1554807.        46.5
6      6     1      1439542.        57.8
>
> 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) ---")
[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> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>
1      1 1643691.    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA
2      2 1641957.    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA
3      3 1611968.    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA
4      4 1409728.    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA
5      5 1554807.    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA
6      6 1439542.    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA    NA
# i 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>
>
```

NAME - UNNATI RATHOD
ROLL-S109

UNNATI S09