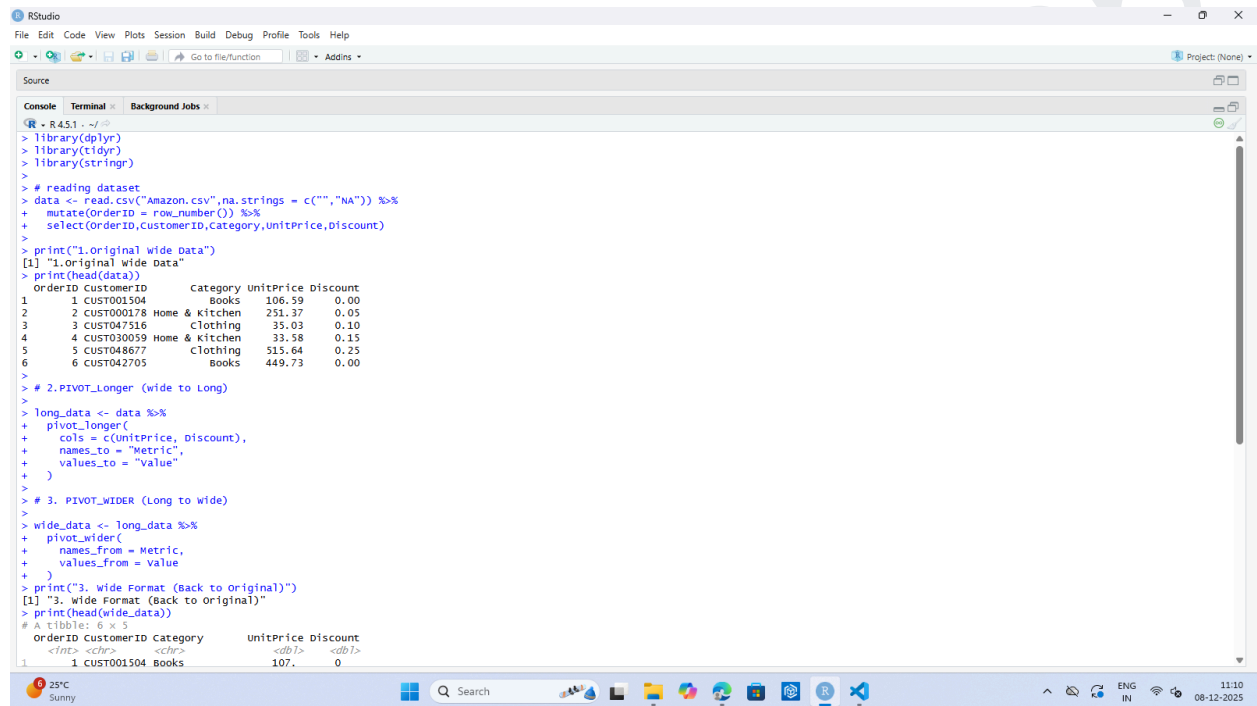


Practical No 11

Aim : Reshaping data using pivot_longer()/pivot_wider() (R).

Output :



```
R - R4.5.1 - ~/R
File Edit Code View Plots Session Build Debug Profile Tools Help
Source
Console Terminal Background Jobs
> library(dplyr)
> library(tidyverse)
> library(stringr)
>
> # reading dataset
> data <- read.csv("Amazon.csv", na.strings = c("", "NA")) %>%
+ mutate(orderID = row_number()) %>%
+ select(orderID, CustomerID, Category, UnitPrice, Discount)
>
> print("1. Original Wide Data")
[1] "1. Original Wide Data"
> print(head(data))
  orderID CustomerID Category UnitPrice Discount
1      1 CUST001504    Books    106.59      0.00
2      2 CUST000178 Home & Kitchen 251.37      0.05
3      3 CUST047516    Clothing    35.03      0.10
4      4 CUST030059 Home & Kitchen 33.58      0.15
5      5 CUST048677    Clothing    515.64      0.25
6      6 CUST042705    Books     449.73      0.00
>
> # 2. PIVOT_LoNger (wide to Long)
>
> long_data <- data %>%
+ pivot_longer(
+   cols = c(UnitPrice, Discount),
+   names_to = "Metric",
+   values_to = "Value"
+ )
>
> # 3. PIVOT_WIDER (Long to wide)
>
> wide_data <- long_data %>%
+ pivot_wider(
+   names_from = Metric,
+   values_from = Value
+ )
>
> print("3. Wide Format (back to original)")
[1] "3. Wide Format (back to original)"
> print(head(wide_data))
# A tibble: 6 x 5
  orderID CustomerID Category UnitPrice Discount
  <int> <chr> <chr> <dbl> <dbl>
1      1 CUST001504 Books    107.      0
```

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SUBJECT : R Programming

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RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins Project: (None)

Source
Console Terminal Background Jobs

R - R 4.5.1 - ~/...

>
> wide_data <- long_data %>%
+   pivot_wider(
+     names_from = Metric,
+     values_from = value
+   )
> print("3. Wide Format (back to original)")
[1] "3. Wide Format (back to original)"
> print(head(wide_data))
# A tibble: 6 x 5
   orderID CustomerID Category unitPrice discount
   <int> <chr> <chr> <dbl> <dbl>
1     1 CUST001504 Books 107. 0
2     2 CUST000178 Home & Kitchen 251. 0.05
3     3 CUST047516 Clothing 35.0 0.1
4     4 CUST030059 Home & Kitchen 33.6 0.15
5     5 CUST048677 Clothing 516. 0.25
6     6 CUST042705 Books 450. 0

> # 4. ADVANCED EXAMPLE (Reshaping for Reporting)
>
> data_clean <- data %>%
+   mutate(Category = ifelse(is.na(Category), "unknown", Category))
> category_pivot <- data_clean %>%
+   select(orderID, Category, unitPrice) %>%
+   pivot_wider(
+     names_from = Category,
+     values_from = unitPrice
+   )
> print("4. Category Pivot (Spreading Categories)")
[1] "4. Category Pivot (Spreading Categories)"
> print(head(category_pivot))
# A tibble: 6 x 7
   orderID Books Home & Kitchen Clothing Toys & Games Sports & outdoors Electronics
   <int> <dbl> <dbl> <dbl> <dbl> <dbl> <dbl>
1     1 107. NA NA NA NA NA
2     2 NA 251. NA NA NA NA
3     3 NA NA 35.0 NA NA NA
4     4 NA NA 33.6 NA NA NA
5     5 NA NA 516. NA NA NA
6     6 450. NA NA NA NA NA

> |
```

NAME : SHUBHAM SANJAY KARAPE
ROLL NO : S085