# MVLU COLLEGE
# Data analysis with SAS/SSPR/R
# PRACTICAL NO.13

**Aim:** 13. Identifying and handling duplicates using distinct() (R studio ).

## INPUT:

```
library(dplyr)

amazon_df <- read.csv("D:/S119/DATA ANAN/Amazon.csv", na.strings = c("", "NA"))

print("--- 1. Original Dataset (Note rows) ---")
print(amazon_df)

duplicates_report <- amazon_df %>%
  group_by(OrderID, CustomerName, ProductName) %>%
  count() %>%
  filter(n > 1)

print("--- 2. Identification Report (Rows that are duplicated) ---")
print(duplicates_report)

clean_exact <- amazon_df %>%
  distinct()

print("--- 3. Removed Exact Duplicates (distinct) ---")
print(clean_exact)

unique_customers <- amazon_df %>%
  distinct(CustomerName, .keep_all = TRUE)

print("--- 4. Unique Customers Only (Partial Duplicates removed) ---")
print(unique_customers)
```

## OUTPUT:

**NAME:HEMANI SINGH**
**ROLL NO:S119**

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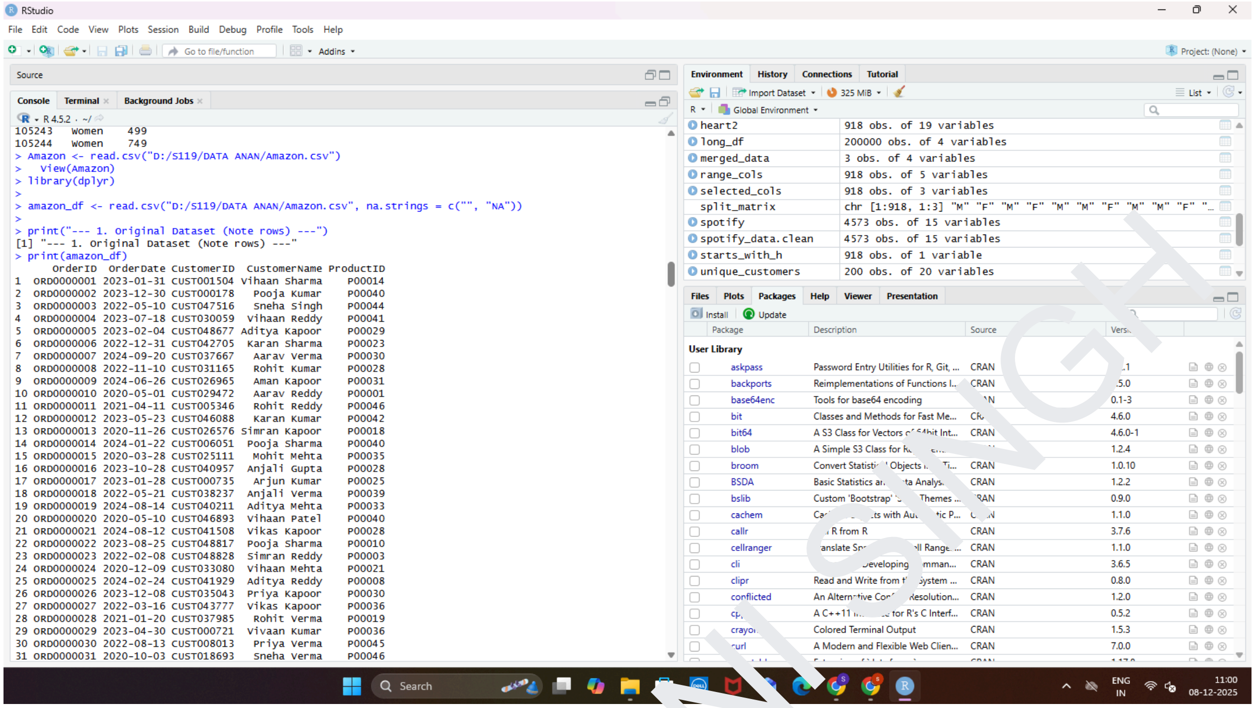

```
105243   Women    499
105244   Women    749
> Amazon <- read.csv("D:/S119/DATA ANAN/Amazon.csv")
>   View(Amazon)
> library(dplyr)
>
> amazon_df <- read.csv("D:/S119/DATA ANAN/Amazon.csv", na.strings = c("", "NA"))
>
> print("--- 1. Original Dataset (Note rows) ---")
[1] "--- 1. Original Dataset (Note rows) ---"
> print(amazon_df)
      OrderID  OrderDate CustomerID  CustomerName ProductID
1  ORD0000001 2023-01-31 CUST001504 Vihaan Sharma    P00014
2  ORD0000002 2023-12-30 CUST000178   Pooja Kumar    P00040
3  ORD0000003 2022-05-10 CUST047516   Sneha Singh    P00044
4  ORD0000004 2023-07-18 CUST030059  Vihaan Reddy    P00041
5  ORD0000005 2023-02-04 CUST048677 Aditya Kapoor    P00029
6  ORD0000006 2022-12-31 CUST042705  Karan Sharma    P00023
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9  ORD0000009 2024-06-26 CUST026965   Aman Kapoor    P00031
10 ORD0000010 2020-05-01 CUST029472   Aarav Reddy    P00001
11 ORD0000011 2021-04-11 CUST005346   Rohit Reddy    P00046
12 ORD0000012 2023-05-23 CUST046088   Karan Kumar    P00042
13 ORD0000013 2020-11-26 CUST026576 Simran Kapoor    P00018
14 ORD0000014 2024-01-22 CUST006051  Pooja Sharma    P00040
15 ORD0000015 2020-03-28 CUST025111   Mohit Mehta    P00035
16 ORD0000016 2023-10-28 CUST040957  Anjali Gupta    P00028
17 ORD0000017 2023-01-28 CUST000735   Arjun Kumar    P00025
18 ORD0000018 2022-05-21 CUST038237  Anjali Verma    P00039
19 ORD0000019 2024-08-14 CUST040211  Aditya Mehta    P00033
20 ORD0000020 2020-05-10 CUST046893  Vihaan Patel    P00040
21 ORD0000021 2024-08-12 CUST041508  Vikas Kapoor    P00028
22 ORD0000022 2023-08-25 CUST048817  Pooja Sharma    P00010
23 ORD0000023 2022-02-08 CUST048828  Simran Reddy    P00003
24 ORD0000024 2020-12-09 CUST033080  Vihaan Mehta    P00021
25 ORD0000025 2024-02-24 CUST041929  Aditya Reddy    P00008
26 ORD0000026 2023-12-08 CUST035043  Priya Kapoor    P00030
27 ORD0000027 2022-03-16 CUST043777  Vikas Kapoor    P00036
28 ORD0000028 2021-01-20 CUST037985   Rohit Verma    P00019
29 ORD0000029 2023-04-30 CUST000721  Vivaan Kumar    P00036
30 ORD0000030 2022-08-13 CUST008013   Priya Verma    P00045
31 ORD0000031 2020-10-03 CUST018693   Sneha Verma    P00046
```

| | |
|---|---|
| heart2 | 918 obs. of 19 variables |
| long_df | 200000 obs. of 4 variables |
| merged_data | 3 obs. of 4 variables |
| range_cols | 918 obs. of 5 variables |
| selected_cols | 918 obs. of 3 variables |
| split_matrix | chr [1:918, 1:3] "M" "F" "M" "F" "M" "M" "F" "M" "M" "F" "... |
| spotify | 4573 obs. of 15 variables |
| spotify_data.clean | 4573 obs. of 15 variables |
| starts_with_h | 918 obs. of 1 variable |
| unique_customers | 200 obs. of 20 variables |

User Library

| Package | Description | Source | Version |
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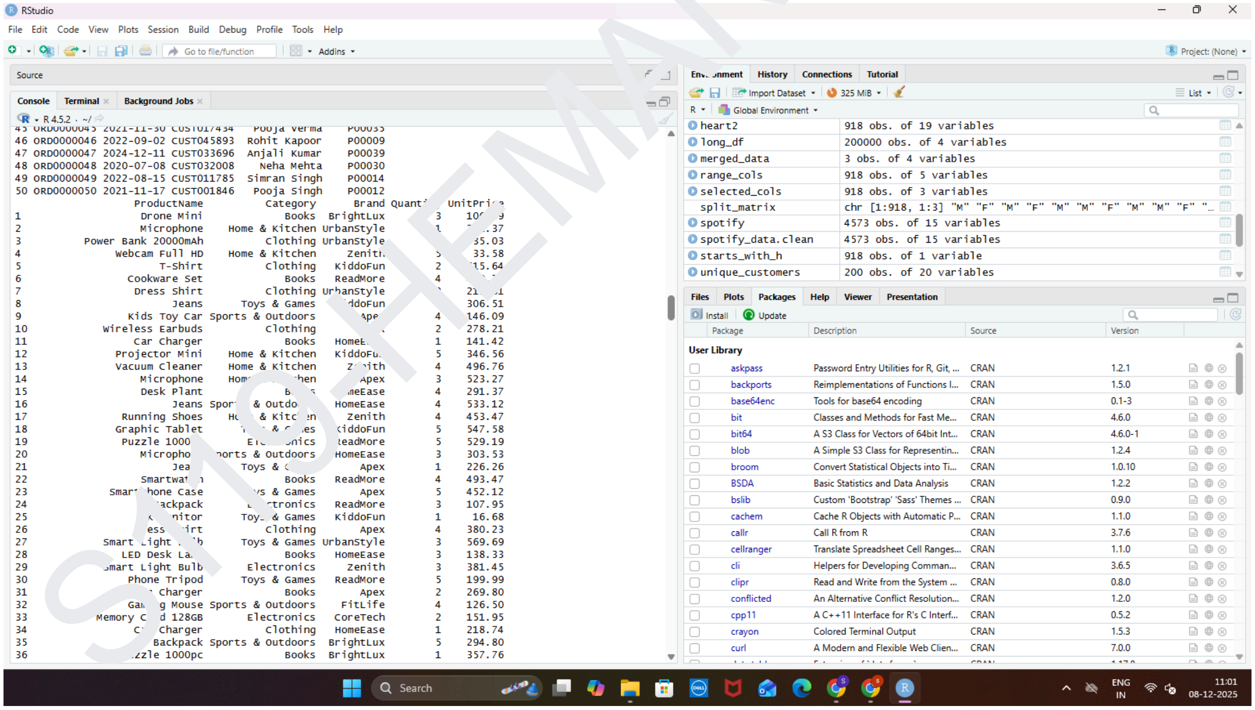

```
45 ORD0000045 2021-11-30 CUST017434   Pooja Verma    P00035
46 ORD0000046 2022-09-02 CUST045893  Rohit Kapoor    P00009
47 ORD0000047 2024-12-11 CUST033696  Anjali Kumar    P00039
48 ORD0000048 2020-07-08 CUST032008    Neha Mehta    P00030
49 ORD0000049 2022-08-15 CUST011785  Simran Singh    P00014
50 ORD0000050 2021-11-17 CUST001846   Pooja Singh    P00012
            ProductName          Category      Brand Quantity UnitPrice
1            Drone Mini             Books  BrightLux        3    [illegible]
2            Microphone    Home & Kitchen UrbanStyle        1    [illegible]
3     Power Bank 20000mAh         Clothing UrbanStyle        5     35.03
4          Webcam Full HD    Home & Kitchen     Zenith        5     33.58
5               T-Shirt          Clothing   KiddoFun        2    115.64
6          Cookware Set             Books   ReadMore        4    [illegible]
7           Dress Shirt          Clothing UrbanStyle [illegible]    21[illegible]
8                 Jeans      Toys & Games   KiddoFun [illegible]    306.51
9         Kids Toy Car Sports & Outdoors       Apex        4    146.09
10      Wireless Earbuds          Clothing [illegible]        2    278.21
11          Car Charger             Books   HomeEase        1    141.42
12        Projector Mini    Home & Kitchen   KiddoFun        5    346.56
13        Vacuum Cleaner    Home & Kitchen     Zenith        4    496.76
14           Microphone    Home & Kitchen       Apex        3    523.27
15           Desk Plant             Books   HomeEase        4    291.37
16                Jeans Sports & Outdoors   HomeEase        4    533.12
17         Running Shoes    Home & Kitchen     Zenith        4    453.47
18       Graphic Tablet      Toys & Games   KiddoFun        5    547.58
19         Puzzle 1000pc       Electronics   ReadMore        5    529.19
20           Microphone Sports & Outdoors   HomeEase        3    303.53
21                Jeans      Toys & Games       Apex        1    226.26
22           Smartwatch             Books   ReadMore        4    493.47
23     Smartphone Case      Toys & Games       Apex        5    452.12
24             Backpack       Electronics   ReadMore        3    107.95
25           4K Monitor      Toys & Games   KiddoFun        1     16.68
26        Dress Shirt          Clothing       Apex        4    380.23
27     Smart Light Bulb      Toys & Games UrbanStyle        3    569.69
28        LED Desk Lamp             Books   HomeEase        3    138.33
29     Smart Light Bulb       Electronics     Zenith        3    381.45
30          Phone Tripod      Toys & Games   ReadMore        5    199.99
31    [illegible] Charger             Books       Apex        2    269.80
32          Gaming Mouse Sports & Outdoors    FitLife        4    126.50
33   Memory Card 128GB       Electronics   CoreTech        2    151.95
34          Car Charger          Clothing   HomeEase        1    218.74
35             Backpack Sports & Outdoors  BrightLux        5    294.80
36        Puzzle 1000pc             Books  BrightLux        1    357.76
```

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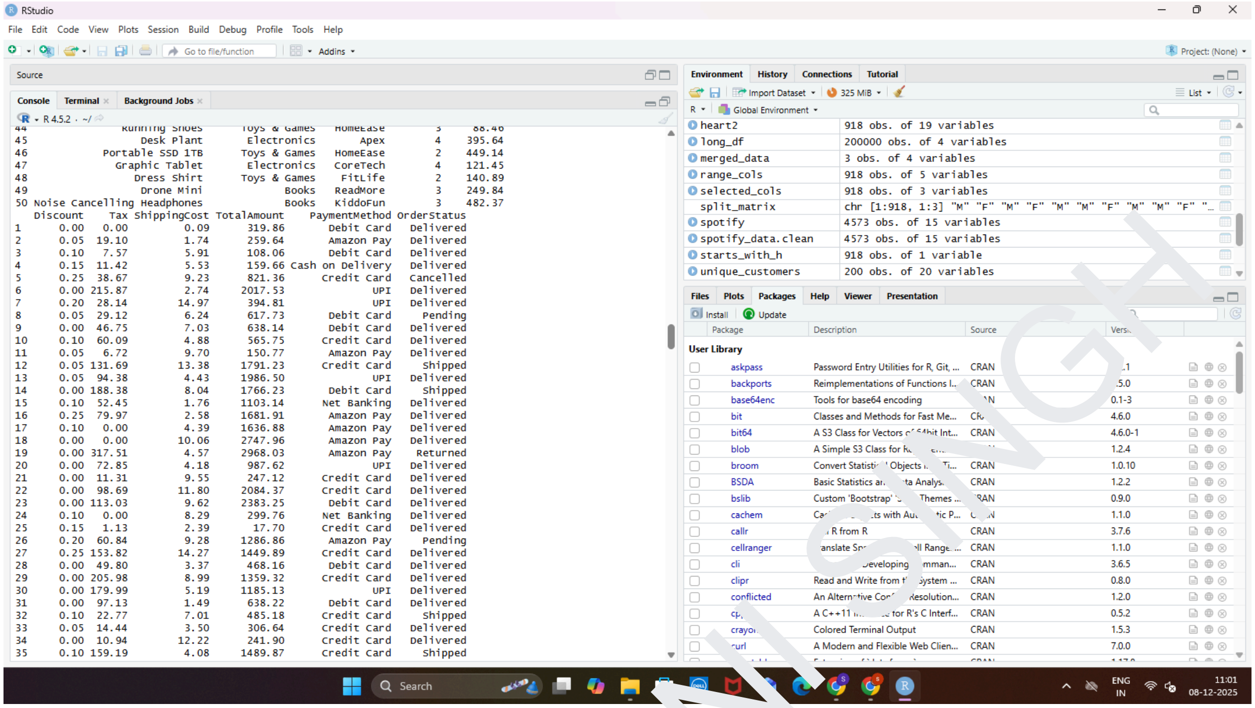

```
44                  Running Shoes     Toys & Games   HomeEase       3    88.46
45                     Desk Plant      Electronics       Apex       4   395.64
46              Portable SSD 1TB     Toys & Games   HomeEase       2   449.14
47                Graphic Tablet      Electronics   CoreTech       4   121.45
48                   Dress Shirt     Toys & Games    FitLife       2   140.89
49                    Drone Mini            Books   ReadMore       3   249.84
50 Noise Cancelling Headphones            Books   KiddoFun       3   482.37
   Discount    Tax ShippingCost TotalAmount    PaymentMethod OrderStatus
1      0.00   0.00         0.09      319.86       Debit Card   Delivered
2      0.05  19.10         1.74      259.64       Amazon Pay   Delivered
3      0.10   7.57         5.91      108.06       Debit Card   Delivered
4      0.15  11.42         5.53      159.66 Cash on Delivery   Delivered
5      0.25  38.67         9.23      821.36      Credit Card   Cancelled
6      0.00 215.87         2.74     2017.53              UPI   Delivered
7      0.20  28.14        14.97      394.81              UPI   Delivered
8      0.05  29.12         6.24      617.73       Debit Card     Pending
9      0.00  46.75         7.03      638.14       Debit Card   Delivered
10     0.10  60.09         4.88      565.75      Credit Card   Delivered
11     0.05   6.72         9.70      150.77       Amazon Pay   Delivered
12     0.05 131.69        13.38     1791.23      Credit Card     Shipped
13     0.05  94.38         4.43     1986.50              UPI   Delivered
14     0.00 188.38         8.04     1766.23       Debit Card     Shipped
15     0.10  52.45         1.76     1103.14      Net Banking   Delivered
16     0.25  79.97         2.58     1681.91       Amazon Pay   Delivered
17     0.10   0.00         4.39     1636.88       Amazon Pay   Delivered
18     0.00   0.00        10.06     2747.96       Amazon Pay   Delivered
19     0.00 317.51         4.57     2968.03       Amazon Pay    Returned
20     0.00  72.85         4.18      987.62              UPI   Delivered
21     0.00  11.31         9.55      247.12      Credit Card   Delivered
22     0.00  98.69        11.80     2084.37      Credit Card   Delivered
23     0.00 113.03         9.62     2383.25       Debit Card   Delivered
24     0.10   0.00         8.29      299.76      Net Banking   Delivered
25     0.15   1.13         2.39       17.70      Credit Card   Delivered
26     0.20  60.84         9.28     1286.86       Amazon Pay     Pending
27     0.25 153.82        14.27     1449.89      Credit Card   Delivered
28     0.00  49.80         3.37      468.16       Debit Card   Delivered
29     0.00 205.98         8.99     1359.32      Credit Card   Delivered
30     0.00 179.99         5.19     1185.13              UPI   Delivered
31     0.00  97.13         1.49      638.22       Debit Card   Delivered
32     0.10  22.77         7.01      485.18      Credit Card     Shipped
33     0.05  14.44         3.50      306.64      Credit Card   Delivered
34     0.00  10.94        12.22      241.90      Credit Card   Delivered
35     0.10 159.19         4.08     1489.87      Credit Card     Shipped
```

```
heart2               918 obs. of 19 variables
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selected_cols        918 obs. of 3 variables
split_matrix         chr [1:918, 1:3] "M" "F" "M" "F" "M" "M" "F" "M" "M" "F" "...
spotify              4573 obs. of 15 variables
spotify_data.clean   4573 obs. of 15 variables
starts_with_h        918 obs. of 1 variable
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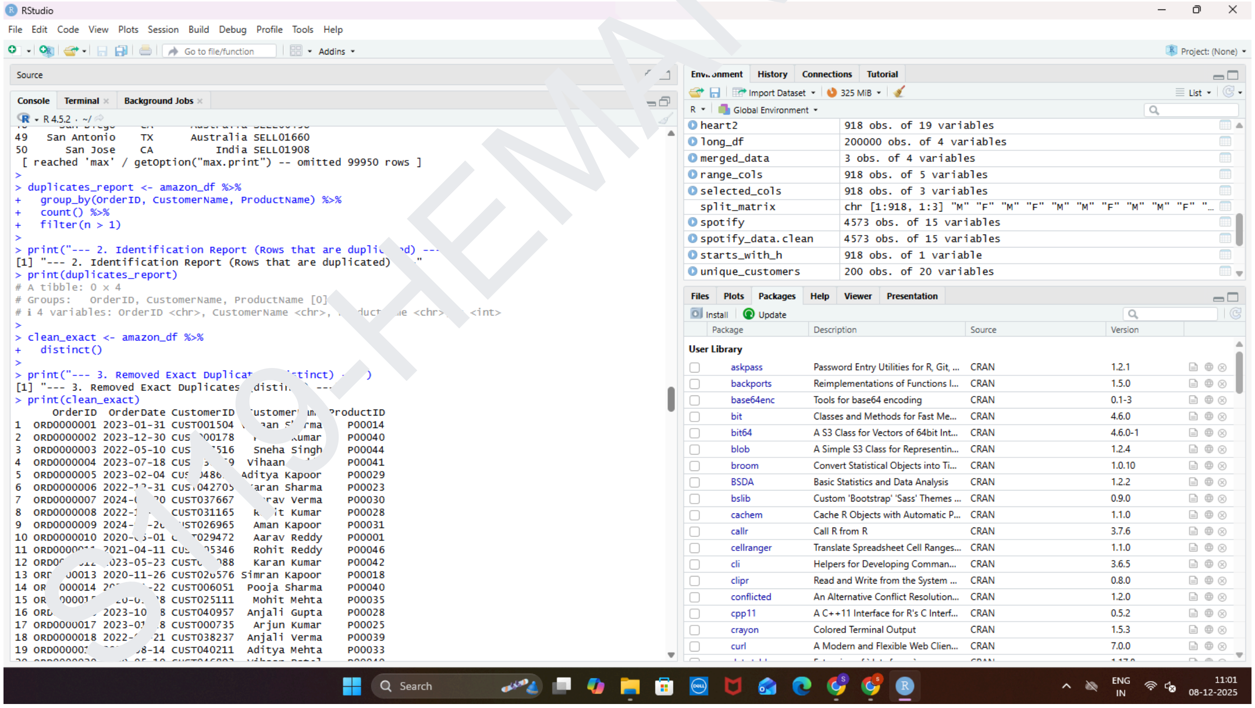

```
49   San Antonio    TX       Australia SELL01660
50      San Jose    CA           India SELL01908
 [ reached 'max' / getOption("max.print") -- omitted 99950 rows ]
>
> duplicates_report <- amazon_df %>%
+   group_by(OrderID, CustomerName, ProductName) %>%
+   count() %>%
+   filter(n > 1)
>
> print("--- 2. Identification Report (Rows that are duplicated) ---")
[1] "--- 2. Identification Report (Rows that are duplicated) ---"
> print(duplicates_report)
# A tibble: 0 × 4
# Groups:   OrderID, CustomerName, ProductName [0]
# ℹ 4 variables: OrderID <chr>, CustomerName <chr>, ProductName <chr>, n <int>
>
> clean_exact <- amazon_df %>%
+   distinct()
>
> print("--- 3. Removed Exact Duplicates (distinct) ---")
[1] "--- 3. Removed Exact Duplicates (distinct) ---"
> print(clean_exact)
      OrderID  OrderDate CustomerID  CustomerName ProductID
1  ORD0000001 2023-01-31 CUST001504 [illegible]an S[illegible]rma    P00014
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4  ORD0000004 2023-07-18 CUS[illegible]9  Vihaan [illegible]    P00041
5  ORD0000005 2023-02-04 CUS[illegible]486[illegible] Aditya Kapoor    P00029
6  ORD0000006 2022-1[illegible]-31 CUS[illegible]042705 [illegible]aran Sharma    P00023
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10 ORD0000010 2020-[illegible]-01 C[illegible]T029472   Aarav Reddy    P00001
11 ORD0000[illegible] 2021-04-11 CUS[illegible]05346   Rohit Reddy    P00046
12 ORD0[illegible] [illegible]023-05-23 CUST[illegible]088   Karan Kumar    P00042
13 ORD[illegible]00013 2020-11-26 CUST020576 Simran Kapoor    P00018
14 OR[illegible]000014 20[illegible]-22 CUST006051  Pooja Sharma    P00040
15 OR[illegible]00001[illegible] [illegible]20-0[illegible]8 CUST025111   Mohit Mehta    P00035
16 ORD[illegible] 2023-10[illegible]8 CUST040957  Anjali Gupta    P00028
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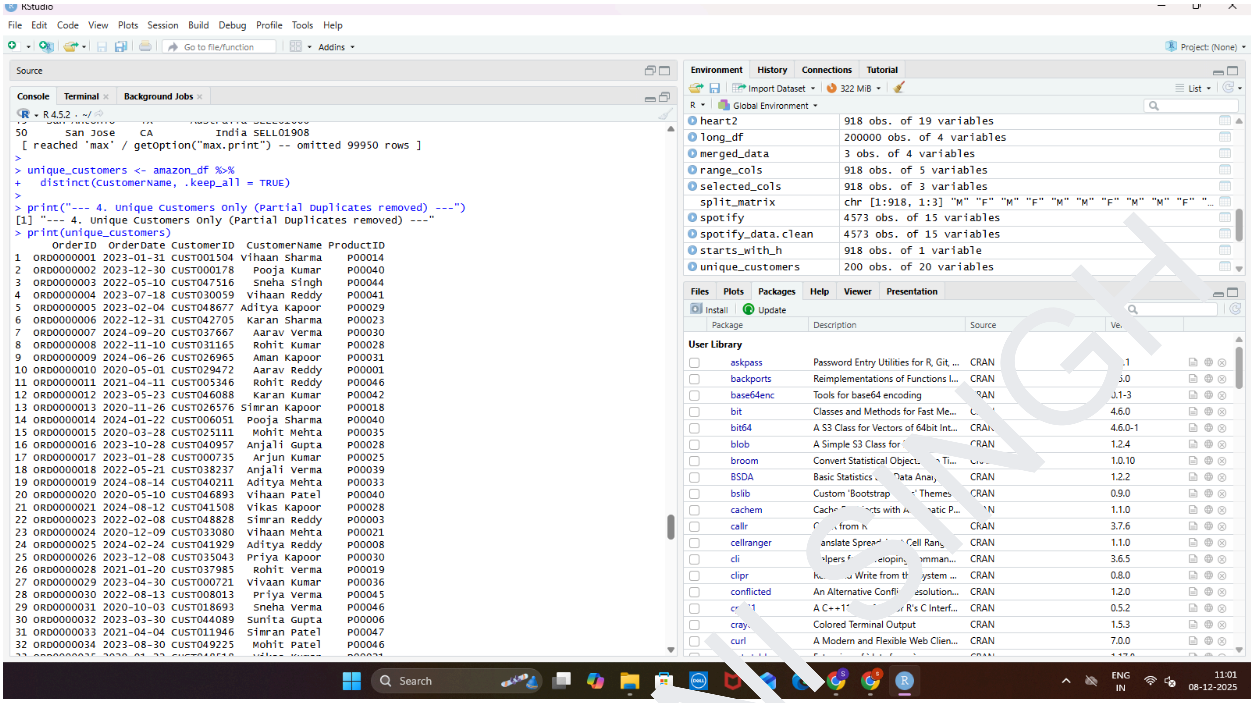

RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
Project: (None)
Source
Console Terminal Background Jobs
R 4.5.2 · ~/
Environment History Connections Tutorial
Import Dataset
322 MiB
List
Global Environment
Files Plots Packages Help Viewer Presentation
Install Update
Search
ENG IN
11:01
08-12-2025

```
50       San Jose    CA          India SELL01908
 [ reached 'max' / getOption("max.print") -- omitted 99950 rows ]
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> unique_customers <- amazon_df %>%
+   distinct(CustomerName, .keep_all = TRUE)
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16 ORD0000016 2023-10-28 CUST040957  Anjali Gupta    P00028
17 ORD0000017 2023-01-28 CUST000735   Arjun Kumar    P00025
18 ORD0000018 2022-05-21 CUST038237  Anjali Verma    P00039
19 ORD0000019 2024-08-14 CUST040211  Aditya Mehta    P00033
20 ORD0000020 2020-05-10 CUST046893  Vihaan Patel    P00040
21 ORD0000021 2024-08-12 CUST041508  Vikas Kapoor    P00028
22 ORD0000023 2022-02-08 CUST048828  Simran Reddy    P00003
23 ORD0000024 2020-12-09 CUST033080  Vihaan Mehta    P00021
24 ORD0000025 2024-02-24 CUST041929  Aditya Reddy    P00008
25 ORD0000026 2023-12-08 CUST035043  Priya Kapoor    P00030
26 ORD0000028 2021-01-20 CUST037985   Rohit Verma    P00019
27 ORD0000029 2023-04-30 CUST000721  Vivaan Kumar    P00036
28 ORD0000030 2022-08-13 CUST008013   Priya Verma    P00045
29 ORD0000031 2020-10-03 CUST018693   Sneha Verma    P00046
30 ORD0000032 2023-03-30 CUST044089  Sunita Gupta    P00006
31 ORD0000033 2021-04-04 CUST011946  Simran Patel    P00047
32 ORD0000034 2023-08-30 CUST049225   Mohit Patel    P00046
```
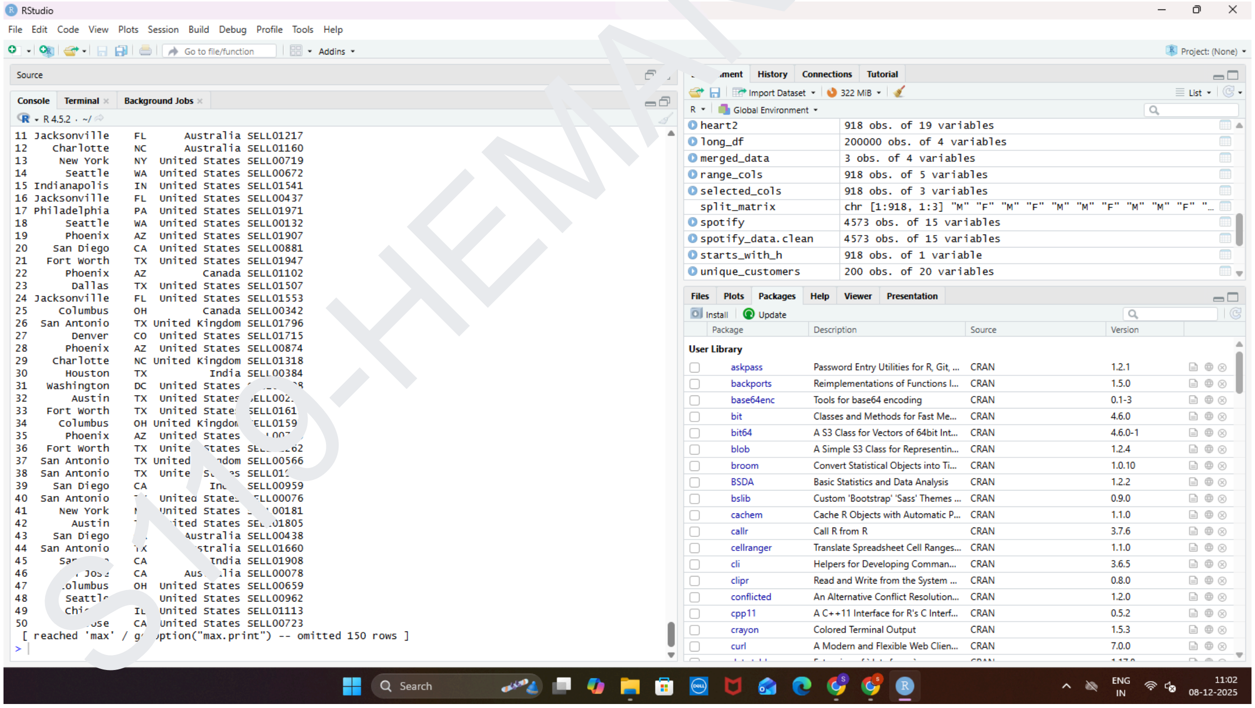

|  |  |
|---|---|
| heart2 | 918 obs. of 19 variables |
| long_df | 200000 obs. of 4 variables |
| merged_data | 3 obs. of 4 variables |
| range_cols | 918 obs. of 5 variables |
| selected_cols | 918 obs. of 3 variables |
| split_matrix | chr [1:918, 1:3] "M" "F" "M" "F" "M" "M" "F" "M" "M" "F" "… |
| spotify | 4573 obs. of 15 variables |
| spotify_data.clean | 4573 obs. of 15 variables |
| starts_with_h | 918 obs. of 1 variable |
| unique_customers | 200 obs. of 20 variables |

User Library

|  | Package | Description | Source | Version |
|---|---|---|---|---|
| □ | askpass | Password Entry Utilities for R, Git, ... | CRAN | 1.2.1 |
| □ | backports | Reimplementations of Functions I... | CRAN | 1.5.0 |
| □ | base64enc | Tools for base64 encoding | CRAN | 0.1-3 |
| □ | bit | Classes and Methods for Fast Me... | CRAN | 4.6.0 |
| □ | bit64 | A S3 Class for Vectors of 64bit Int... | CRAN | 4.6.0-1 |
| □ | blob | A Simple S3 Class for Representin... | CRAN | 1.2.4 |
| □ | broom | Convert Statistical Objects into Ti... | CRAN | 1.0.10 |
| □ | BSDA | Basic Statistics and Data Analysis | CRAN | 1.2.2 |
| □ | bslib | Custom 'Bootstrap' 'Sass' Themes ... | CRAN | 0.9.0 |
| □ | cachem | Cache R Objects with Automatic P... | CRAN | 1.1.0 |
| □ | callr | Call R from R | CRAN | 3.7.6 |
| □ | cellranger | Translate Spreadsheet Cell Ranges... | CRAN | 1.1.0 |
| □ | cli | Helpers for Developing Comman... | CRAN | 3.6.5 |
| □ | clipr | Read and Write from the System ... | CRAN | 0.8.0 |
| □ | conflicted | An Alternative Conflict Resolution... | CRAN | 1.2.0 |
| □ | cpp11 | A C++11 Interface for R's C Interf... | CRAN | 0.5.2 |
| □ | crayon | Colored Terminal Output | CRAN | 1.5.3 |
| □ | curl | A Modern and Flexible Web Clien... | CRAN | 7.0.0 |



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 4.5.2 · ~/
Environment History Connections Tutorial
Import Dataset
322 MiB
List
Global Environment
Files Plots Packages Help Viewer Presentation
Install Update
Search
ENG IN
11:02
08-12-2025

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11 Jacksonville    FL      Australia SELL01217
12    Charlotte    NC      Australia SELL01160
13     New York    NY  United States SELL00719
14      Seattle    WA  United States SELL00672
15 Indianapolis    IN  United States SELL01541
16 Jacksonville    FL  United States SELL00437
17 Philadelphia    PA  United States SELL01971
18      Seattle    WA  United States SELL00132
19      Phoenix    AZ  United States SELL01907
20    San Diego    CA  United States SELL00881
21   Fort Worth    TX  United States SELL01947
22      Phoenix    AZ         Canada SELL01102
23       Dallas    TX  United States SELL01507
24 Jacksonville    FL  United States SELL01553
25     Columbus    OH         Canada SELL00342
26  San Antonio    TX United Kingdom SELL01796
27       Denver    CO  United States SELL01715
28      Phoenix    AZ  United States SELL00874
29    Charlotte    NC United Kingdom SELL01318
30      Houston    TX          India SELL00384
31   Washington    DC  United States [illegible]
32       Austin    TX  United States SELL002[illegible]
33   Fort Worth    TX  United States SELL0161[illegible]
34     Columbus    OH United Kingdom SELL0159[illegible]
35      Phoenix    AZ  United States [illegible]
36   Fort Worth    TX  United States [illegible]62
37  San Antonio    TX United Kingdom SELL00566
38  San Antonio    TX  United States SELL01[illegible]
39    San Diego    CA          India SELL00959
40  San Antonio    TX  United States SELL00076
41     New York    NY  United States [illegible]00181
42       Austin    TX  United States SELL01805
43    San Diego    [illegible]      Australia SELL00438
44  San Antonio    TX      Australia SELL01660
45     San Jose    CA          India SELL01908
46     San Jose    CA      Australia SELL00078
47     Columbus    OH  United States SELL00659
48      Seattle    [illegible]  United States SELL00962
49      Chicago    IL  United States SELL01113
50     San Jose    CA  United States SELL00723
 [ reached 'max' / getOption("max.print") -- omitted 150 rows ]
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**NAME:HEMANI SINGH**
**ROLL NO:S119**