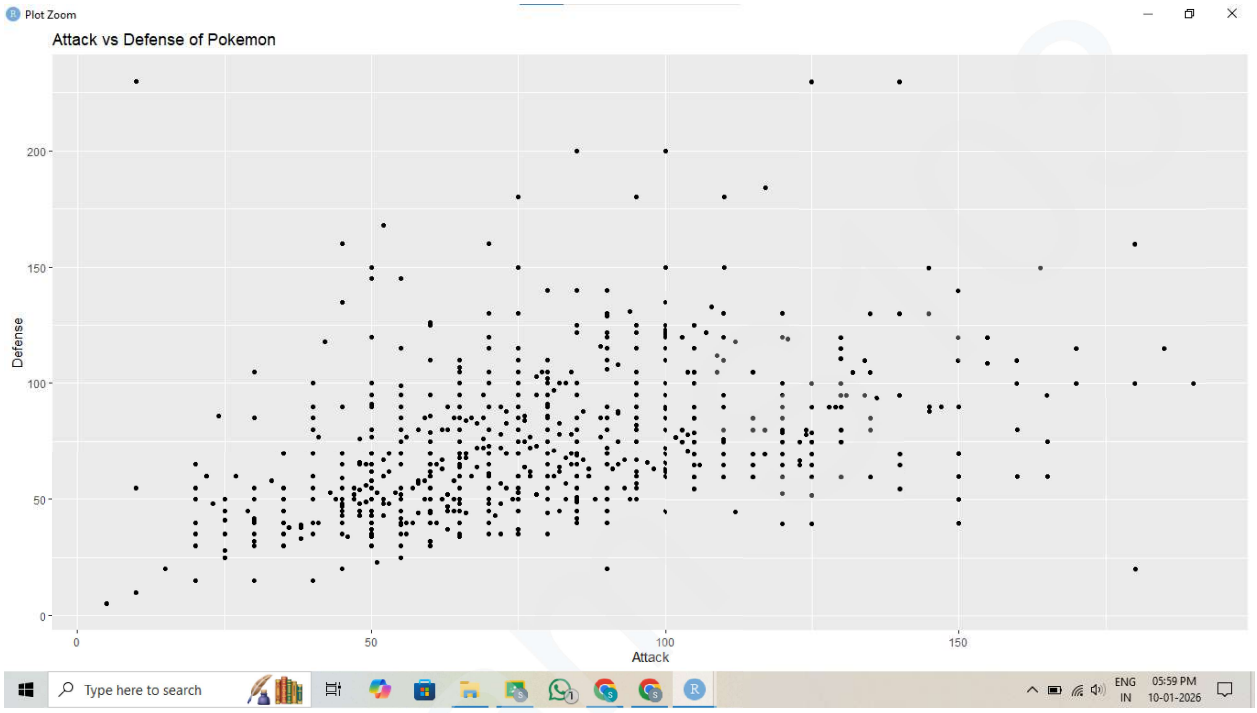
SHETH L.U.J. AND SIR M.V. COLLEGE
SUBJECT:Data Analysis with R

Aim: 10 Creating graphical reports using ,ggplot2 (R).
11 Generating histograms and box plots using ggplot2 (R).
12 Generating correlation matrices using cor() (R).

10th Output :

Scatter plot



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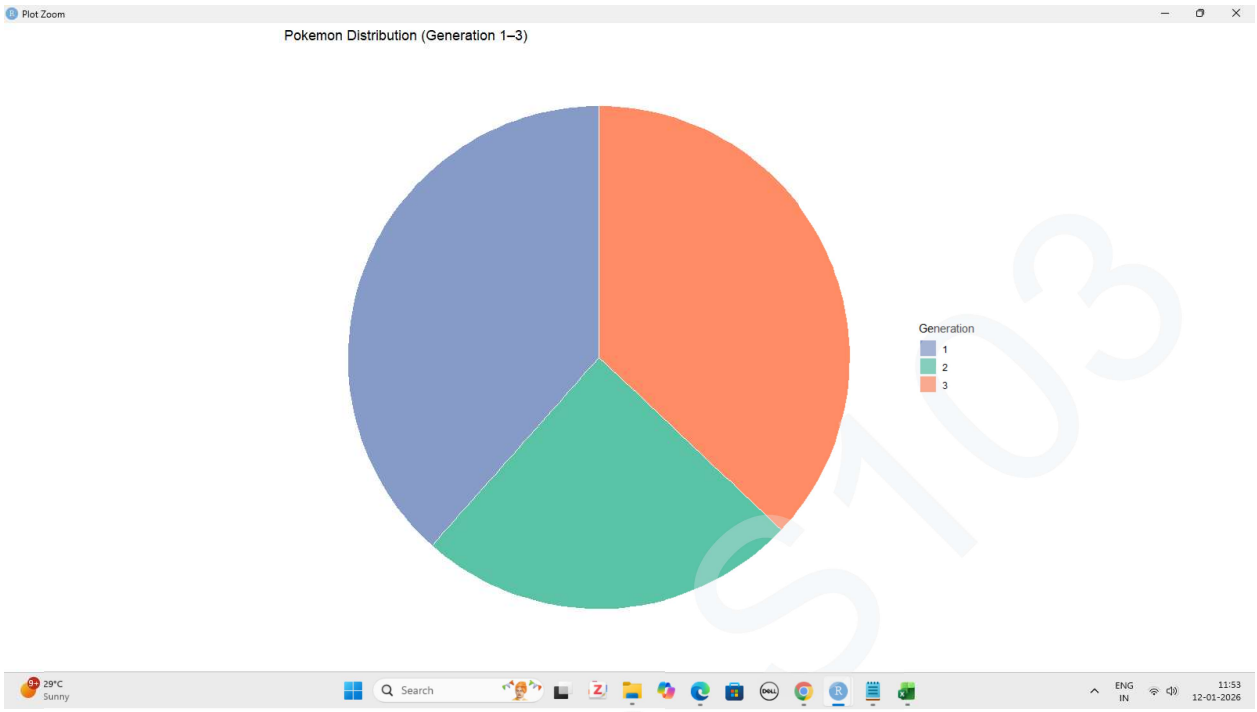
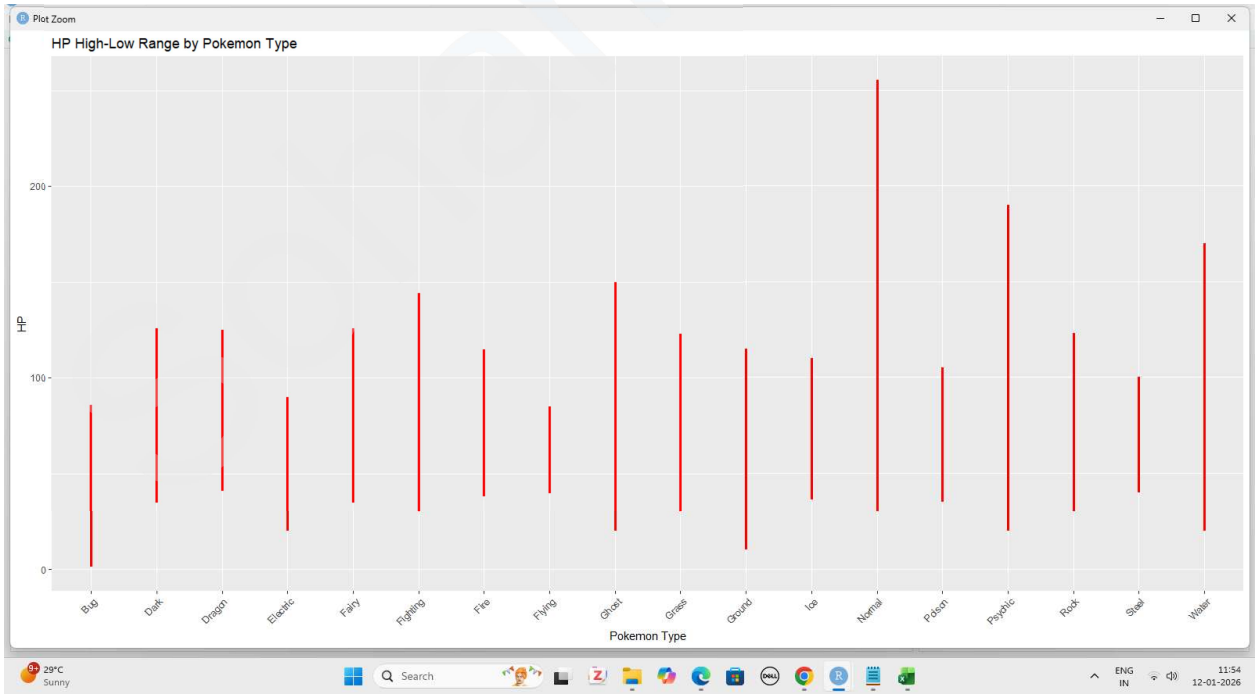
Pie Charts



High-Low Charts



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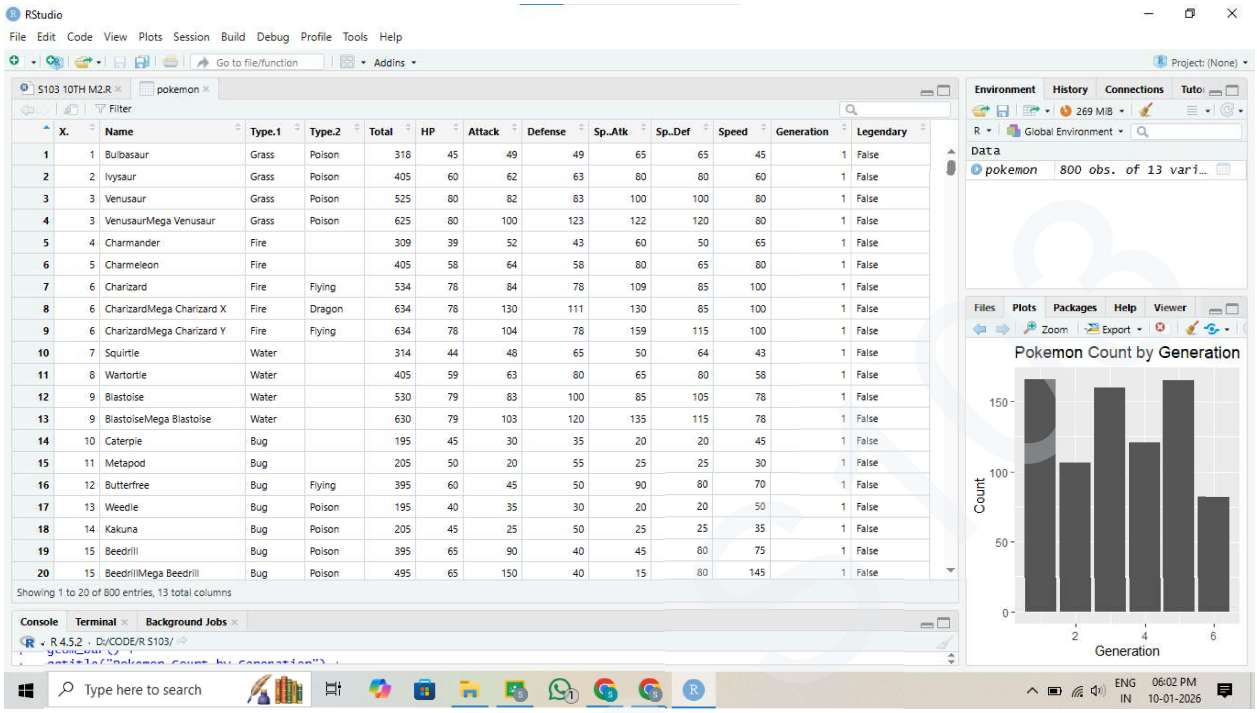
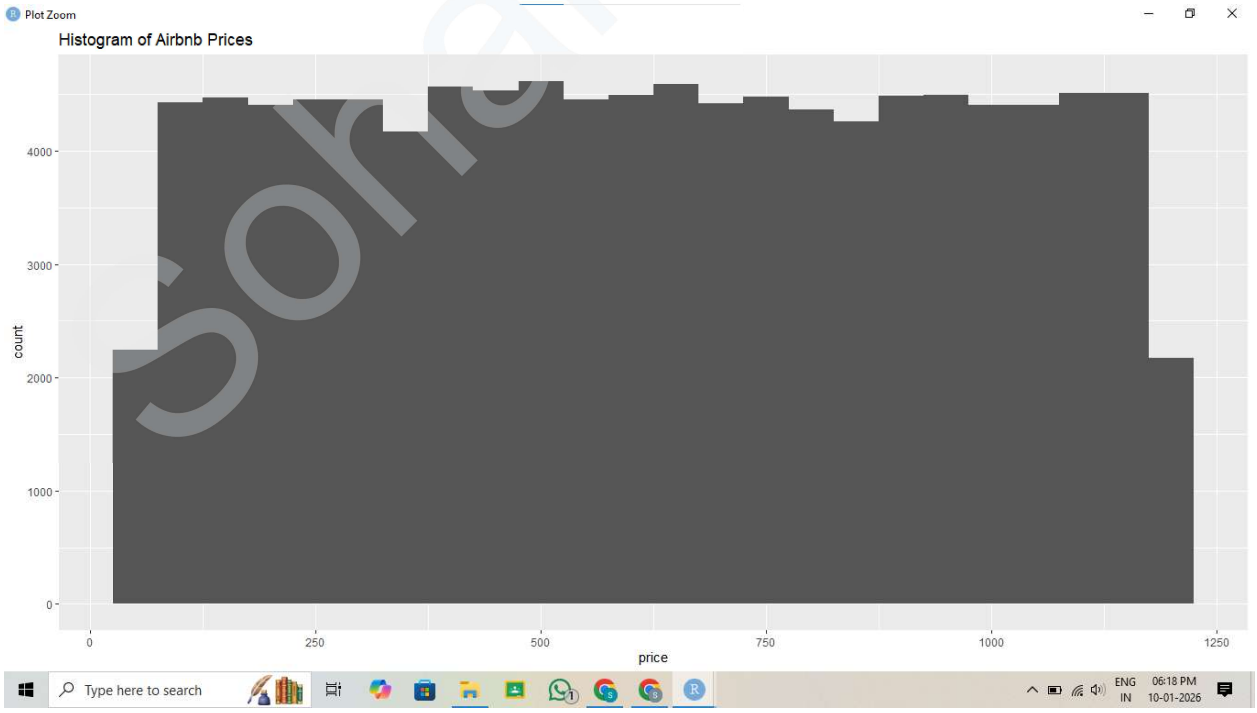
Dataset



	X.	Name	Type.1	Type.2	Total	HP	Attack	Defense	Sp..Atk	Sp..Def	Speed	Generation	Legendary
1	1	Bulbasaur	Grass	Poison	318	45	49	49	65	65	45	1	False
2	2	Ivysaur	Grass	Poison	405	60	62	63	80	80	60	1	False
3	3	Venusaur	Grass	Poison	525	80	82	83	100	100	80	1	False
4	3	VenusaurMega Venusaur	Grass	Poison	625	80	100	123	122	120	80	1	False
5	4	Charmander	Fire		309	39	52	43	60	50	65	1	False
6	5	Charmeleon	Fire		405	58	64	58	80	65	80	1	False
7	6	Charizard	Fire	Flying	534	78	84	78	109	85	100	1	False
8	6	CharizardMega Charizard X	Fire	Dragon	634	78	130	111	130	85	100	1	False
9	6	CharizardMega Charizard Y	Fire	Flying	634	78	104	78	159	115	100	1	False
10	7	Squirtle	Water		314	44	48	65	50	64	43	1	False
11	8	Wartortle	Water		405	59	63	80	65	80	58	1	False
12	9	Blastoise	Water		530	79	83	100	85	105	78	1	False
13	9	BlastoiseMega Blastoise	Water		630	79	103	120	135	115	78	1	False
14	10	Caterpie	Bug		195	45	30	35	20	20	45	1	False
15	11	Metapod	Bug		205	50	20	55	25	25	30	1	False
16	12	Butterfree	Bug	Flying	395	60	45	50	90	80	70	1	False
17	13	Weedle	Bug	Poison	195	40	35	30	20	20	50	1	False
18	14	Kakuna	Bug	Poison	205	45	25	50	25	25	35	1	False
19	15	Beedrill	Bug	Poison	395	65	90	40	45	80	75	1	False
20	15	BeedrillMega Beedrill	Bug	Poison	495	65	150	40	15	80	145	1	False

11TH OUTPUT:

Histogram



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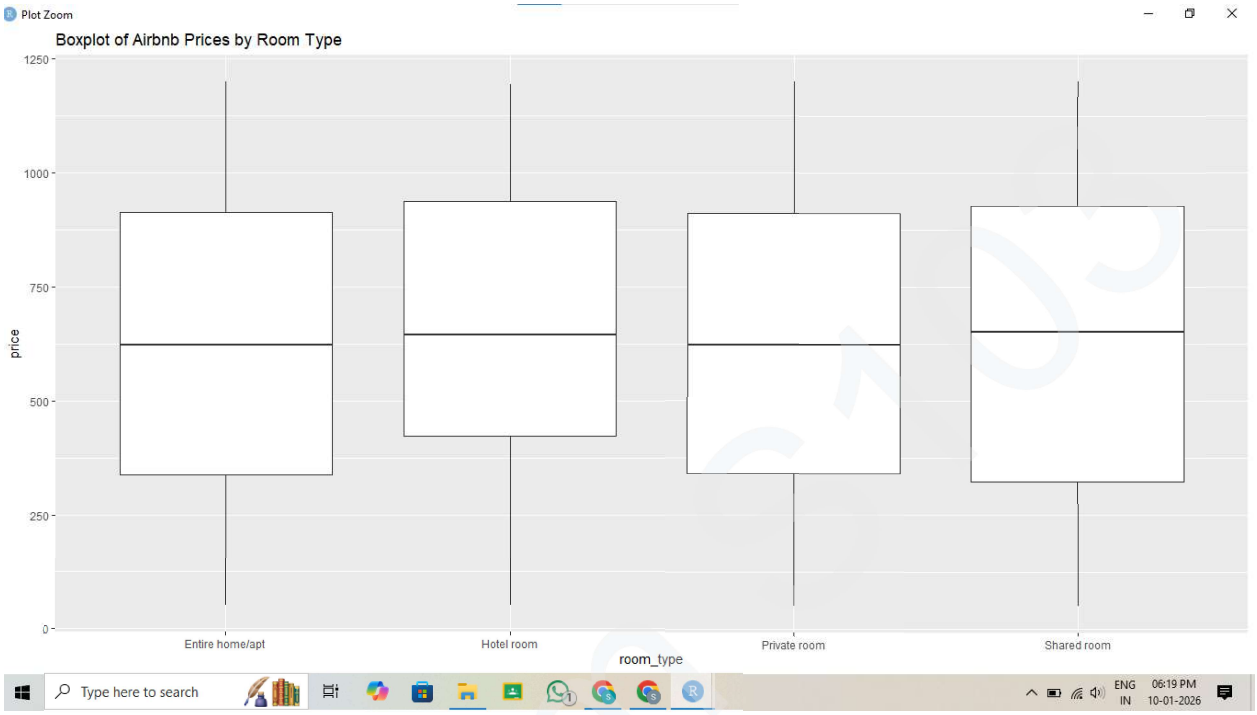
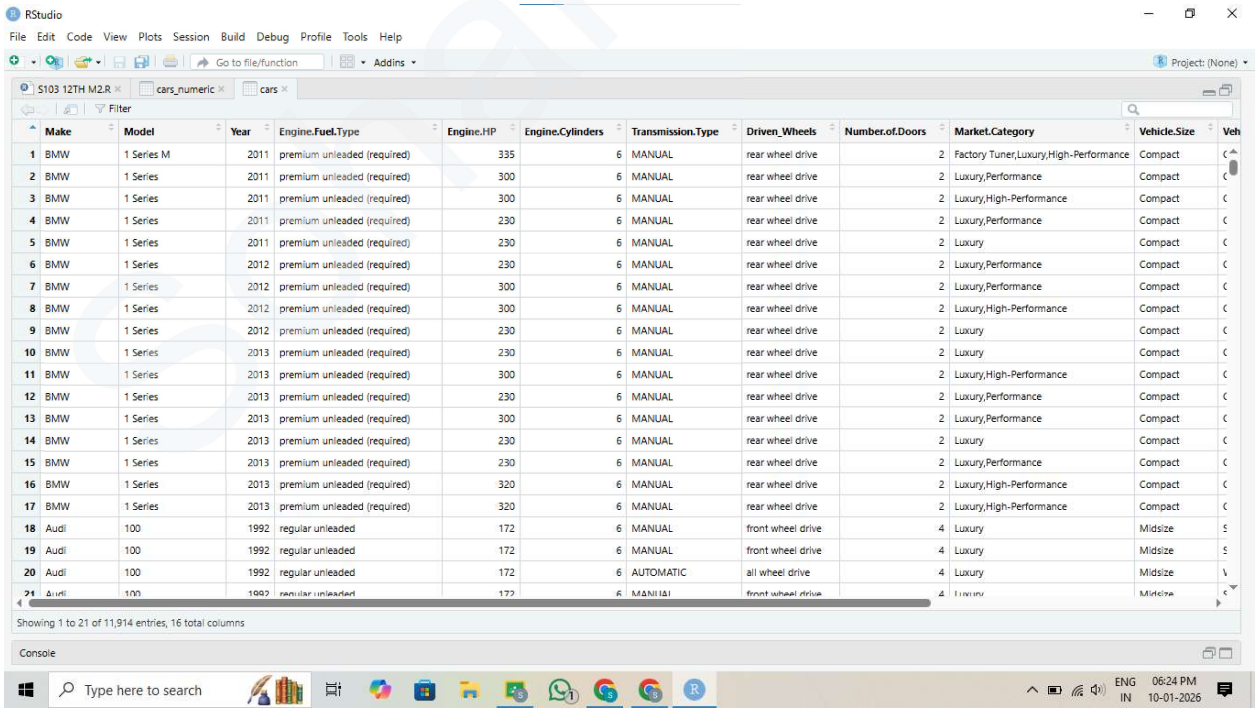
Boxplot



12th output:Dataset



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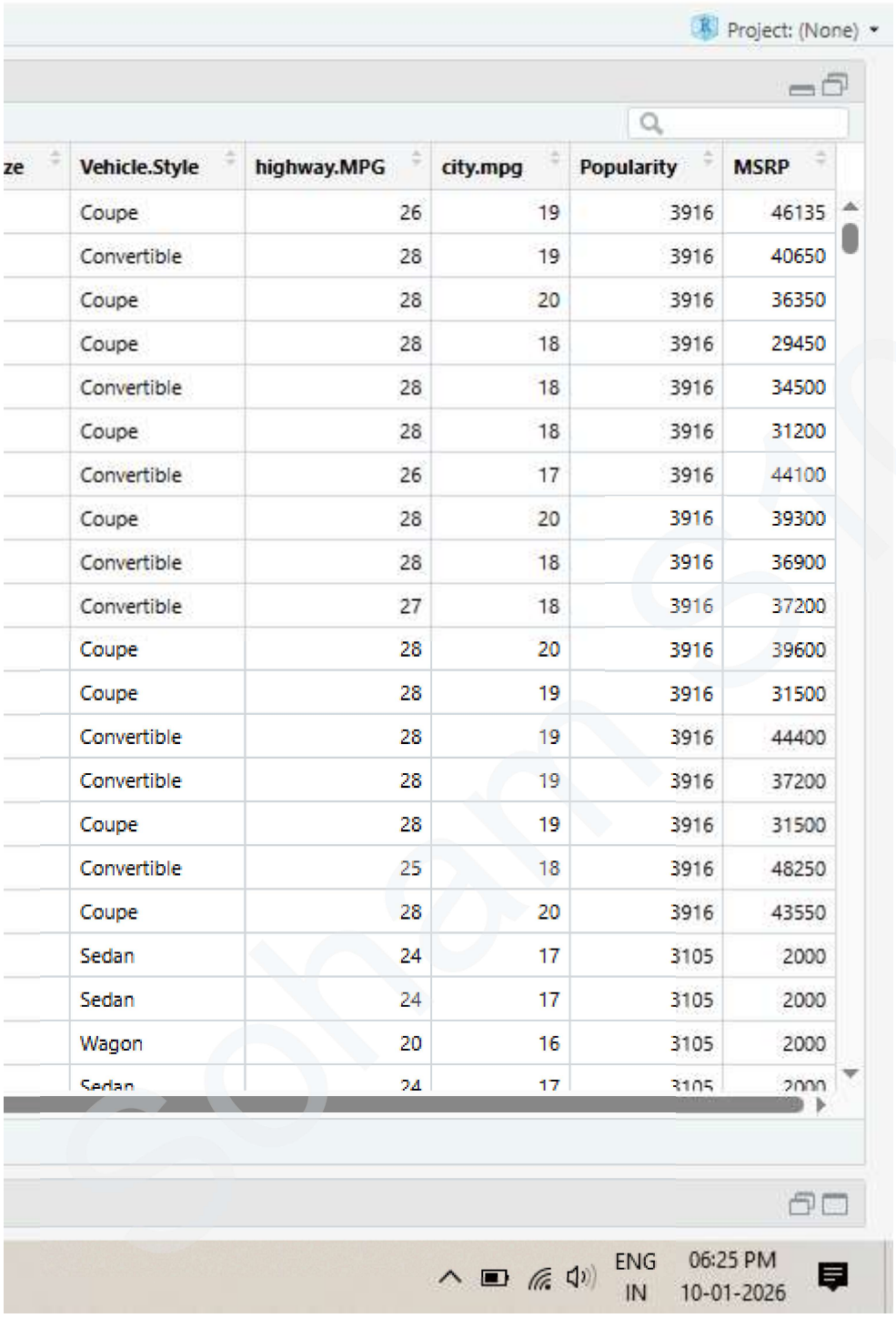

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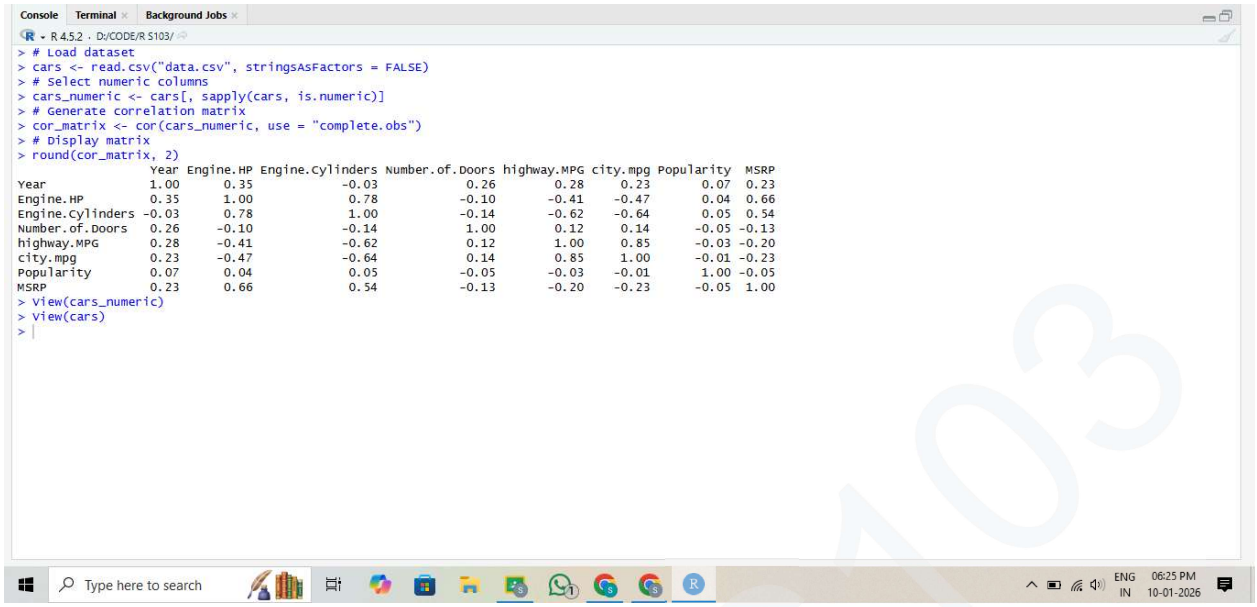

```
Console   Terminal ×   Background Jobs ×
R 4.5.2 · D:/CODE/R S103/
> # Load dataset
> cars <- read.csv("data.csv", stringsAsFactors = FALSE)
> # Select numeric columns
> cars_numeric <- cars[, sapply(cars, is.numeric)]
> # Generate correlation matrix
> cor_matrix <- cor(cars_numeric, use = "complete.obs")
> # Display matrix
> round(cor_matrix, 2)
                   Year Engine.HP Engine.Cylinders Number.of.Doors highway.MPG city.mpg Popularity  MSRP
Year               1.00      0.35            -0.03            0.26        0.28     0.23       0.07  0.23
Engine.HP          0.35      1.00             0.78           -0.10       -0.41    -0.47       0.04  0.66
Engine.Cylinders -0.03       0.78             1.00           -0.14       -0.62    -0.64       0.05  0.54
Number.of.Doors    0.26     -0.10            -0.14            1.00        0.12     0.14      -0.05 -0.13
highway.MPG        0.28     -0.41            -0.62            0.12        1.00     0.85      -0.03 -0.20
city.mpg           0.23     -0.47            -0.64            0.14        0.85     1.00      -0.01 -0.23
Popularity         0.07      0.04             0.05           -0.05       -0.03    -0.01       1.00 -0.05
MSRP               0.23      0.66             0.54           -0.13       -0.20    -0.23      -0.05  1.00
> view(cars_numeric)
> view(cars)
>
```


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