`ADVANCE DATA VISUALIZATION(EXP 4)
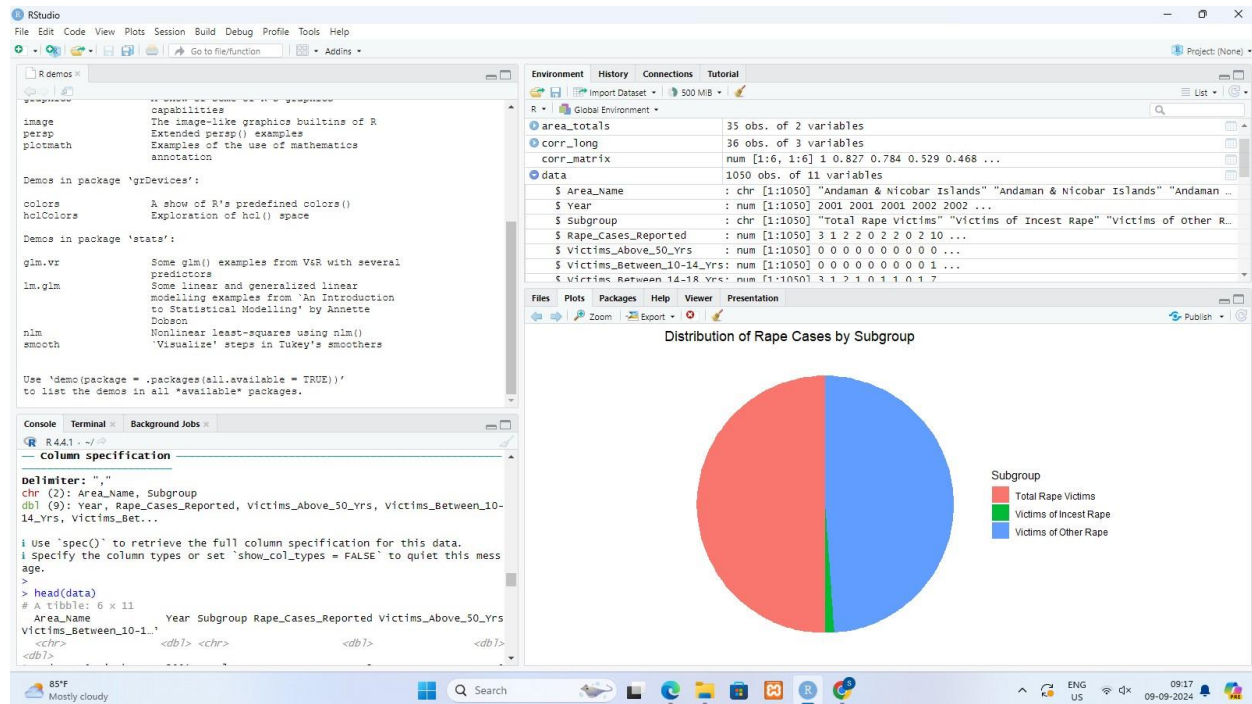
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AIM: Create Basic charts using PowerBi/Tableau/R/Python/D3.js on dataset CrimePolice/law and order

DATA: The dataset comprises information on **rape cases reported across various regions, with data organized by area, year, and specific subgroups of victims**. It includes detailed breakdowns of the victims' ages, allowing for analysis across different demographics. The dataset contains 11 columns and 1059 rows, and the columns capture the total number of rape cases, as well as the number of victims in specific age categories, ranging from those under 10 years to those over 50 years. Additionally, the dataset categorizes cases into subgroups, such as total rape victims and victims of incest rape, offering a comprehensive view of reported cases across regions and time periods.
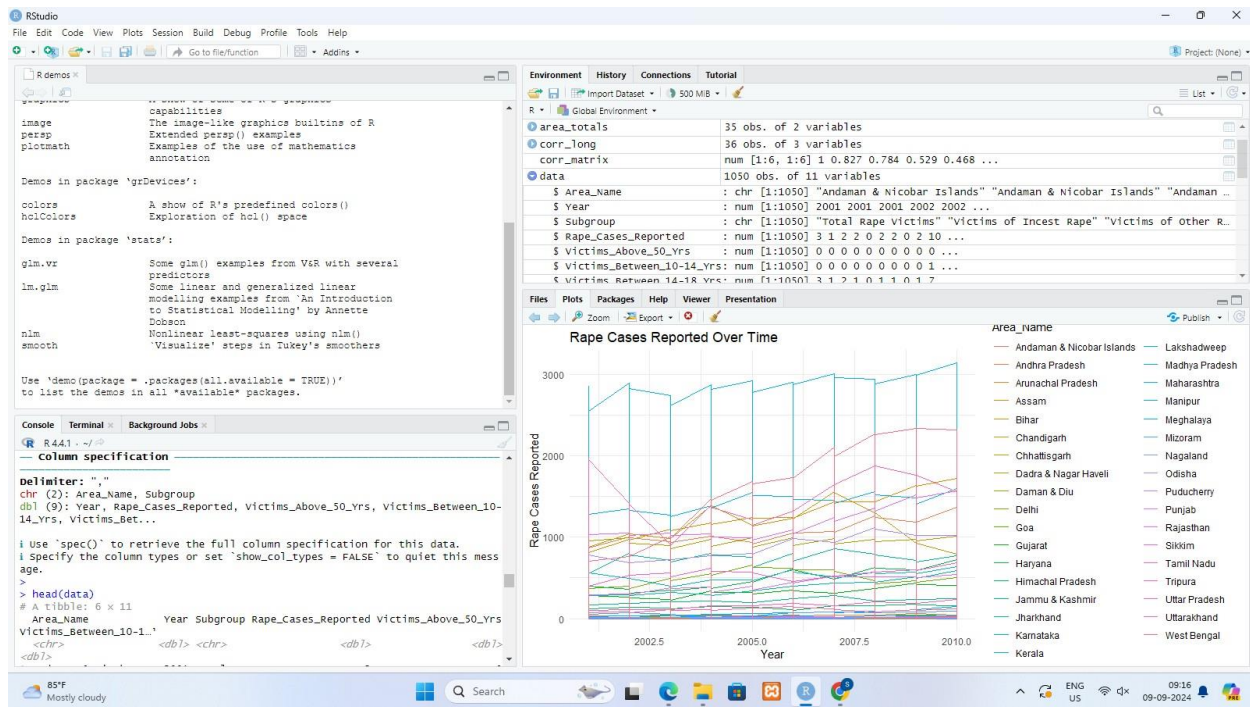
CHARTS AND OBSERVATIONS:

1) DISTRIBUTION OF RAPE CASES BY SUBGROUP

OBSERVATIONS:
- Total rape victims significantly outnumber incest rape victims
- Incest rape cases make up a small proportion of total reported cases
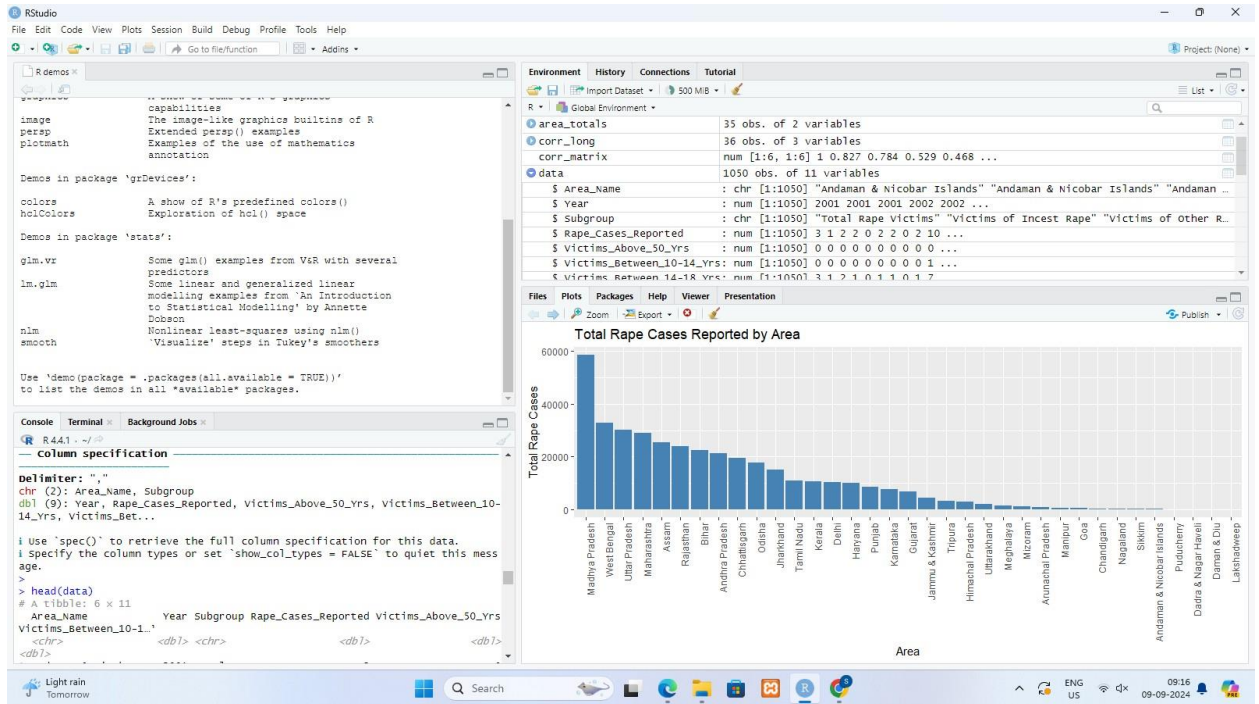- The disparity between total and incest cases is consistent across the dataset

2) RAPE CASES RECORDED OVER TIME:

OBSERVATIONS:

- There's an overall increasing trend in reported rape cases over the years
- Some years show sharp increases compared to previous years
- Recent years appear to have higher numbers of reported cases than earlier years
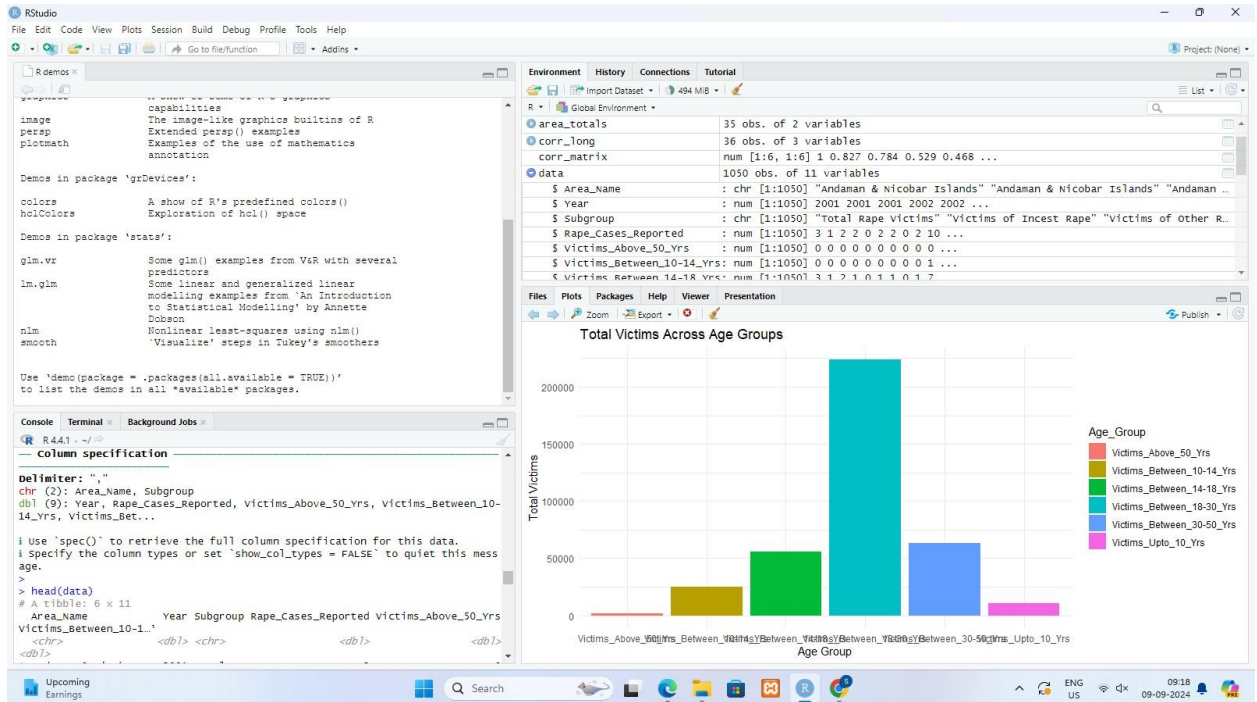
3) RAPE CASES REPORTED BY AREA

OBSERVATIONS:

- Certain areas report significantly more cases than others
- There's a wide disparity in reported cases across different regions
- A few areas stand out with notably high numbers of reported cases like MADHYA PRADESH
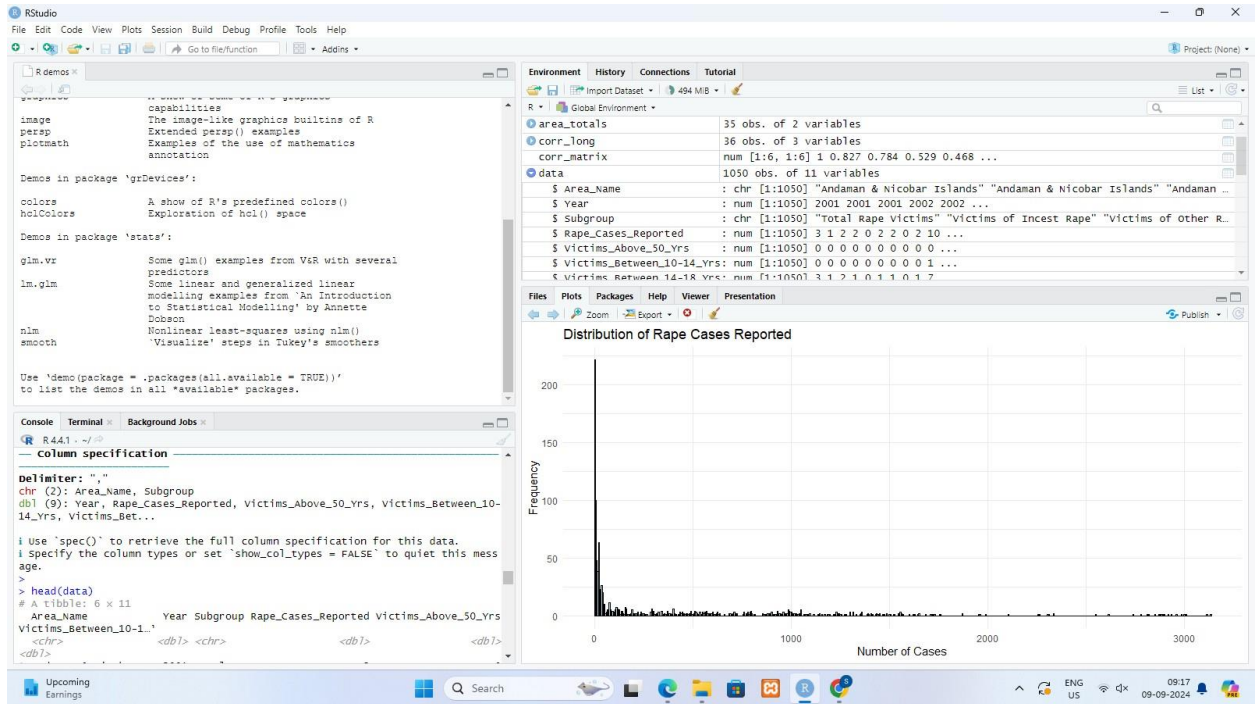
4) TOTAL VICTIMS ACROSS AGE GROUP:

OBSERVATIONS:

- The 18-30 years age group has the highest number of victims
- There's a significant number of victims in the under-18 age groups
- The number of victims tends to decrease in older age groups (above 30)
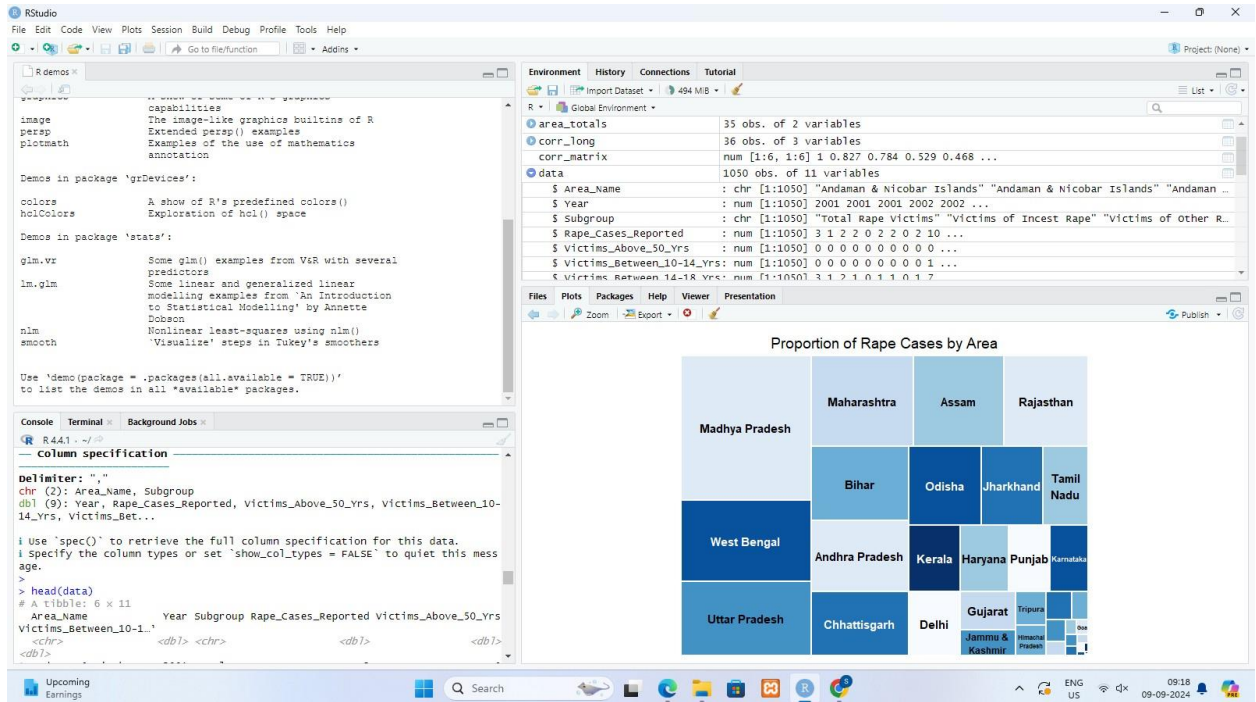
5) DISTIRBUTION OF RAPE CASES REPORTED

OBSERVATIONS:

- There's a wide range in the number of reported cases across different entries
- Some entries show extremely high numbers compared to the average
- Many entries cluster around lower numbers, with fewer high-value outliers

6) PROPORTION OF RAPE CASES BY AREA

OBSERVATIONS:
- A few areas account for a large proportion of total reported cases
- Madhya Pradesh ,West Bengal, Maharashtra also show significant proportions, each appearing to account for around 15-20% of cases
- Many smaller slices in the tree map indicate that numerous areas contribute smaller proportions to the total
- Some areas, represented by very thin slices, contribute minimally to the overall number of reported cases