

2) Perform 5 data visualization tasks on the student performance dataset given in the link below (create 5 different visualizations). Explain what kind analysis has become easier with each of the visualizations.

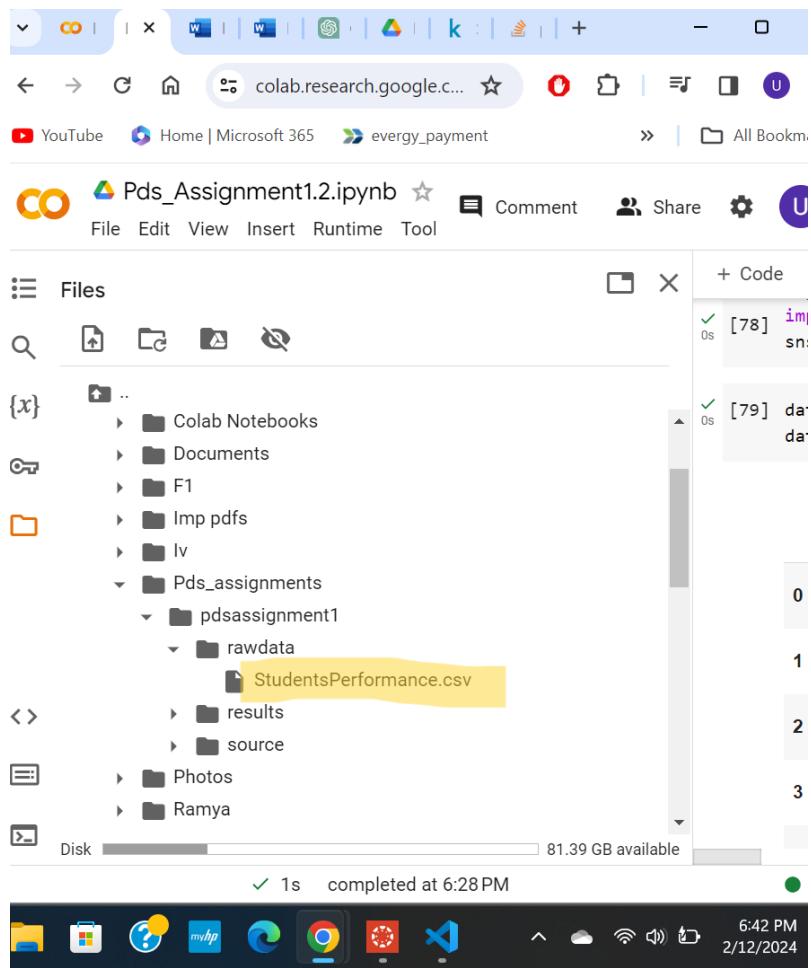
Create the folder structure for this question like question 1. (15 points)

Step 1: Collection of input data from csv file provided.

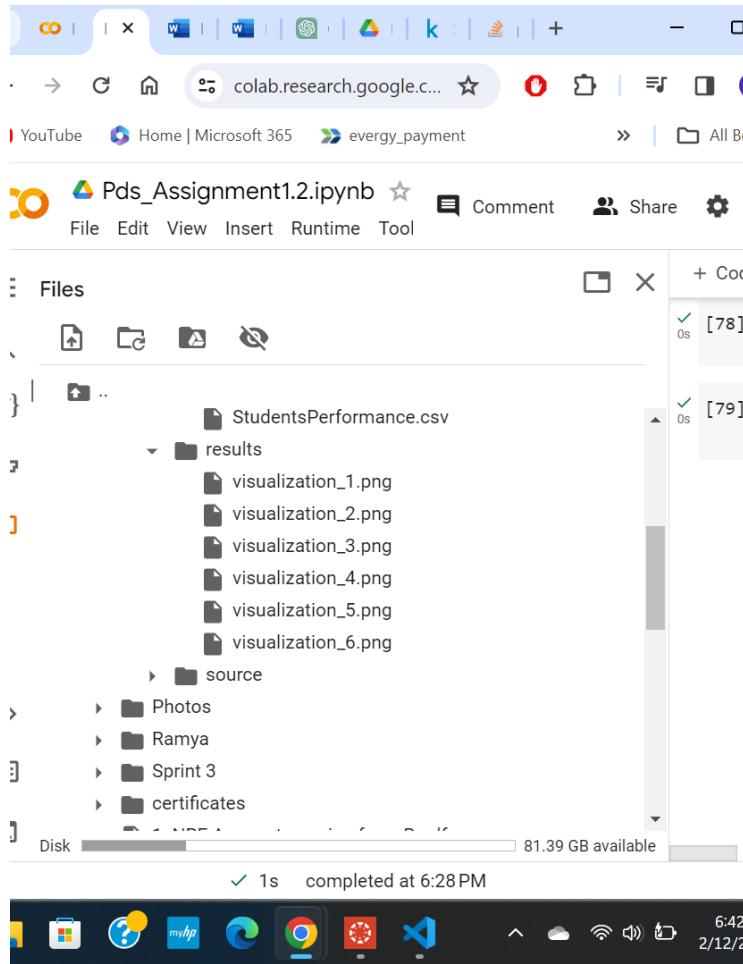
The screenshot shows a Google Colab notebook titled "Pds_Assignment1.2.ipynb". The code cell at the top imports os and google.colab.drive, then mounts the content drive. The next cell changes the current directory to "/content/drive/MyDrive/Pds_assignments/pdassignment1" and gets the current working directory. The third cell reads a CSV file named "StudentsPerformance.csv" into a pandas DataFrame and displays its head. The final cell prints the DataFrame's information. The output shows the first five rows of the CSV data:

	gender	race/ethnicity	parental level of education	lunch	test preparation course	math score	reading score	writing score
0	female	group B	bachelor's degree	standard	none	72	72	74
1	female	group C	some college	standard	completed	69	90	88
2	female	group B	master's degree	standard	none	90	95	93
3	male	group A	associate's degree	free/reduced	none	47	57	44
4	male	group C	some college	standard	none	76	78	75

Above step indicates the utilization of pandas library to load studentperformance.csv file into python

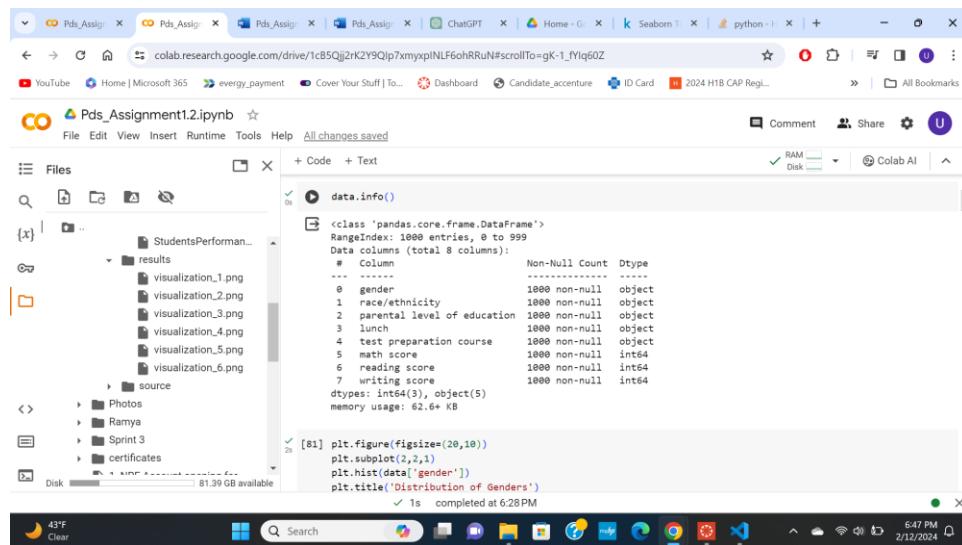


The above picture indicates the file structure of the folder created.

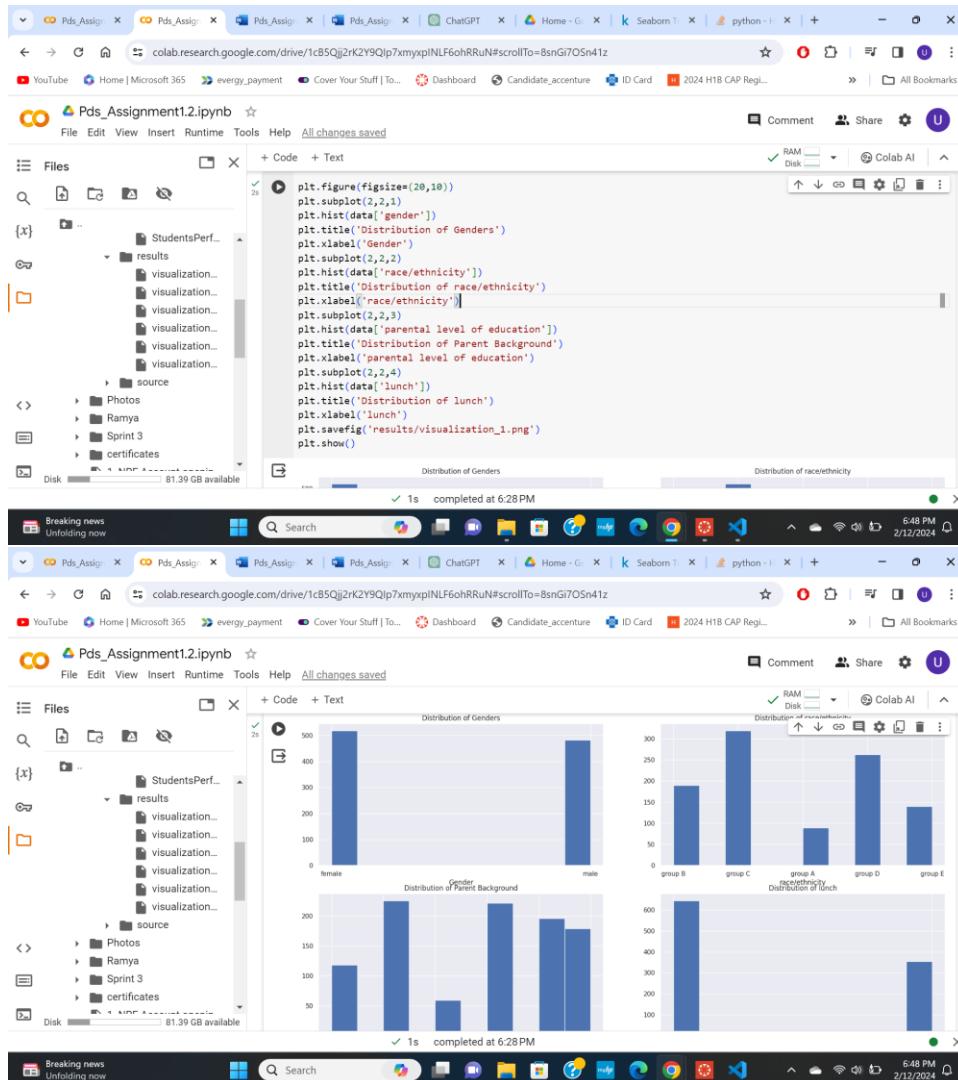


This is the file structure indicates the final folder structure with all data visualization images obtained.

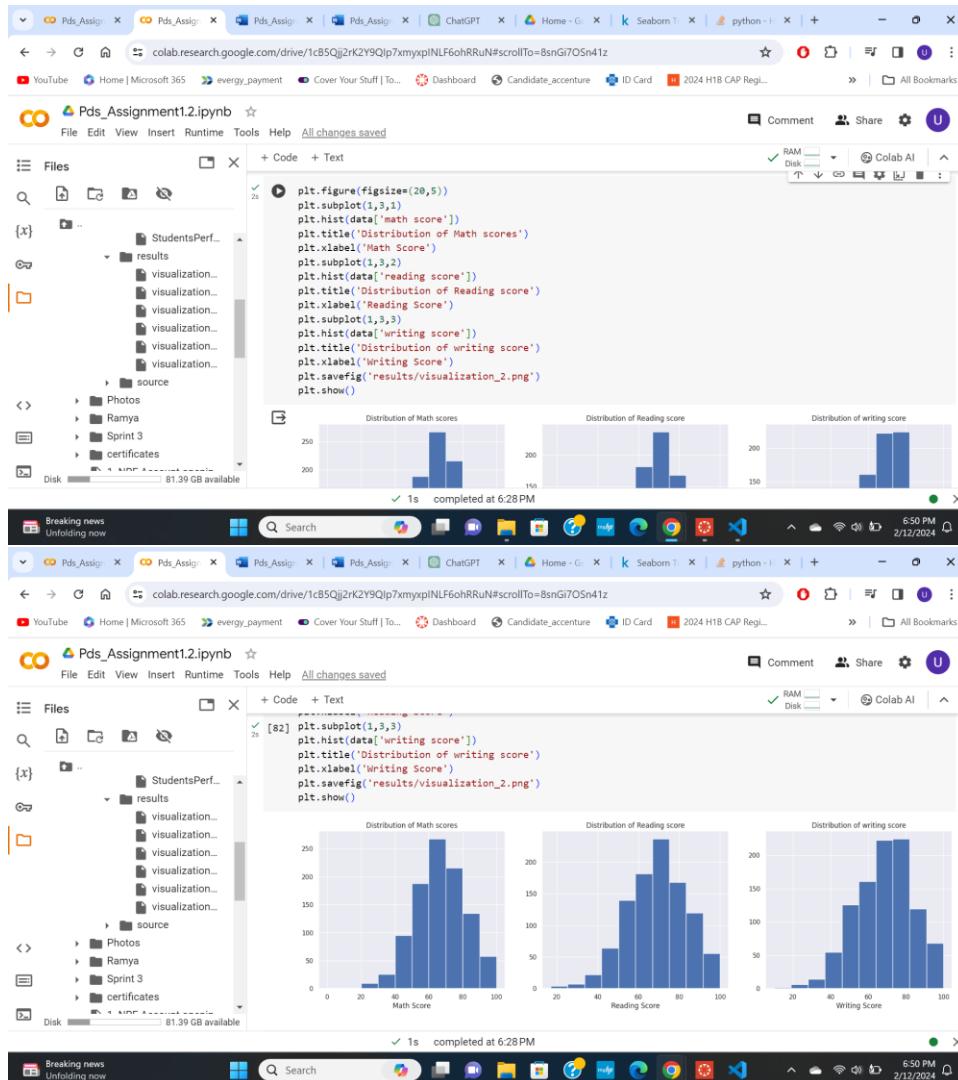
Step 2: Processing of the data



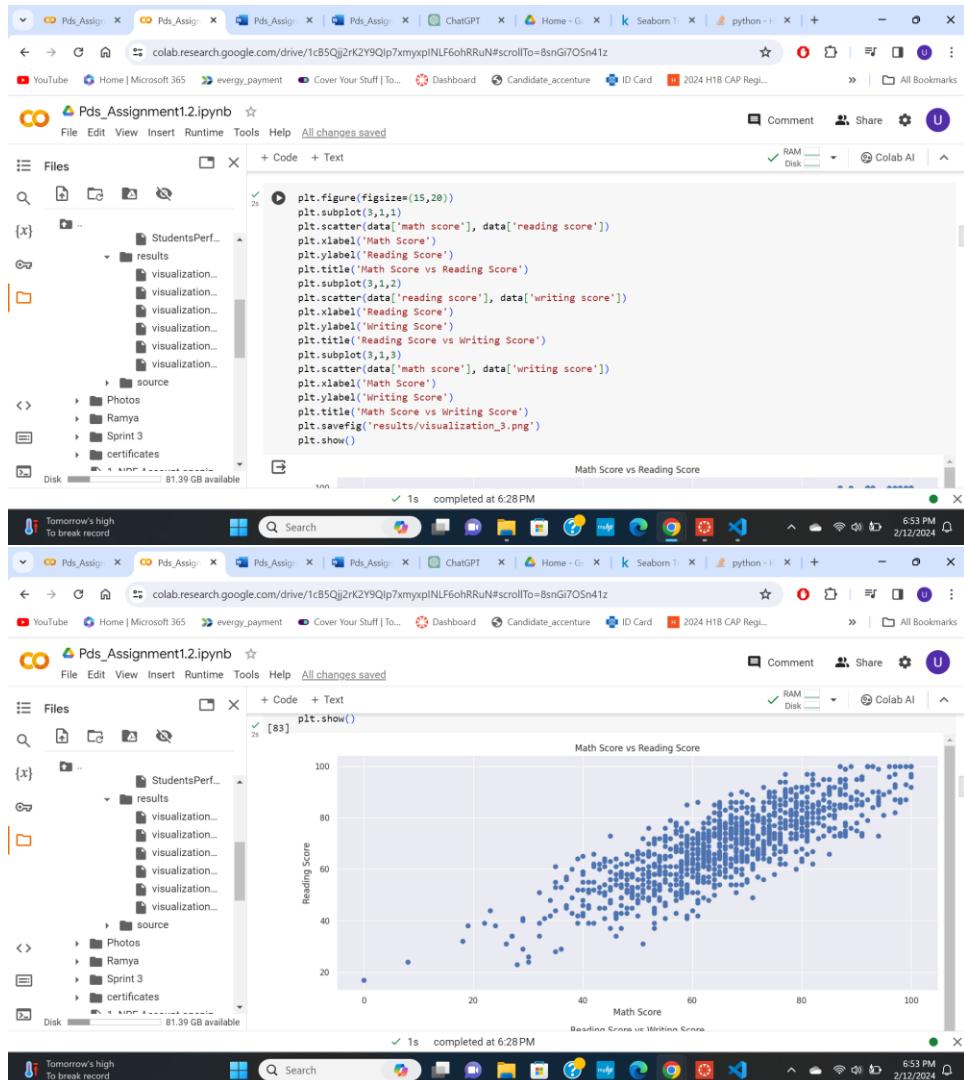
Step 3: Visualizations of data

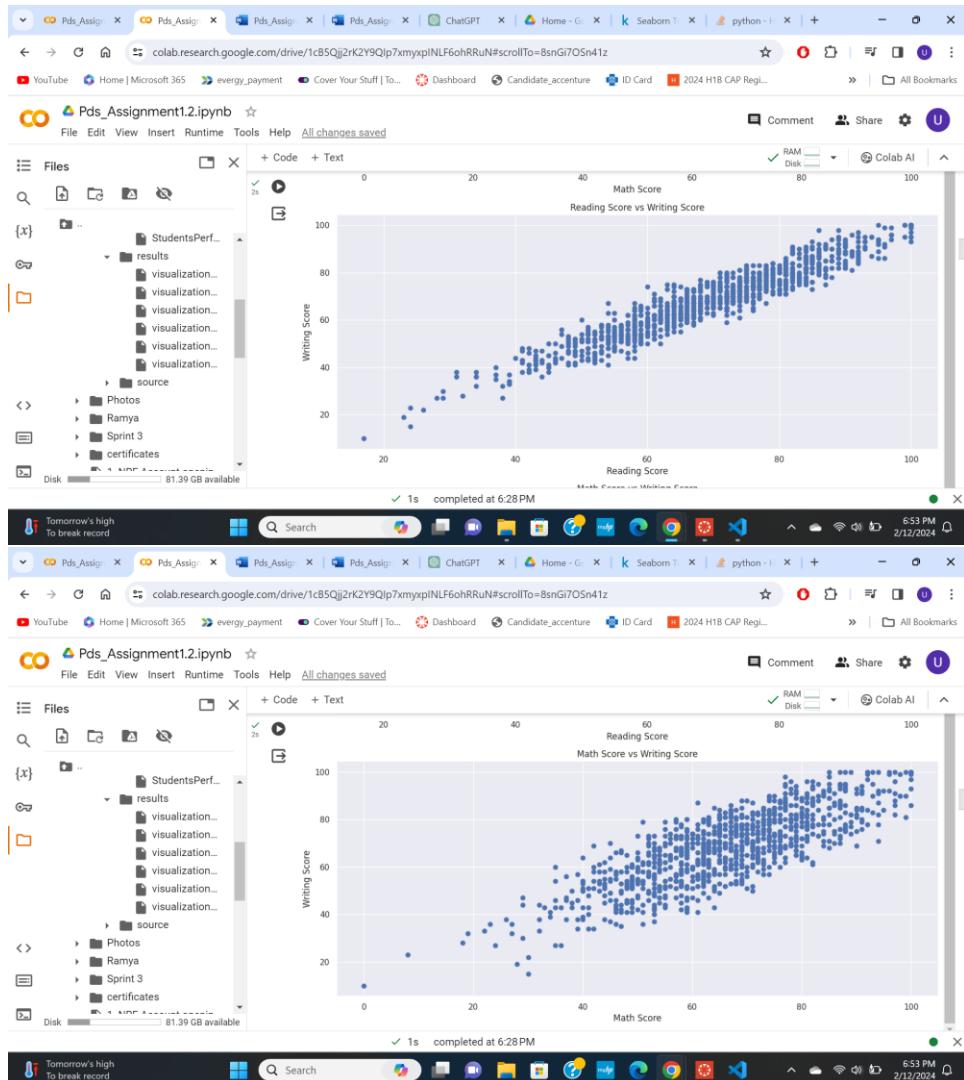


2. Visualization to show distribution between the maths, reading and writing scores on a bar graph

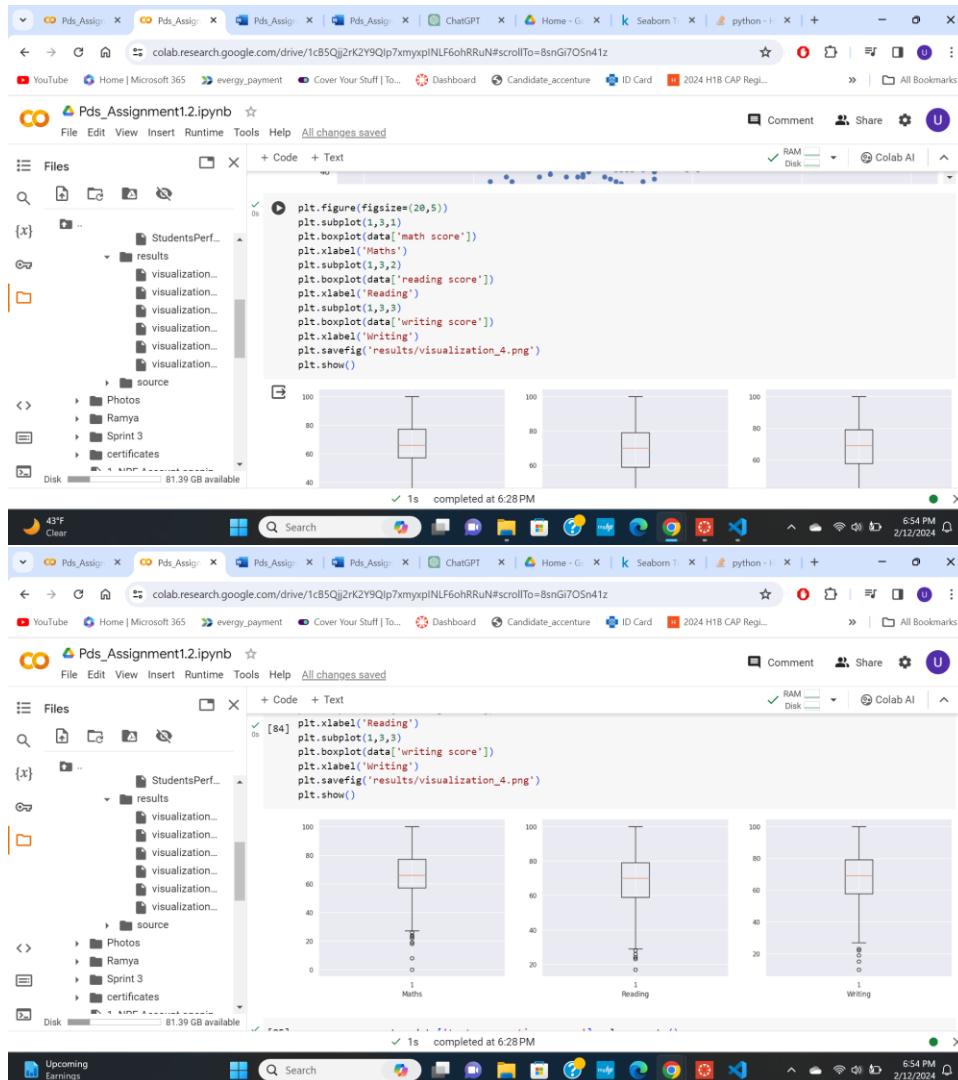


3. Visualization of data in form of scatterplot to show comparision between maths vs reading vs writing scores.

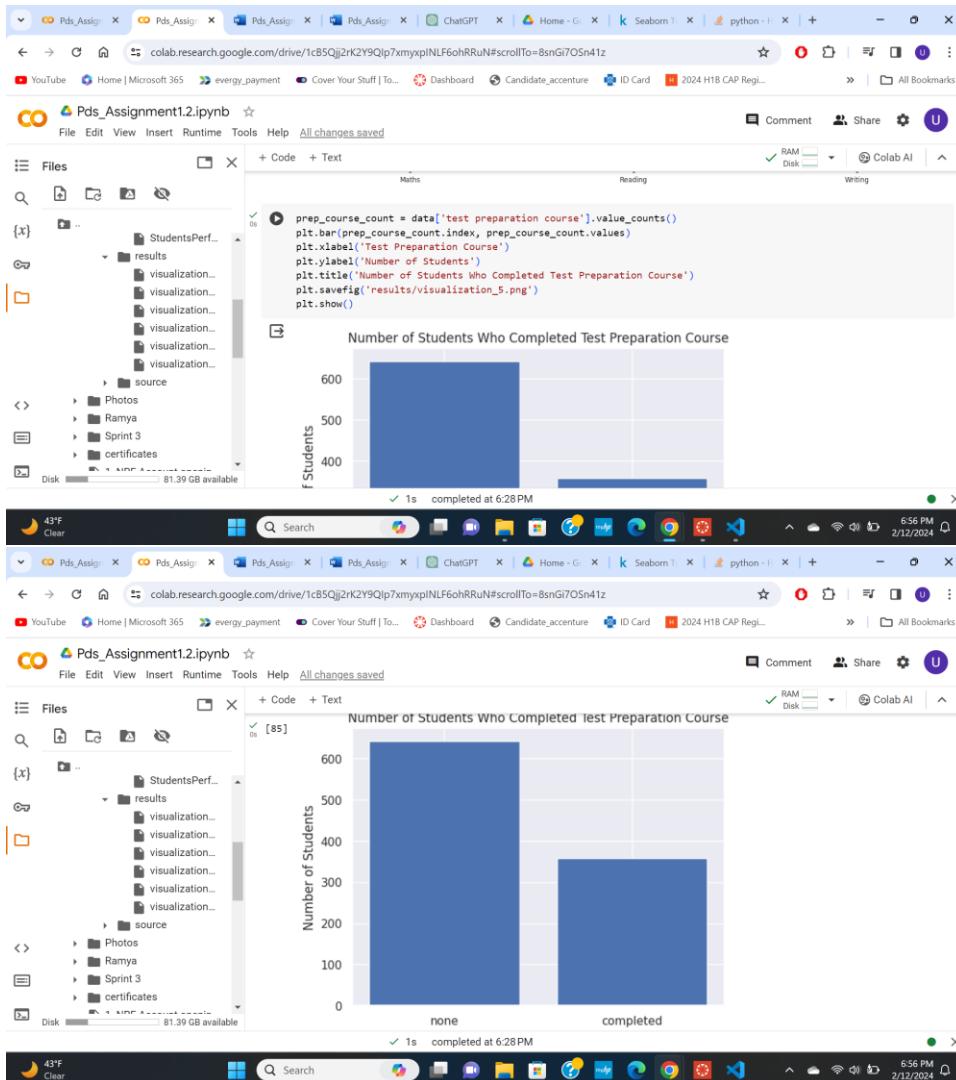




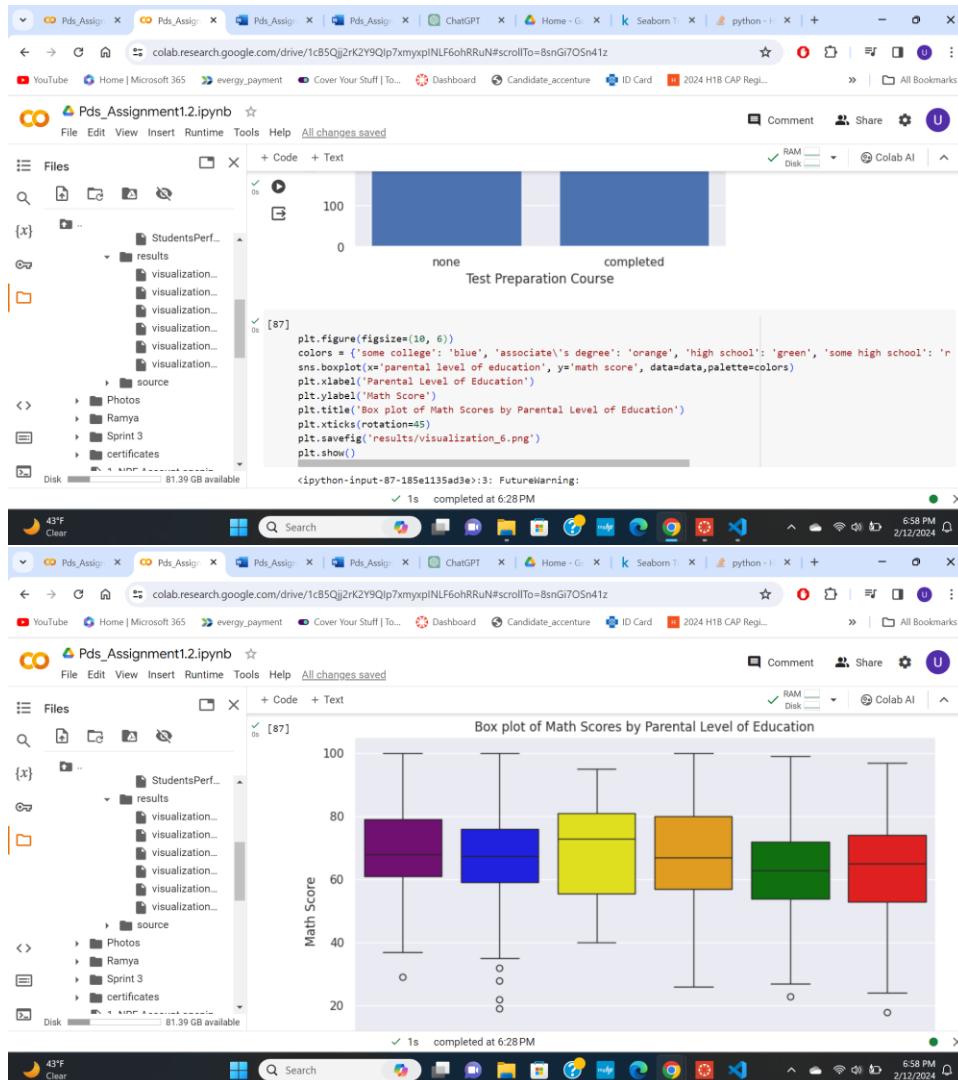
4.Box plot visualization to provide more information regarding the data.



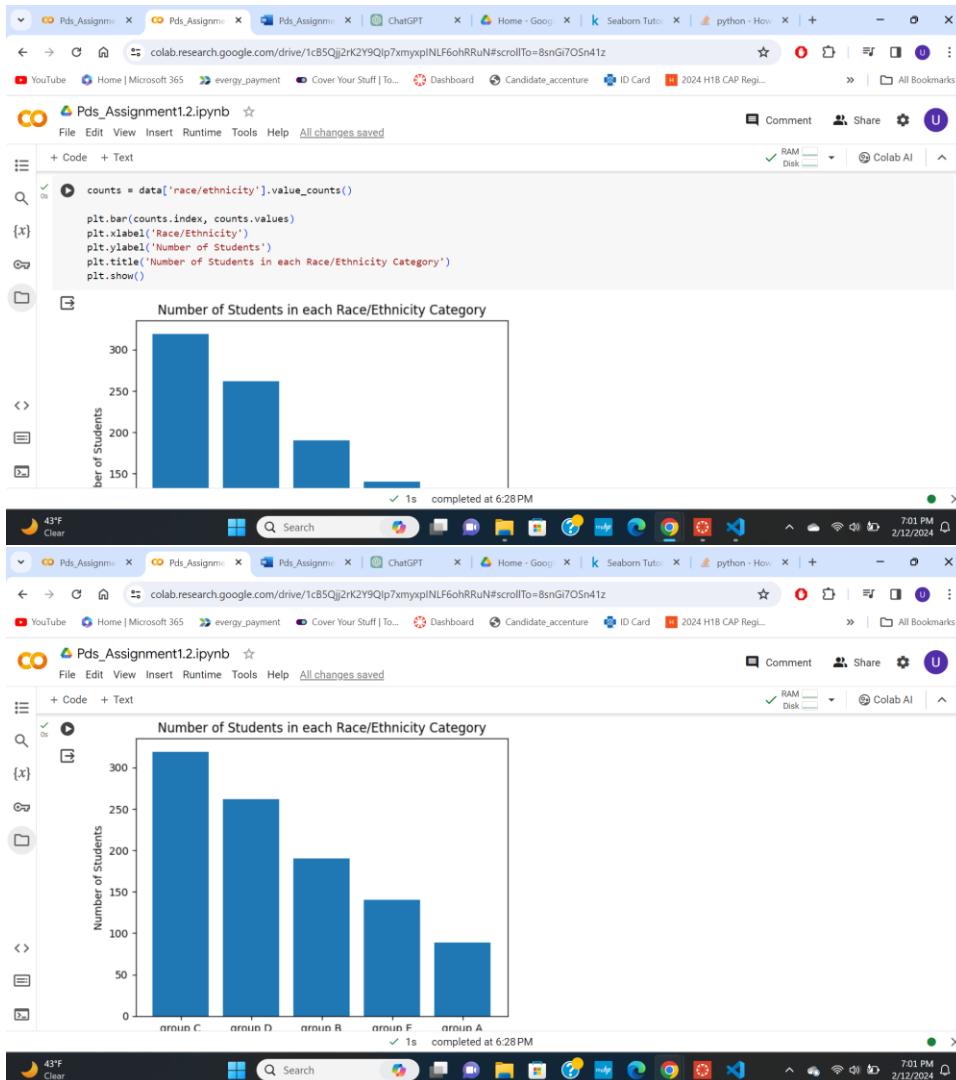
5. Bar chart visualization to provide relation between number of students and test preparation course.



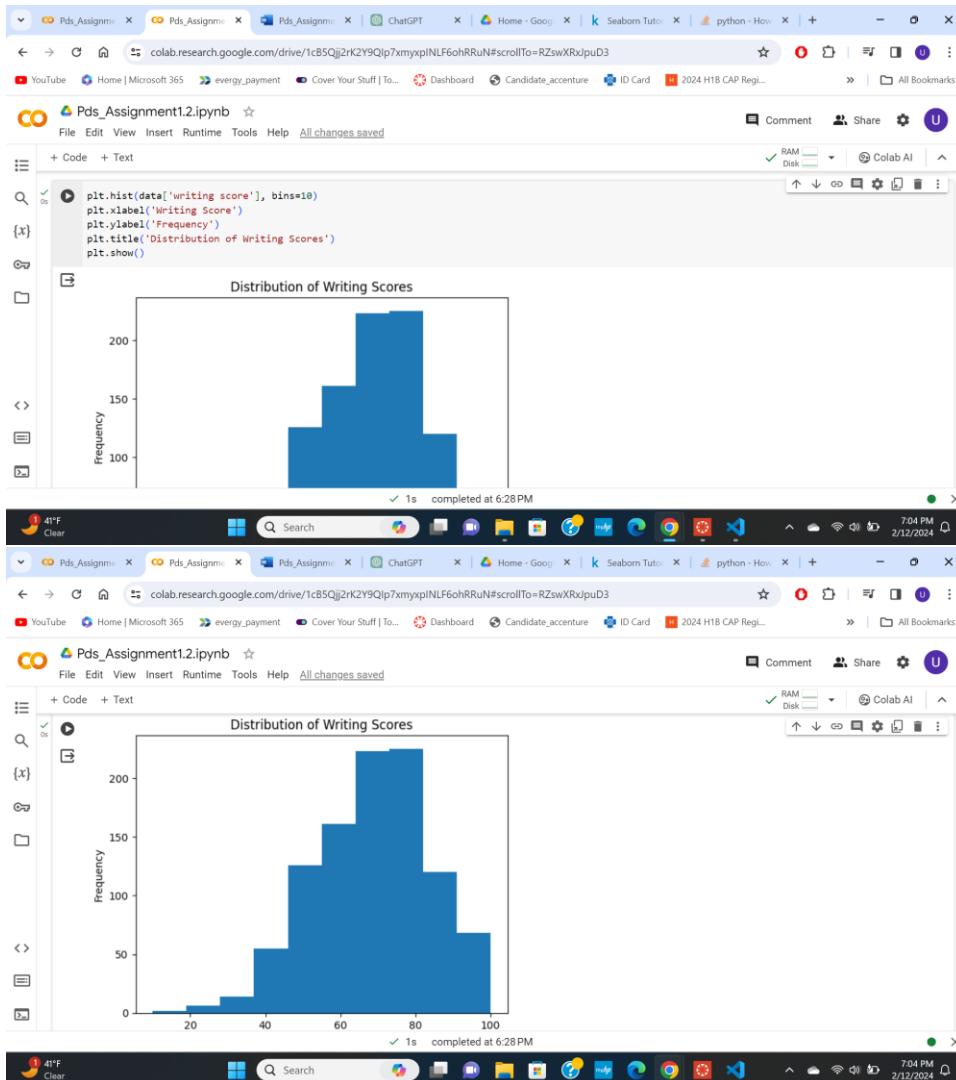
6.Box Plot Visualization ,this visualization can help identify whether there is a difference in test scores between students whose parents have different levels of education.



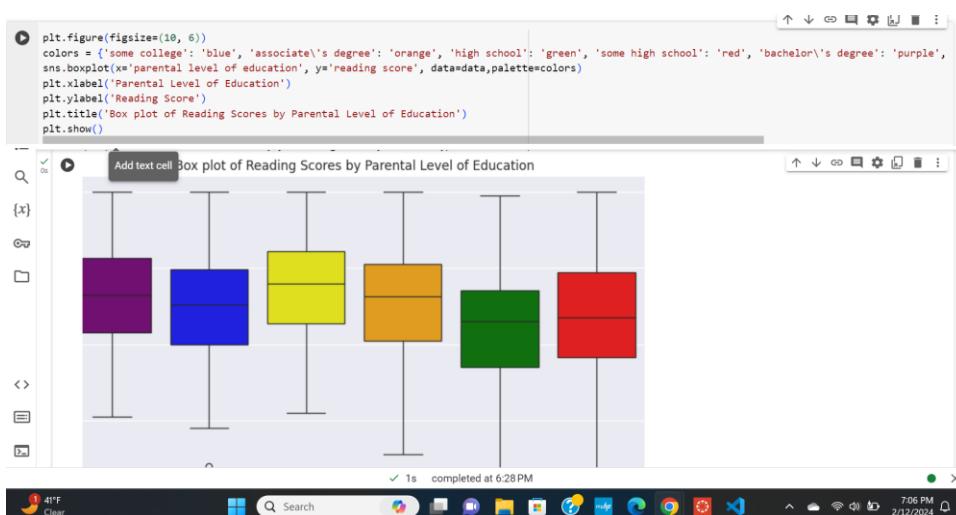
7.Bar graph of Race /Ethnicity vs number of students



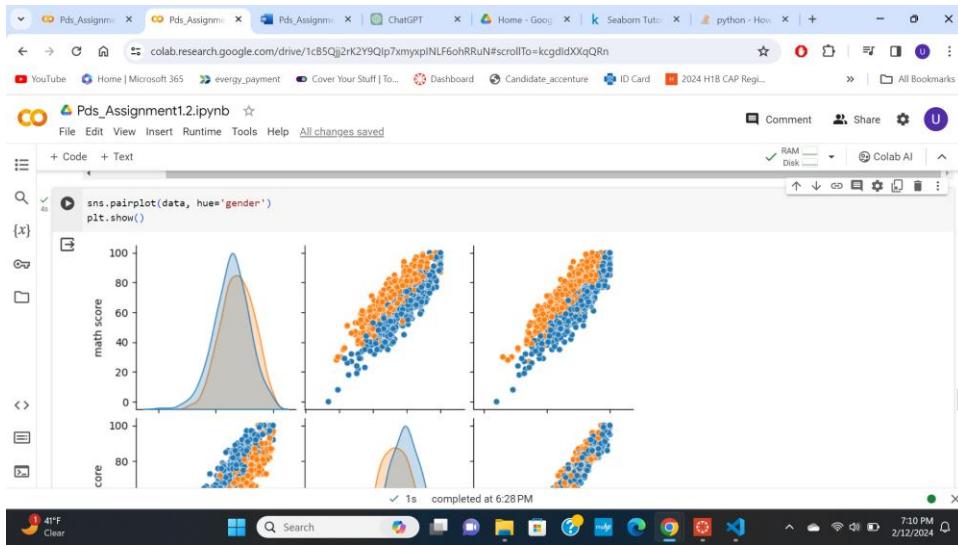
8.histogram of writing score and frequency



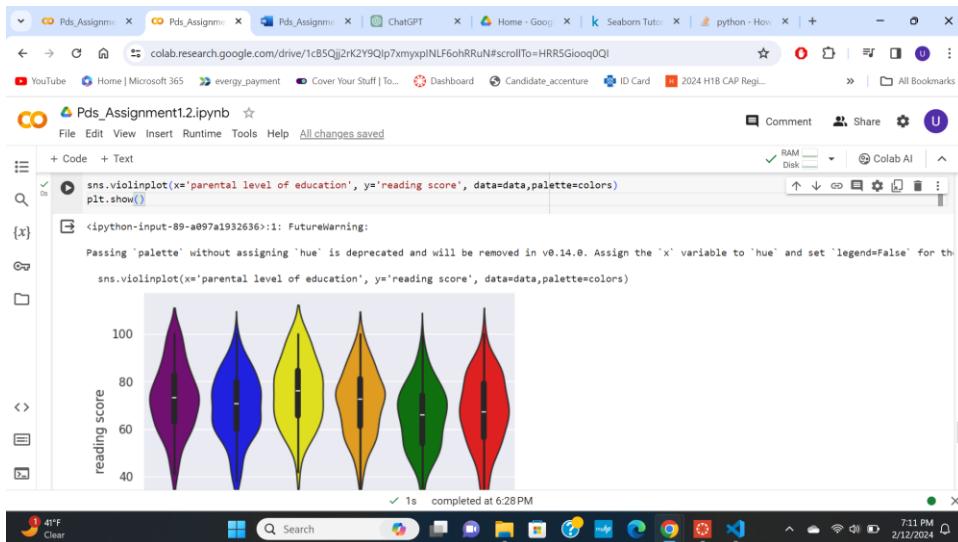
9.Box Plot of reading scores by parental level of Education



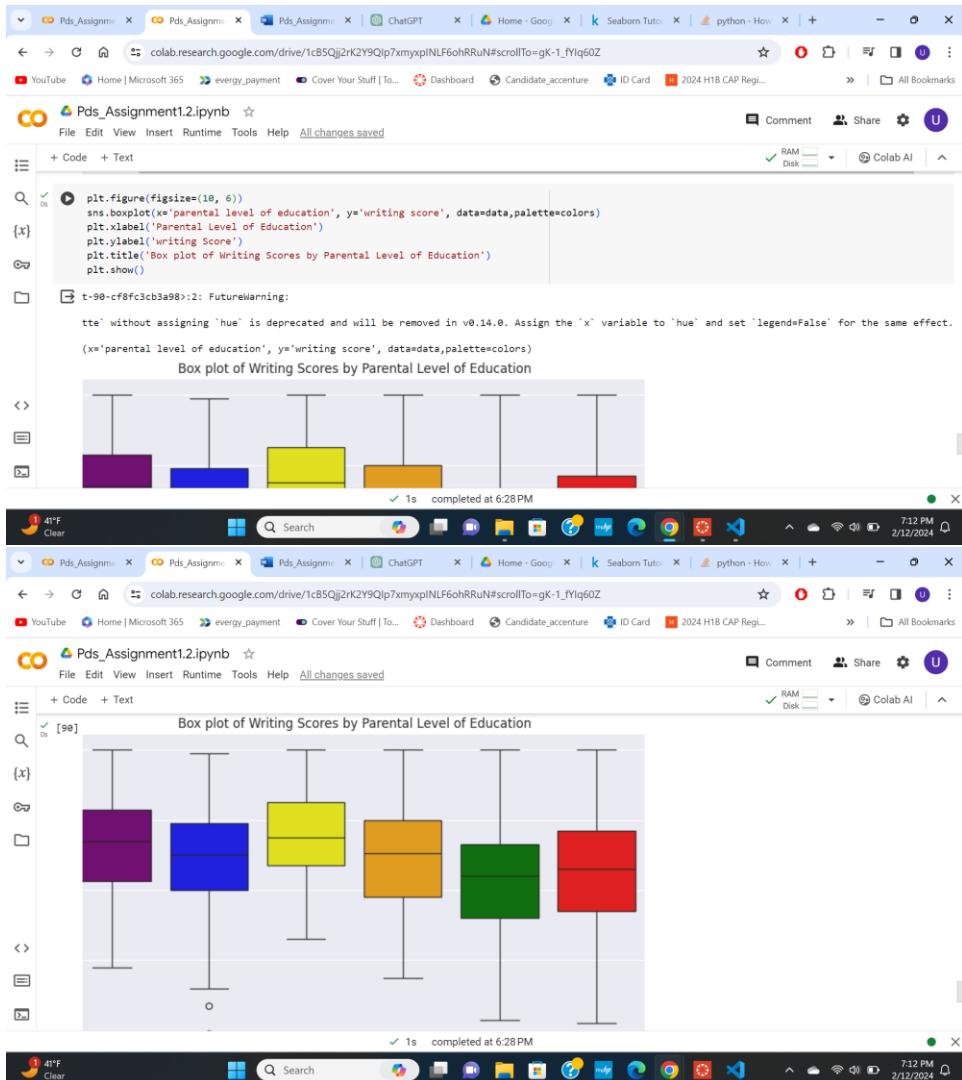
10. pairplot where hue is gender.



11. violin plot of parental level of education and reading score.



12. Box plot of writing scores by parental level of Education



13.Distribution of math ,reading and writing scores.

