**Exp 8**

**pip install seaborn**

**import pandas as pd**

**import numpy as np**

**import matplotlib.pyplot as plt**

**import seaborn as sns**

**dataset = sns.load\_dataset('titanic')**

**dataset.head()**

**sns.distplot(dataset['fare'])**

**sns.distplot(dataset['fare'], kde=False)**

**sns.jointplot(x='age', y='fare', data=dataset)**

**sns.rugplot(dataset['fare'])**

**sns.barplot(x='sex', y='age', data=dataset)**

**sns.countplot(x='sex', data=dataset)**

**sns.boxplot(x='sex', y='age', data=dataset)**

**sns.boxplot(x='sex', y='age', data=dataset)**

**sns.violinplot(x='sex', y='age', data=dataset)**

**sns.stripplot(x='sex', y='age', data=dataset)**

**sns.swarmplot(x='sex', y='age', data=dataset)**

**sns.violinplot(x='sex', y='age', data=dataset)**

**sns.swarmplot(x='sex', y='age', data=dataset, color='black')**

**#Expt. No. 8 Part-2**

**# histogram of fare**

**titanic\_hist = dataset.fare.plot.hist(bins = 40, color = 'grey')**

**plt.xlabel('Fare (pounds, 1912 prices)')**

**plt.show(titanic\_hist)**

**sns.distplot(dataset['fare'])**

Here's a brief summary of each line:

1. `pip install seaborn`: Installs the Seaborn library using pip.

2. Importing necessary libraries: Pandas (`pd`), NumPy (`np`), Matplotlib (`plt`), and Seaborn (`sns`).

3. Loading the Titanic dataset into a Pandas DataFrame.

4. Displaying the first few rows of the dataset.

5. Creating a distribution plot (histogram) for the 'fare' column in the dataset.

6. Creating a distribution plot (histogram) for the 'fare' column with the kernel density estimation (KDE) turned off.

7. Creating a joint plot showing the relationship between 'age' and 'fare'.

8. Creating a rug plot for the 'fare' column.

9. Creating a bar plot showing the average 'age' by 'sex'.

10. Creating a count plot of the 'sex' column.

11. Creating a box plot showing the distribution of 'age' by 'sex'.

12. Creating a violin plot showing the distribution of 'age' by 'sex'.

13. Creating a strip plot showing individual data points for 'age' by 'sex'.

14. Creating a swarm plot showing individual data points for 'age' by 'sex'.

15. Combining a violin plot and a swarm plot to show the distribution of 'age' by 'sex'.

16. Adding a swarm plot to the violin plot with specified color.

17-19. Commentary on Experiment No. 8, Part-2 (lines commented out, no action taken).

20. Creating a histogram of the 'fare' column with customized settings and labeling the x-axis.

21. Displaying a distribution plot (histogram) for the 'fare' column again.

These lines demonstrate various visualizations and exploratory data analysis techniques using Seaborn and Matplotlib in Python.