Python Data Dive Activities Unit 1.3

1. Develop a Python script that reads data from multiple file formats (CSV, Excel, JSON) using Pandas and combines them into a single DataFrame.

2. Perform element-wise addition and subtraction on two NumPy arrays of different shapes.

3. Write a Python program that uses Pandas to aggregate and group data based on multiple criteria, providing meaningful insights.

4. Implement a Python script that filters a Pandas DataFrame based on specific conditions and visualizes the results using Matplotlib.

5. Create a Python program that imports data from a relational database into a Pandas DataFrame, performs data manipulations, and exports the results back to the database.

6. Develop a Python script that reads a large dataset in chunks using Pandas, demonstrating efficient handling of large datasets.

7. Calculate the mean, median, mode, and standard deviation of a Pandas DataFrame column.

8. Perform basic DataFrame operations, such as addition, subtraction, multiplication, and division.

9. Write a Python script using Pandas filtering to select specific rows and columns from a DataFrame.