Assignment - Exploring Delta Table

Delta Table Operations

1. Given a dataset load the data into DataFrame

```
sample_data = [
    (1, "Arjun", 29),
    (2, "Balaram", 35),
    (3, "Chaitanya", 24),
    (4, "Damodhar", 40)
]
```

2. Write the DataFrame to a Delta table and perform some basic operations filtering and aggregation
3. Demonstrate the update feature in Delta table by setting age of Arjun to 30
4. Demonstrate the delete feature
5. Insert a new record and then query the previous version.
6. Use the **versionAsOf** or **timestampAsOf** options.
7. Use vacuum command to keep data for 7 days
8. Create a new dataframe with more records and append to the existing dataframe

Spark SQL

1. Write a SQL query to retrieve employees along with their department names.

2. Write a SQL query to retrieve tasks along with the names of the employees to whom they are assigned.

3. Write a SQL query to retrieve projects along with the names of the project managers.

4. Write a SQL query to retrieve employees along with their department names and the names of their managers.

5. Write a SQL query to find the employee(s) with the highest salary.

6. Create a DeltaTable in a Databricks environment with the schema