Semi-Structured Dataset (Store Inventory Updates)

EDDAGOTTI ANILRAJ processed XML data related to store inventory updates. His tasks included:

Parsing XML Data:

Used Python's `xml.etree.ElementTree` module to extract inventory updates from an XML file.

Storing Data:

Inserted the data into a MongoDB collection named `InventoryUpdates` within the `StoreInventoryDB` database.

Queries and Analysis:

- Fetched all updates for a specific product (e.g., "Laptop").
- Aggregated total stock added and removed for each product.
- Identified products with more stock removed than added.
- Analyzed stock changes over time for specific products (e.g., "Tablet").
- Counted the number of updates per product.

Semi-Structured Dataset (Employee Attendance)

SURESH KUMAR worked with employee attendance data in XML format. His tasks included:

Parsing XML Data:

Used the `xmltodict` library to convert XML data into a structured Python dictionary.

Storing Data:

Inserted attendance records into the `Attendance` collection of the `EmployeeDB` MongoDB database.

Queries and Analysis

- Retrieved attendance records for specific employees (e.g., EmployeeID "E0084").
- Counted total attendance records.
- Identified employees with late check-ins (after 9:00 AM).
- Aggregated total hours worked by each employee.
- Found employees who worked overtime (more than 8 hours).
- Filtered attendance records for specific months.
- Counted the number of attendance records grouped by date.

Structured Dataset (Customer Purchase Data)

ABHINAV DEVA dealt with a structured dataset stored in a PostgreSQL database. His tasks included:

Database Connectivity:

Connected to the `customerdb` PostgreSQL database using the `psycopg2` library.

Query Execution:

Retrieved data from the `Purchases` table.

Data Presentation:

Loaded the retrieved data into a Pandas DataFrame for analysis.

Structured Dataset (Daily Product Sales)

SRIKANTH VUNNAM worked with daily product sales data stored in another PostgreSQL database. His tasks included:

Database Connectivity:

Connected to the `salesdb` PostgreSQL database using the `psycopg2` library.

Query Execution:

Retrieved data from the `SalesData` table.

Data Presentation:

Loaded the sales data into a Pandas DataFrame for analysis.

Group Member Contributions

E ANILRAJ, T SURESH KUMAR, ABHINAVA DEVA, V SRIKANTH

"I focused on handling inventory updates in XML format. After parsing the data, I stored it in MongoDB and ran analytical queries to understand stock trends and anomalies."

"My task was to process employee attendance records stored in XML. I imported the data into MongoDB and executed queries to extract insights like late check-ins and overtime."

"I worked on structured purchase data from a PostgreSQL database. My main contribution was fetching and preparing the purchase data for analysis."

"My responsibility was analyzing daily sales data from a structured PostgreSQL database. I ensured accurate retrieval and preparation of the data for further insights."