Solution Architecture

Date	15 February 2026
Team ID	LTVIP2026TMIDS75097
Project Name	Strategic Product Placement Analysis: Unveiling Sales Impact with Tableau Visualization
Maximum Marks	4 Marks

Solution Architecture:

The proposed solution architecture follows a data analytics-based approach where supermarket sales data is collected in CSV/Excel format and processed using Tableau tools. The architecture consists of data ingestion, data preparation, visualization, dashboard deployment, and web integration layers. The cleaned data is visualized using Tableau Desktop to create interactive dashboards and stories. These dashboards are deployed on Tableau Public and integrated into a web interface built using HTML, CSS, and JavaScript. The end users, such as Retail Managers and Business Analysts, access the dashboard through the web interface to analyse the impact of product placement on sales performance.

Architecture Layers:

1. **Data Layer**

   - Supermarket Sales Dataset (CSV/Excel)

   - Stored in local file system

2. **Data Processing Layer**

   - Data Cleaning and Transformation

   - Tools: Excel / Tableau Prep

3. **Analytics & Visualization Layer**

   - Tableau Desktop

   - Creation of charts, dashboards, and stories

4. **Deployment Layer**

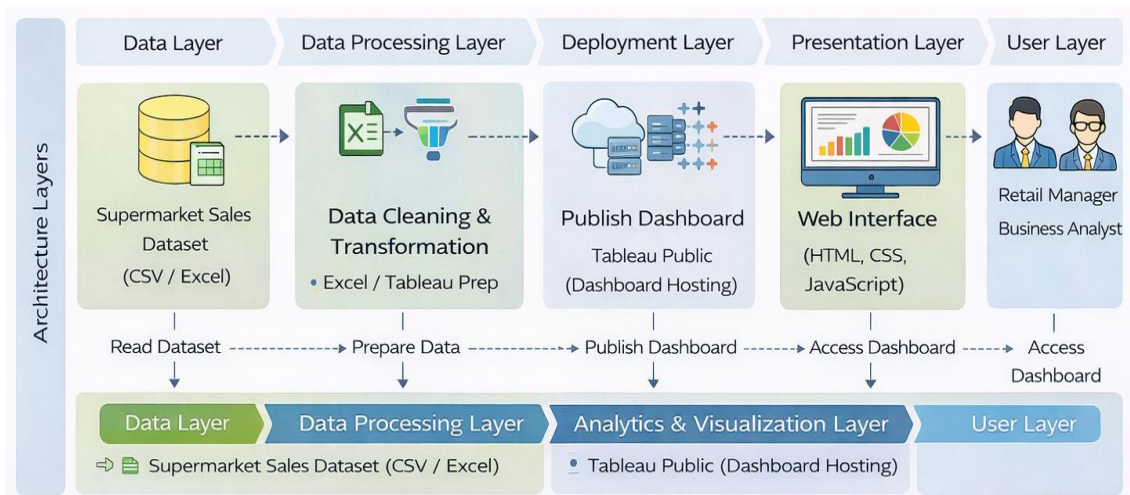   - Tableau Public (Dashboard Hosting)

5. **Presentation Layer**

   - Web Interface (HTML, CSS, JavaScript)

   - Embedded Tableau dashboard

6. **User Layer**

- Retail Manager

- Business Analyst

Solution Architecture Diagram:

The diagram shows how data moves through the system step by step. First, the supermarket sales data (CSV/Excel) is collected in the Data Layer. Then, in the Data Processing Layer, the data is cleaned and prepared using Excel or Tableau Prep. After that, Tableau is used to create dashboards and visualizations. These dashboards are published using Tableau Public. Finally, the dashboards are integrated into a web interface built with HTML, CSS, and JavaScript, where users like retail managers and analysts can view and analyse the results.