Requirement Analysis

Technology Stack (Architecture & Stack)

Date	18 June 2025
Team ID	LTVIP2025TMID47637
Project Name	Strategic Product Placement Analysis: Unveiling Sales Impact with Tableau Visualization
Maximum Marks	4 Marks

Technical Architecture:

Table 1: Technical Architecture Components

Component	Description	Technology Used
User Interface	Web or desktop interface where users explore dashboards	Tableau Dashboard
Data Source	Supermarket sales data	CSV / Excel files
Processing Layer	Logic for filtering, aggregating, transforming	Tableau Calculated Fields
Visualization Engine	Visualizes data	Tableau
External Tools	Used for collaboration/deployment	GitHub, Google Docs
Storage	Temporary file storage	Local machine, Tableau Public cloud

Table 2: Technical Architecture Components

S.NO	Component	Tool/Technology
1	Data Source	Supermarket Sales CSV
2	Visualization Tool	Tableau Public/Desktop
3	Collaboration	GitHub, Google Docs
4	Diagramming Tool	Mural (Empathy Map, Brainstorming, etc.)
5	Documentation	Microsoft Word / PDF
6	Version Control	Git + GitHub

Summary & Conclusion

This architecture and technology stack was designed to support the strategic product placement analysis project using Tableau visualizations. The system ensures efficient user interactions, seamless data flow, secure API communications, cloud-based scalability, and availability

Security mechanisms such as encryption, IAM control, and use of firewalls are planned. The use of open-source technologies and scalable microservices enhances cost-efficiency and adaptability.

In conclusion, this design ensures robustness, security, and scalability necessary for handling real-world business challenges in retail data analytics, especially in sensitive offline/remote use-cases such as during pandemics.