

Project Design Phase-I Solution Architecture

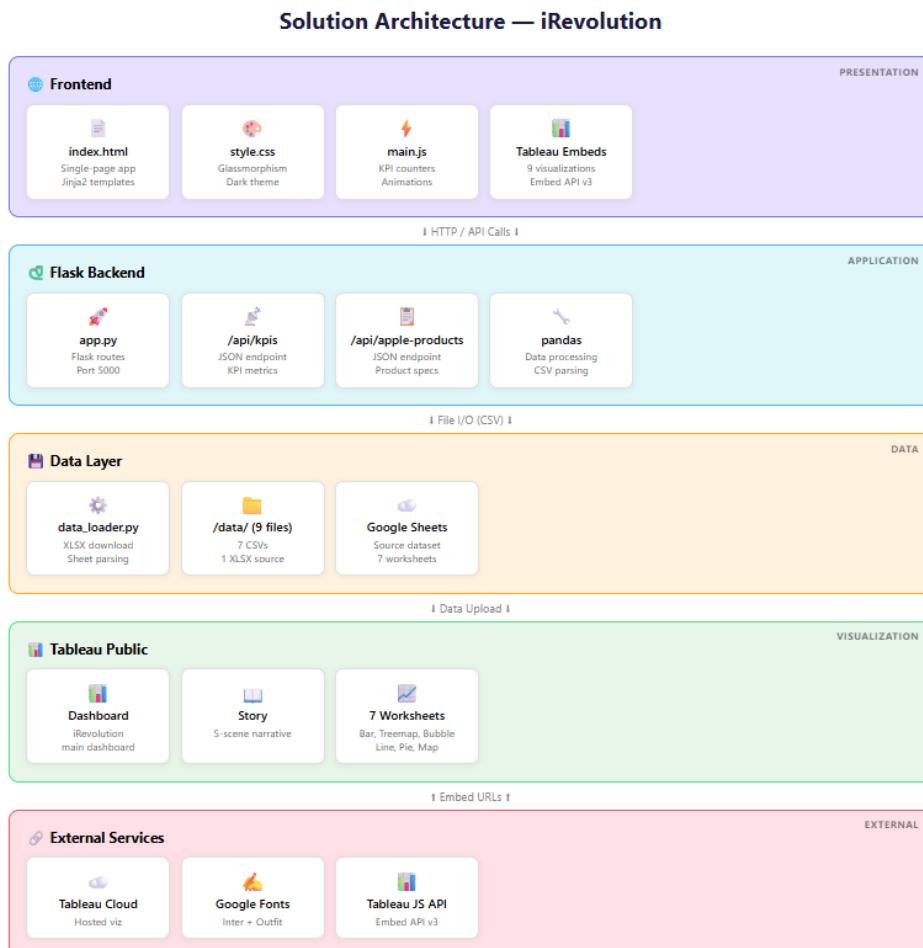
Date	08 February 2026
Team ID	LTVIP2026TMIDS82607
Project Name	iRevolution - Apple's iPhone Impact in India
Maximum Marks	4 Marks

Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.

Solution Architecture Diagram:



Architecture Overview:

The iRevolution application follows a multi-layered architecture:

Layer	Components	Details
Presentation Layer	index.html, style.css, main.js	Single-page app with glassmorphism dark theme, responsive design, animated KPI counters, scroll-reveal animations
Application Layer	app.py (Flask)	Routes: / (main page), /api/kpis (JSON KPIs), /api/apple-products (product specs). Runs on port 5000
Data Processing	data_loader.py, pandas	Downloads XLSX from Google Sheets, parses 7 worksheets, exports clean CSVs. Uses openpyxl engine
Data Storage	/data/ folder (9 files)	apple_products.csv, Flipkart_Smartphone.csv, Annual_Revenue.csv, Market_Penetration.csv, Country-wise_share.csv, Quarterly-share.csv, Model_share.csv
Visualization Layer	Tableau Public	9 worksheets + 1 dashboard + 1 story. Embedded via Tableau Embedding API v3 using <tableau-viz> web component