

Project Design Phase-II

Technology Stack (Architecture & Stack)

Date

30 June 2025

Team ID : LTVIP2025TMID59626

Project Name

Toycraft Tales: Tableau's Vision into Toy Manufacturer Data

Maximum Marks

4 Marks

Technical Architecture:

This application utilizes Tableau for visualizing toy manufacturing data from 2005 to 2016 in the US. The architecture is structured with data preprocessing using Excel/Python, MySQL for structured storage, and Tableau Public for interactive dashboards.

Table-1 : Components & Technologies:

Component	Description	Technology
User Interface	Interactive Dashboard via Tableau Public	Tableau Public
Application Logic-1	Data Cleaning & Aggregation	Excel / Python
Application Logic-2	Data Upload & Chart Preparation	Tableau Public
Database	Storage of cleaned data	MySQL / CSV
File Storage	Source files and dashboards	Local Filesystem
External API-1	Optional enrichment of data	Census API / State Data APIs
Infrastructure	Deployment on local system	Local, Tableau Public

Table-2: Application Characteristics:

Characteristics	Description	Technology
Open-Source Frameworks	Tableau Public for visualization, Python for data handling	Tableau, Python (Pandas)
Security Implementations	File-level access control, Tableau's public security	Role-based access (local)
Scalable Architecture	Dashboard can scale with new data imports	Tableau Data Source
Availability	Dashboards are hosted on Tableau Public	Tableau Server / Tableau Public
Performance	Optimized extracts and filtered views in Tableau	Tableau Engine