

## Project Design Phase-I

### Solution Architecture

Date	31 Jan 2026
Team ID	LTVIP2026TMIDS38705
Project Name	Empowering India
Maximum Marks	4 Marks

#### **Solution Architecture:**

The solution architecture illustrates how Union Budget data is transformed into meaningful insights through a layered system. The architecture connects raw government budget data with visualization tools and a web application to help users understand budget allocations easily.

##### **1. Data Source Layer:**

Union Budget datasets (2021–2024) are collected from official sources/Kaggle. This layer acts as the input for the system.

##### **2. Data Storage Layer (MySQL Database):**

The collected data is cleaned, structured, and stored in a MySQL database. SQL queries are used to retrieve and process the required information for analysis.

##### **3. Visualization Layer (Tableau Dashboards & Stories):**

Tableau is connected to the database to create interactive dashboards and stories. These visualizations present budget allocations category-wise, department-wise, and scheme-wise, making complex financial data easy to interpret.

##### **4. Web Application Layer (Flask):**

The Tableau dashboards are embedded into a Flask-based web application using iframes. This layer provides a simple user interface for interacting with the visualizations through a web browser.

##### **5. End Users:**

Students, startups, policymakers, and analysts access the web application to explore budget trends, compare allocations, and gain insights for decision-making.

## Solution Architecture Diagram:

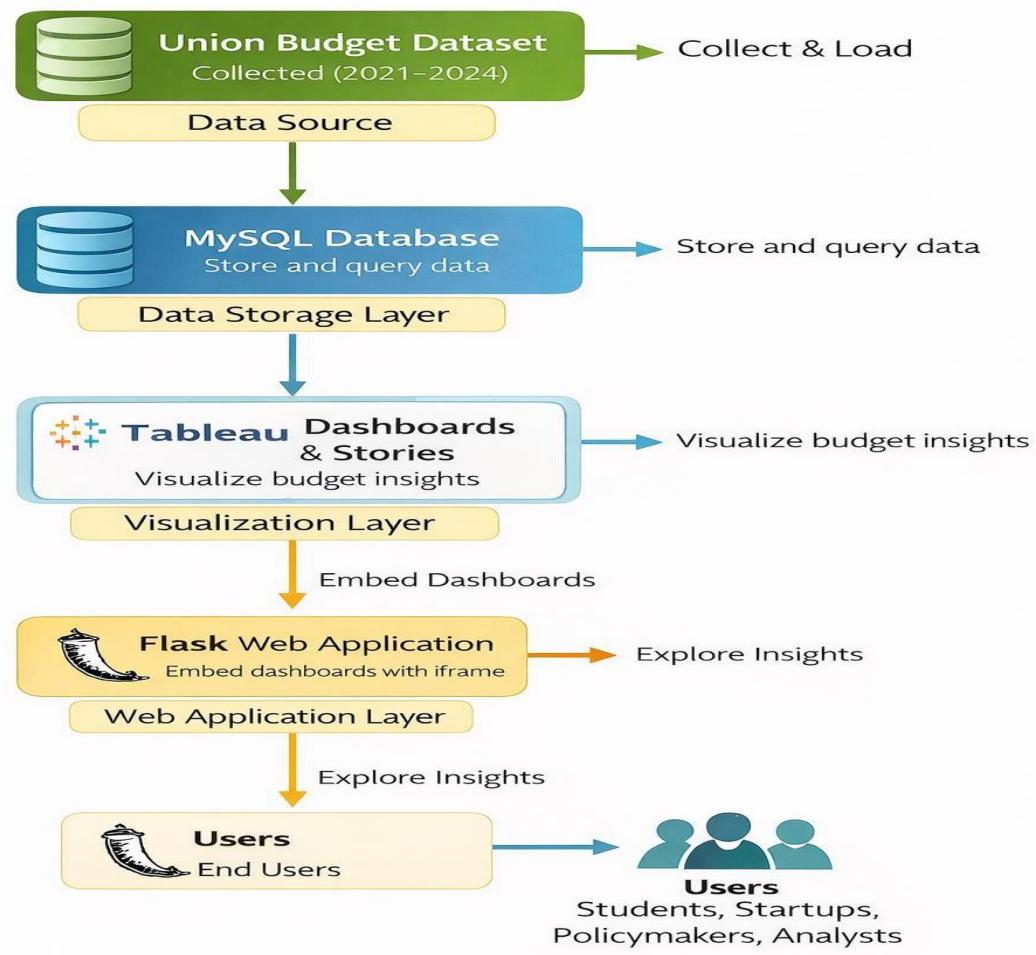


Figure 1: Architecture and data flow of the *Empowering India*