

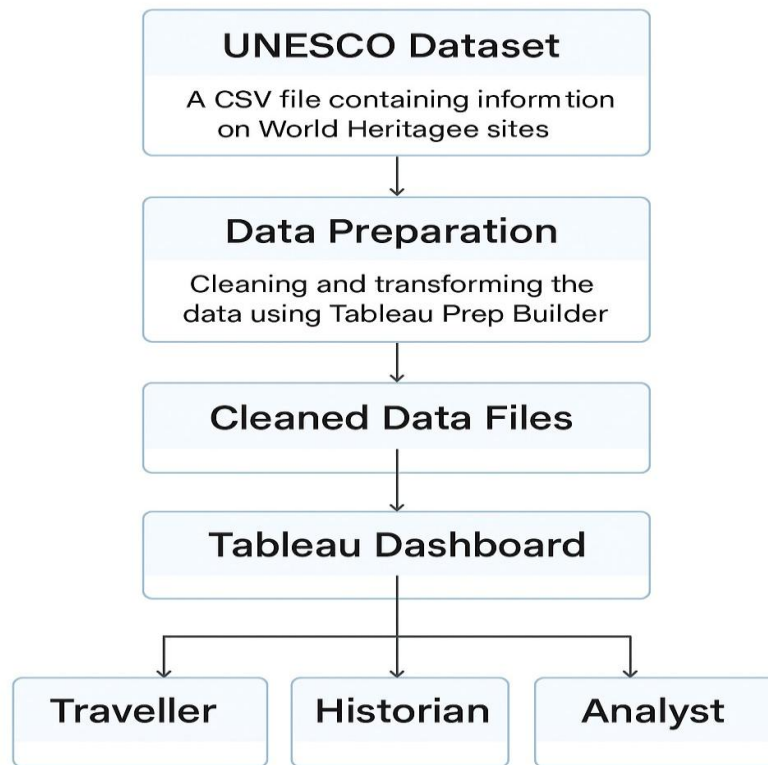
**Project Design Phase-II**  
**Technology Stack (Architecture & Stack)**

|               |  |
|---------------|--|
| Date          | 12 February 2026   |
| Team ID       | LTVIP2026TMIDS36160  |
| Project Name  | Heritage Treasures: An In-Depth Analysis of UNESCO World Heritage Sites in Tableau |
| Maximum Marks | 4 Marks  |

**Technical Architecture:**

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

The Technical Architecture of the Heritage Treasures Project outlines how different components work together to support the exploration, analysis, and visualization of UNESCO World Heritage Site data. This architecture is designed to ensure usability, scalability, availability, and performance while providing users—including travellers, historians, and data analysts—with meaningful insights.



## Architecture Diagram

| S.No | Component           | Description  | Technology                                   |
|------|---------------------|--|--|
| 1.   | User Interface      | Web interface to interact with dashboards and visualizations                                       | Tableau Public (Web UI), optionally HTML/CSS |
| 2.   | Application Logic-1 | Logic for filtering, grouping and preparing site data  | Java / Python                                |
| 3.   | Application Logic-2 | Not applicable application   | N/A  |
| 4.   | Database            | Data is structured and handled in flat file format (CSV), optionally loaded into structured tables | CSV, optionally Excel                        |
| 5.   | Cloud Database      | Data shared using cloud storage (if needed)  | Google Sheets, OneDrive                      |
| 6.   | File Storage        | Stores raw and cleaned datasets locally or on shared drive   | Local Filesystem, Google Drive               |

|    |                                 |   |   |
|----|---------------------------------|---|---|
| 7. | External API-1                  | Could integrate UNESCO API for real-time updates (if implemented in future) | UNESCO API for real-time updates (if implemented in future) |
| 8. | Infrastructure (Server / Cloud) | Project created and tested locally, optionally shared on web/cloud          | Local system, Google Drive, Tableau Public                  |

**Table-2: Application Characteristics:**

| S<br>.<br>N<br>o | Characteristics          | Description   | Technology                                |
|------------------|--------------------------|---|---|
|                  | Open-Source Frameworks   | Public datasets accessed from UNESCO, optionally processed in Excel or Python (for custom pre-cleaning).                            | Python (Pandas), Excel, CSV               |
|                  | Security Implementations | Restricted dataset editing to local environment; optional SHA-256 checksum validation for file integrity.                           | Local access control, SHA-256             |
|                  | Scalable Architecture    | Designed with modular stages: data input → prep → dashboard → multi-user access; easily expandable with other data sources or APIs. | 3-Tier Architecture (Data → Logic → View) |
|                  | Availability             | Dashboard available through Tableau Public links or exportable files; multiple access points for team.                              | Tableau Online/Public, Google Drive       |
|                  | Performance              | Lightweight dashboards optimized with filters and summaries; low-latency for small to mid-size datasets                             | Max ~100 requests/day supported manually  |