**Project Design Phase-II**

**Data Flow Diagram & User Stories**

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| Date | 14 June 2025 |
| Team ID | LTVIP2025TMID52148 |
| Project Name | Heritage Treasures: An in-depth analysis of UNESCO World Heritage Sites In Tableau |
| Maximum Marks | 4 Marks |

**Data Flow Diagrams:**

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

**Level 0 DFD (Context Diagram)**

External Entities: UNESCO Database, Users (Researchers, Policy Makers, Tourists), Heritage Organizations

Heritage Treasures System receives:

- Raw UNESCO Heritage Data

- User Query Requests

- Filter Parameters

Heritage Treasures System provides:

- Interactive Visualizations

- Analytical Reports

- Dashboard Insights

**Level 1 DFD (System Overview)**

Process 1: Data Extraction & Processing

- Input: UNESCO API Data, CSV Files

- Output: Cleaned Heritage Dataset

- Data Store: Heritage Database

Process 2: Data Analysis & Transformation

- Input: Cleaned Heritage Dataset

- Output: Analytical Metrics, Calculated Fields

- Data Store: Analytics Database

Process 3: Visualization Generation

- Input: Analytical Metrics, User Filters

- Output: Interactive Charts, Maps, Dashboards

- Data Store: Visualization Cache

Process 4: User Interface Management

- Input: User Requests, Dashboard Interactions

- Output: Customized Views, Export Files

- Data Store: User Preferences

**Level 2 DFD (Detailed Process Flow)**

Sub-Process 1.1: Data Validation

- Validates UNESCO data quality

- Handles missing values and duplicates

Sub-Process 1.2: Data Transformation

- Converts data types

- Creates geographical coordinates

- Calculates heritage site age

Sub-Process 2.1: Trend Analysis

- Analyzes inscription patterns over time

- Regional distribution calculations

Sub-Process 2.2: Risk Assessment

- Identifies endangered sites

- Calculates threat levels

Sub-Process 3.1: Map Visualization

- Generates interactive world maps

- Applies geographic clustering

Sub-Process 3.2: Statistical Charts

- Creates bar charts, line graphs

- Generates comparative analyses

**User Stories**

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| --- | --- | --- | --- | --- | --- | --- |
| **User Type** | **Functional Requirement (Epic)** | **User Story Number** | **User Story / Task** | **Acceptance Criteria** | **Priority** | **Release** |
| **Researcher** | **Data Exploration** | USN-1 | As a researcher, I can access the Heritage Treasures dashboard to view comprehensive UNESCO World Heritage Sites data | I can see all heritage sites displayed on an interactive world map with detailed information | High | Sprint-1 |
|  |  | USN-2 | As a researcher, I can filter heritage sites by country, region, type (Cultural/Natural/Mixed), and inscription year | The dashboard updates dynamically based on my filter selections | High | Sprint-1 |
|  |  | USN-3 | As a researcher, I can view detailed information about each heritage site including name, location, criteria, and inscription date | Clicking on any site shows comprehensive details in a tooltip or popup | Medium | Sprint-2 |
| **Policy Maker** | **Risk Analysis** | USN-4 | As a policy maker, I can identify heritage sites that are currently "In Danger" through visual indicators | Sites at risk are clearly marked with different colors/icons on the map | High | Sprint-1 |
|  |  | USN-5 | As a policy maker, I can analyze regional distribution of heritage sites to understand global preservation patterns | I can view charts showing site distribution by continent and country | High | Sprint-2 |
|  |  | USN-6 | As a policy maker, I can track historical trends of heritage site inscriptions over time | Line charts show inscription trends by year and region | Medium | Sprint-2 |
| **Heritage Organization** | **Conservation Planning** | USN-7 | As a heritage organization, I can export site data and visualizations for reports and presentations | I can download charts, maps, and data in PDF, PNG, and Excel formats | Medium | Sprint-3 |
|  |  | USN-8 | As a heritage organization, I can compare heritage site distributions across different criteria and time periods | Side-by-side comparisons and trend analyses are available | Medium | Sprint-3 |
|  |  | USN-9 | As a heritage organization, I can access summary statistics and KPIs about global heritage preservation | Dashboard shows total sites, endangered sites, regional breakdowns, and key metrics | High | Sprint-2 |
| **Tourist/General Public** | **Discovery & Education** | USN-10 | As a tourist, I can explore heritage sites by geographic region to plan visits | Interactive map allows me to zoom into specific regions and view nearby sites | Low | Sprint-3 |
|  |  | USN-11 | As a general user, I can learn about different types of heritage sites and their significance | Educational content and site descriptions are easily accessible | Low | Sprint-4 |
|  |  | USN-12 | As a tourist, I can view heritage sites with high tourist appeal or cultural significance | Sites are categorized and ranked by various criteria including visitor information | Low | Sprint-4 |
| **Data Analyst** | **Advanced Analytics** | USN-13 | As a data analyst, I can perform comparative analysis between different regions and time periods | Advanced filtering and comparison tools are available | Medium | Sprint-3 |
|  |  | USN-14 | As a data analyst, I can identify patterns and correlations in heritage site data | Statistical analysis tools and correlation matrices are provided | Medium | Sprint-4 |
|  |  | USN-15 | As a data analyst, I can customize dashboard views and save preferred configurations | Personal dashboard layouts can be saved and shared | Low | Sprint-4 |
| **Administrator** | **System Management** | USN-16 | As a system administrator, I can update and refresh the UNESCO heritage data | Data refresh functionality is available with validation checks | High | Sprint-1 |
|  |  | USN-17 | As a system administrator, I can monitor dashboard performance and user activity | Performance metrics and usage analytics are available | Medium | Sprint-3 |
|  |  | USN-18 | As a system administrator, I can manage user access and permissions for different dashboard features | Role-based access controls are implemented | Medium | Sprint-2 |