**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 31 January 2025 |
| Team ID | LTVIP2025TMID48057 |
| Project Name | ToyCraft Tales: Tableau's Vision into Toy Manufacturer Data |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | |  | | --- | |  |   Data Collection & Extraction | Import data from external databases  Perform SQL queries for data extraction  Schedule automated data refresh |
| FR-2 | Data Preparation | Clean and transform data for Tableau visualization Handle missing values and data type conversions  Create calculated fields and hierarchies |
| FR-3 | Data Visualization | View dashboards with interactive charts and graphs  Access stories showing market trends and insights  Filter visualizations by region, year, category |
| FR-4 | Data Upload & Integration | Upload new datasets to the system  Integrate with external database (e.g., SQL DB)  Connect Tableau dashboards to live data |
| FR-5 | Web Embedding | Embed Tableau dashboard in web app (Flask UI)  Provide responsive UI for dashboard interaction |
| FR-6 | Report & Export | Download reports as PDF or Excel  Export specific visualizations |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | The system should provide an intuitive and easy-to-navigate interface for both administrators and end users. Users should be able to interact with dashboards, filters, and reports without extensive training. |
| NFR-2 | **Security** | All data must be secured through encryption, with robust authentication and authorization mechanisms. The system should protect against unauthorized access and ensure data privacy. |
| NFR-3 | **Reliability** | The solution should perform consistently without unexpected failures or downtime. It must deliver accurate visualizations and data outputs at all times. |
| NFR-4 | **Performance** | Dashboards and reports should load quickly, ideally within 3 seconds for normal queries. The system should handle complex visualizations efficiently without lag. |
| NFR-5 | **Availability** | The platform should ensure 99.9% uptime, making dashboards and data accessible at all times except during scheduled maintenance. This helps maintain user trust and continuous data access. |
| NFR-6 | **Scalability** | The system should support growing data volumes and increased user load without performance degradation. It should be easy to scale horizontally or vertically as demand grows. |