**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| Date | 24 June 3035 |
| Team ID | LTVIP2025TMID47668 |
| Project Name | ToyCraft Tales: Tableau's vision into toy manufacturer data |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

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

**Table-1 : Components & Technologies:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Component** | **Description** | **Technology** |
| 1 | User Interface | Tableau Dashboards viewed by users | Tableau, Tableau Public |
| 2 | Application Logic-1 | Data Preparation for Visualization | Tableau Prep, Python (if applicable) |
| 3 | Application Logic-2 | Sales, Inventory, and Trends Analysis Logic | Tableau Calculations, Expressions |
| 4 | Database | Store Sales, Inventory, and Customer Data | MySQL, CSV, Excel, Google Sheets |
| 5 | Cloud Database | Cloud-based storage for scalability | AWS RDS, Google Cloud SQL (Optional) |
| 6 | File Storage | Store raw data files, reports | Google Drive, Cloud Storage |
| 7 | External API-1 | Integration with sales platforms (if applicable) | Shopify API, Google Analytics API |
| 8 | External API-2 | Integration with market trend data (optional) | Market Research APIs (Optional) |
| 9 | Machine Learning Model | Predictive sales trends and inventory forecasting | Basic ML with Tableau Extensions or Python |
| 10 | Infrastructure (Server/Cloud) | Hosting Tableau dashboards and databases | Local Server or Tableau Online |

**Table-2: Application Characteristics:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| 1 | Open-Source Frameworks | Using Tableau Public and open-source data processing tools | Tableau Public, Python |
| 2 | Security Implementations | Access control for dashboard sharing, data security measures | Password Protection, Cloud Security |
| 3 | Scalable Architecture | Cloud deployment for handling large datasets if needed | AWS, Google Cloud (Optional) |

**References:**

[**https://c4model.com/**](https://c4model.com/)

[**https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/**](https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/)

[**https://www.ibm.com/cloud/architecture**](https://www.ibm.com/cloud/architecture)

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[**https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d**](https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d)