Date	Team ID	Project Name	Maximum Marks
16-06-2025	LTVIP2025TMID48235	ToyCraft Tales: Tableau's Vision into Toy Manufacturer Data	

Level 0 – Context Diagram

This is the highest-level overview of the **ToyCraft Data Analytics System**. It shows how external departments interact with the system.

Entities:

- Sales & Marketing Analyst (User)
- ToyCraft Data Analysis System
- Product Team / Logistics Department / Executives

Data Flows:

- Analyst provides raw toy sales and customer demographic data
- System processes data and generates visual dashboards
- Stakeholders receive insights via Tableau dashboards or scheduled reports

Diagram Representation:

[Sales & Marketing Analyst] → *(ToyCraft Data Analysis System)* → **[Product Team / Logistics / Executives]**

Level 1 – Detailed DFD for ToyCraft Dashboard System

Step	Process	Input	Output	Data Store		
1	Collect & Import Data	Raw toy sales CSVs, ERP exports, survey data	Structured and validated tables	Raw_Sales_Data		
2	Clean & Standardize	Raw sales and feedback tables	Cleaned and formatted dataset	Cleaned_Toy_Data		
3	Derive KPIs & Metrics	Cleaned dataset	Sales trends, top products, age-region segments	Derived_KPIs		
4	Define Filters & Segments	Derived metrics	Region, Season, Age, Product Category filters	Filter_Controls		
5	Build Visualizations	Filtered KPIs	Trend lines, heatmaps, bar & pie charts	Visual_Elements		
6	Generate Dashboards & Stories	Visual assets	Tableau Dashboards and Storyboards	Dashboard_Repo		
7	Publish & Share	Final Dashboards	Web-embedded dashboard (Flask), PDF exports	Published_Dashboards		
8	Review & Iterate	Feedback from teams	Updated KPIs, additional filters, revised visuals	Versioned_Workbooks		

Explanation of Each Process in Project Context

1. Collect & Import Data

Sales and customer data are gathered from company databases, CSV reports, and regional feedback forms. This includes information about product categories, sales quantity, location, and customer profiles.

2. Clean & Standardize

Data is cleaned for inconsistencies such as missing age groups, duplicate sales records, or non-uniform product naming. All fields are prepared for structured analysis.

3. Derive KPIs & Metrics

Key performance indicators are calculated—e.g., "Top Products by Region," "Sales Growth by Category," and "Age-wise Toy Preference."

4. Define Filters & Segments

Filters like season (summer, holidays), product type, age group, region, and customer gender are defined to allow custom dashboard views.

5. Build Visualizations

Bar charts, line graphs, regional heatmaps, pie charts, and filterable trend dashboards are created using Tableau. Visuals highlight top-selling toys, seasonal patterns, and market gaps.

6. Generate Dashboards & Stories

Dashboards consolidate all visuals, KPIs, and filters into an interactive interface. Story points guide different stakeholders through product performance insights.

7. Publish & Share

Dashboards are embedded using Flask and made accessible to internal departments. Reports are also exported as PDF or images for offline review.

8. Review & Iterate

Feedback from product, marketing, and logistics teams is used to enhance dashboards, add new views, and improve decision-making visuals over time.