Project Design Phase-II
Data Flow Diagram & User Stories

| Date	24 March 2025
Team ID	PNT2025TMID06731
Project Name	Global Malnutrition Trends: A Power BI Analysis (1983-2019)
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.

Flow
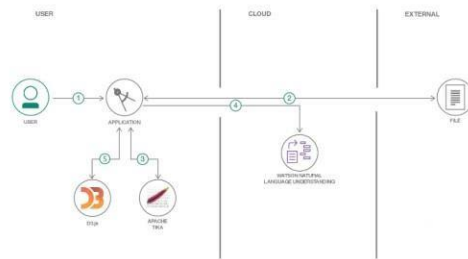
1. User configures credentials for the Watson Natural Language Understanding service and starts the app.
2. User selects data file to process and load.
3. Apache Tika extracts text from the data file.
4. Extracted text is passed to Watson NLU for enrichment.
5. Enriched data is visualized in the UI using the D3.js library.
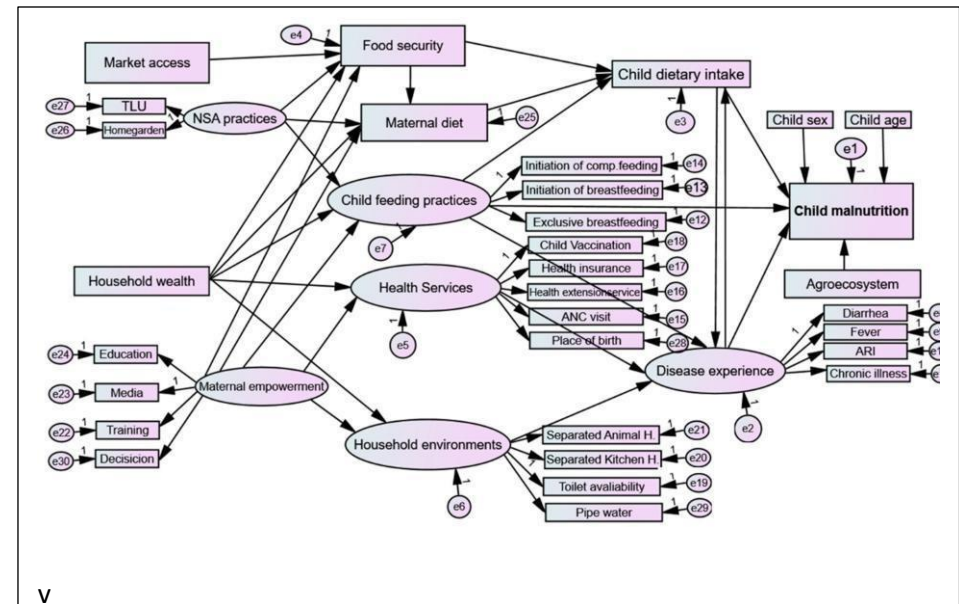
User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Data Analyst	Load and preprocess data	US-001	As a data analyst, I want to upload historical malnutrition datasets from 1983-2019.	Dataset is successfully uploaded, validated, and processed without errors.	High	V1.0
Data Analyst	Data Cleaning & Transformation	US-002	As a data analyst, I want to clean and normalize the malnutrition dataset.	Data is correctly formatted, missing values are handled, and duplicates are removed.	High	V1.0
Data Scientist	Statistical Analysis	US-003	As a data scientist, I want to apply statistical models to identify malnutrition trends.	Trends and patterns are extracted correctly, with statistical validation.	High	V1.1
Data Scientist	Data Enrichment	US-004	As a data scientist, I want to integrate additional datasets (e.g., GDP, population).	External datasets are merged successfully, enhancing trend analysis.	Medium	V1.1
Power BI User	Visualization & Reporting	US-005	As a Power BI user, I want to create interactive dashboards.	Dashboards display accurate charts, graphs, and KPIs for malnutrition trends.	High	V1.2
Researcher	Insights & Comparisons	US-006	As a researcher, I want to compare malnutrition rates across regions.	The system allows side-by-side comparisons with historical and regional data.	Medium	V1.3
Government Official	Policy Recommendations	US-007	As a policymaker, I want to generate insights for policy-making.	The system provides automated recommendations based on data trends.	Medium	V1.3
End User	Export & Share Reports	US-008	As an end user, I want to export reports in multiple formats (PDF, Excel).	Reports can be generated and downloaded without errors.	Medium	V1.

Administrator	Access Control	US-009	s an admin, I want to manage user roles and permissions.	Users can be assigned roles with appropriate access to datasets and dashboards.	High	V1.4