

Project Design Phase-II

Data Flow Diagram & User Stories

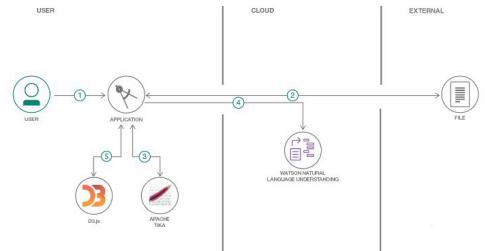
Date	18 February 2026
Team ID	LTVIP2026TMIDS24412
Project Name	Smart Sorting: Transfer learning for identifying rotten fruits and vegetables
Maximum Marks	4 Marks

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.

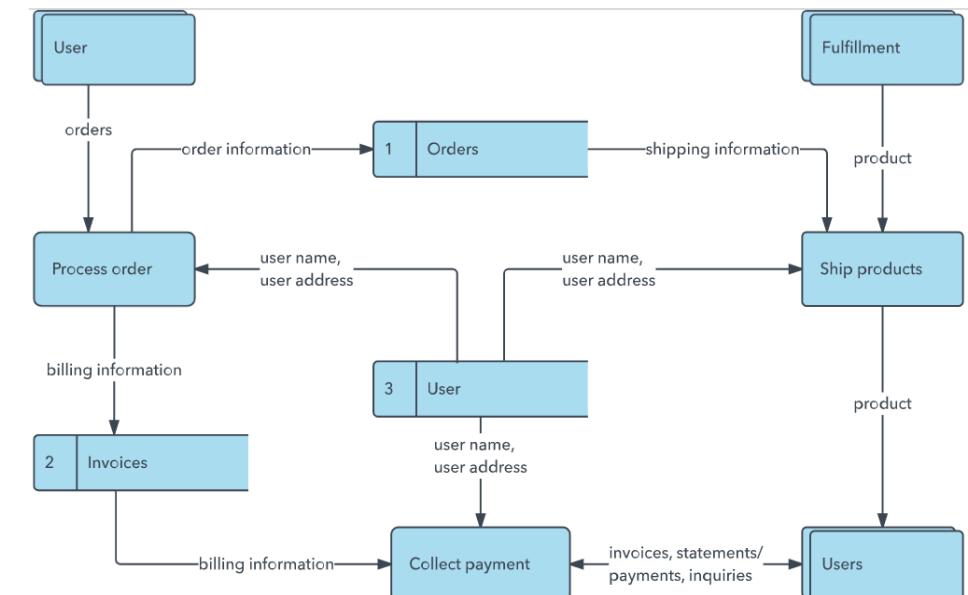
Example: (Simplified)

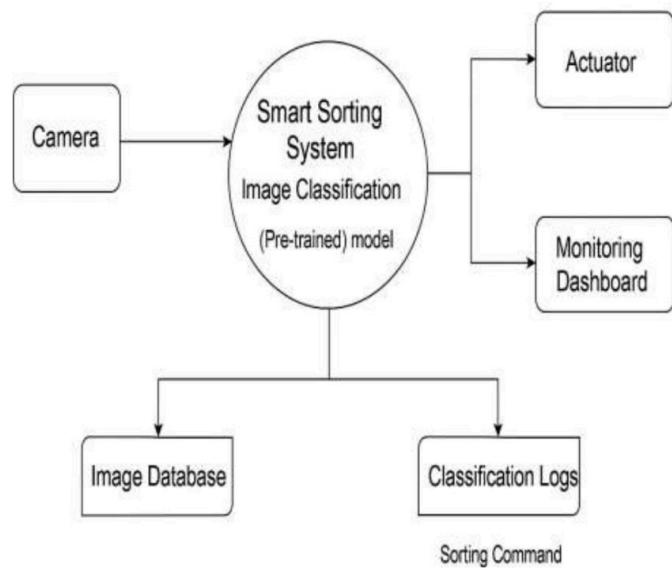
Flow



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.

Example: DFD Level 0 (Industry Standard)





User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Quality Control Manager	Image Classification	USN-1	As a quality manager, I can view alerts when rotten items are detected.	An alert appears when a rotten item is classified.	High	Sprint-1
Quality Control Dashboard Monitoring	Dashboard Monitoring	USN-2	As a manager, I can monitor real time sorting data on a dashboard.	Live feed shows the number of rotten vs fresh items sorted.	High	Sprint-1
System (Machine vision)	Image Capture and processing	USN-3	As for the system, I can capture and process images of fruits and vegetables using cameras and send them for classification.	Every frame is analyzed, processed images are labeled	High	Sprint-1
Administrator	Model Training	USN-4	As an admin, I can upload new training data to retrain the transfer learning model.	New data accepted and model retrained successfully.	Medium	Sprint-2

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Warehouse Supervisor	Report Generation	USN-5	As a supervisor, I can generate daily and weekly reports of sorting results.	Reports show counts of fresh vs rotten items with timestamps.	Medium	Sprint-2
Smart fridge User (Home)	Spoilage Notification	USN-6	As a user, I receive notifications if any stored produce is detected as spoiling.	Notification is triggered for any spoiled item in the fridge.	High	Sprint-2