

## Project Design Phase-II Data Flow Diagram & User Stories

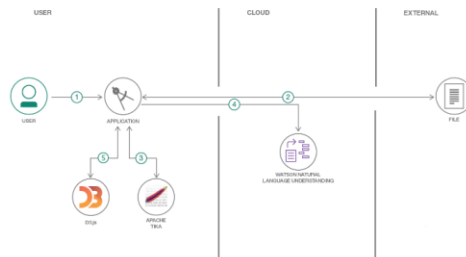
Date	27 June 2025
Team ID	LTVIP2025TMID38971
Project Name	pollen's profiling: automated classification of pollen grains
Maximum Marks	4 Marks

### 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.

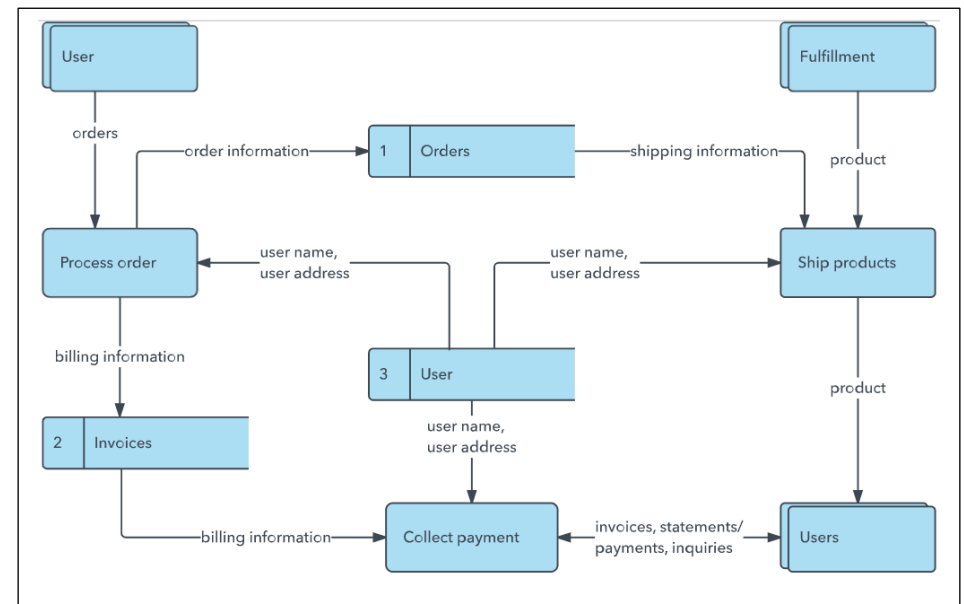
#### Example: (Simplified)

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
Researcher (Web User)	Image Upload & Classification	USN-1	As a user, I can register for the application using email and password.	I can log in to access the image upload dashboard.	High	Sprint-1
		USN-2	As a user, I can upload microscope images of pollen grains.	I can upload one or more image files (JPG/PNG) and see upload success confirmation.	High	Sprint-1
		USN-3	As a user, I can view classification results of the uploaded pollen image.	I see the species name, confidence score, and visualization of processed image.	High	Sprint-2
		USN-4	As a user, I can download a report of the classification result.	I get a PDF or CSV with image name, species, confidence, and timestamp.	Medium	Sprint-3
	Login	USN-5	As a user, I can view the feature map or saliency map of the CNN.	I see which regions of the image influenced the prediction.	Low	Sprint-3
Lab Technician	Batch Processing	USN-6	As a lab technician, I can upload multiple images at once for batch classification.	I can upload a zip folder or multiple images and get results in a table.	High	Sprint-2
	Classification History	USN-7	As a technician, I can view the history of previously classified images.	I can see a table with image name, date, species, and re-run option.	Medium	Sprint-3
Administrator	User & System Management	USN-8	As an admin, I can manage user accounts (activate/deactivate).	I can change user access and view registration logs.	High	Sprint-2
	Dataset Management	USN-9	As an admin, I can update the classification model by uploading new training data.	I can upload a labeled dataset and trigger model retraining.	High	Sprint-3
	Logs and Monitoring	USN-10	As an admin, I can monitor system logs for usage and errors.	I can view logs of upload times, classification errors, and user activity.	Medium	Sprint-3

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