

Project Design Phase-II Data Flow Diagram & User Stories

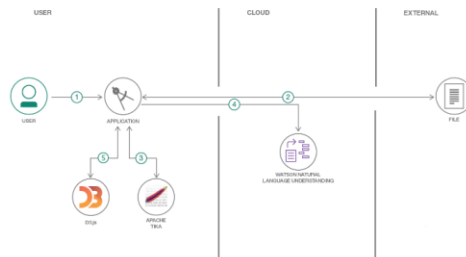
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|---------------|----------------------------------------------------------------------------------------|
| Date | 27 June 2025 |
| Team ID | LTVIP2025TMID38995 |
| Project Name | Revolutionizing Liver Care: Predicting Liver Cirrhosis Using Advanced Machine Learning |
| 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.

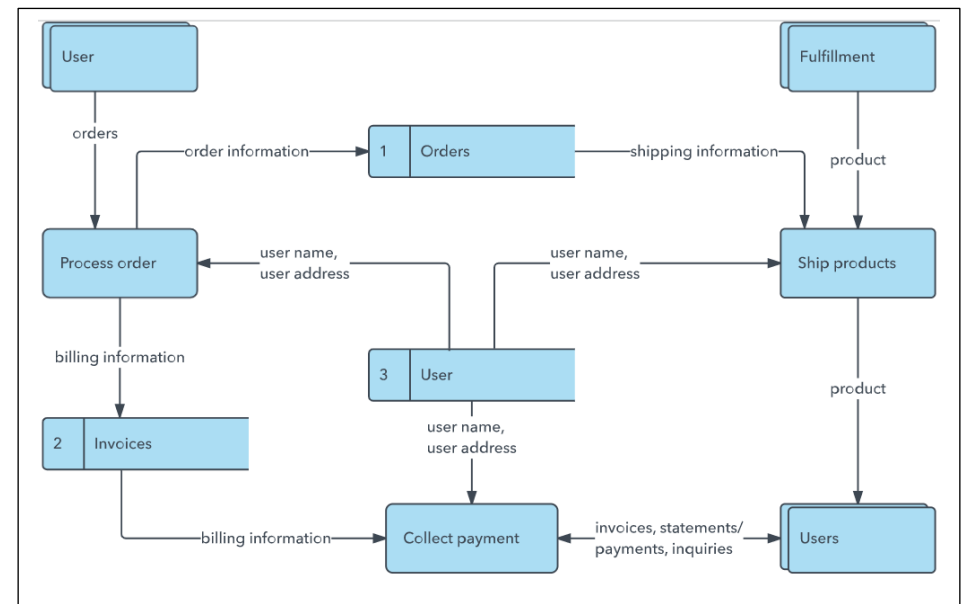
Example: (Simplified)

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.

| | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Release |
|--------------------|------------------------------------|-------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|----------|----------|
| Doctor (Web User) | Patient Risk Prediction | USN-1 | As a doctor, I can enter patient clinical values to get an instant cirrhosis prediction. | I get a prediction as "Cirrhosis Detected" or "No Cirrhosis" after submitting the form. | High | Sprint-1 |
| | | USN-2 | As a doctor, I can view the prediction result along with basic probability or model confidence. | I can see prediction accuracy/confidence score with the result. | Medium | Sprint-2 |
| | | USN-3 | As a doctor, I can reset and enter new patient data without reloading the page. | Form resets to blank input fields. | Low | Sprint-3 |
| | Patient Record Tracking (Optional) | USN-4 | As a doctor, I can optionally save a patient's test inputs and prediction result. | Prediction is stored with a timestamp. | Medium | Sprint-3 |
| Patient (Web User) | Self-Check (Limited) | USN-5 | As a patient, I can enter my own clinical test results to check for liver cirrhosis. | User gets result without needing login. | Medium | Sprint-2 |
| | Help / About | USN-6 | As a patient, I can read about liver cirrhosis and how predictions are made. | Help/About section is available with educational content. | Low | Sprint-3 |
| Admin | User Monitoring | USN-7 | As an admin, I can view all doctors who are using the system and track usage stats. | Admin can see a dashboard with user logs. | Medium | Sprint-3 |
| | Model Management | USN-8 | As an admin, I can upload a new trained ML model without changing backend code. | Admin uploads .pkl file and selects it as active. | High | Sprint-3 |
| | Authentication Management | USN-9 | As an admin, I can reset passwords or deactivate accounts. | Admin can manage users from dashboard. | Medium | Sprint-3 |
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