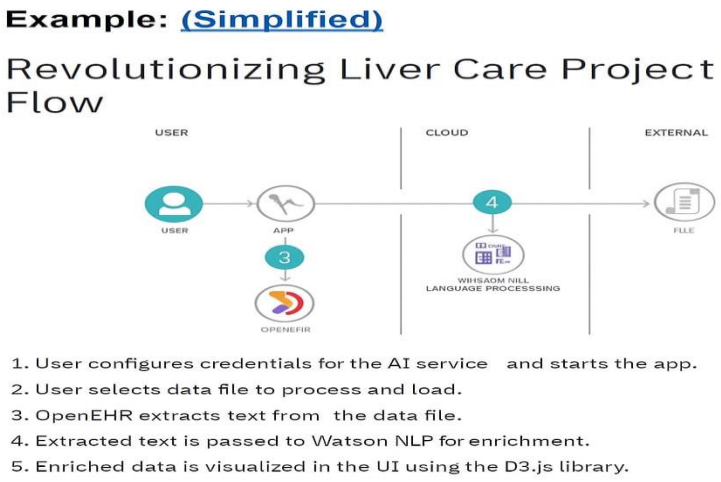
Project Design Phase-II
Data Flow Diagram & User Stories

Date	19 JUNE 2025
Team ID	LTVIP2025TMID33932
Project Name	Revolutionizing Liver Care : Predicting Liver Cirrhosis using Advanced Machine Learning Techniques
Maximum Marks	4 Marks

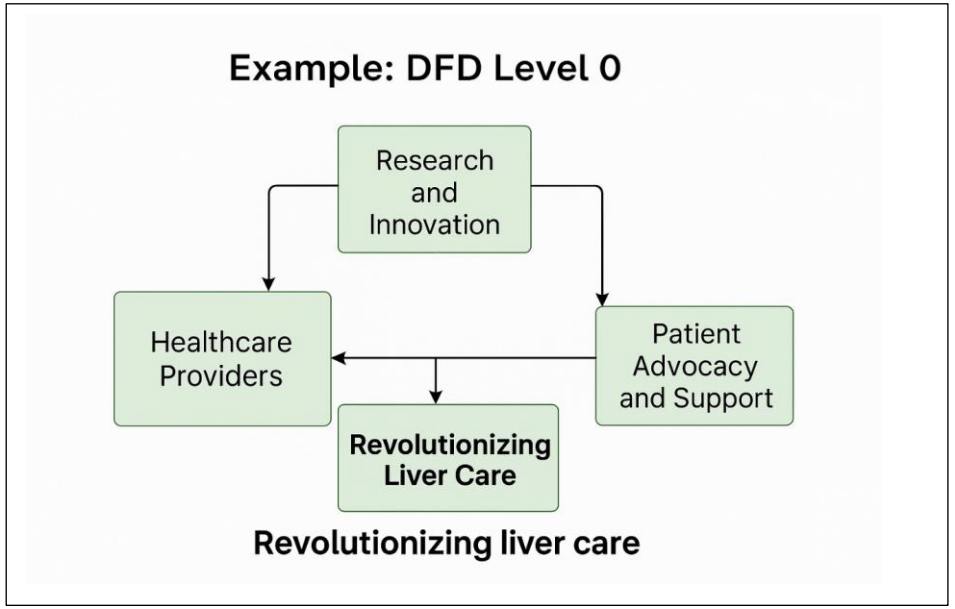
Data Flow Diagrams:

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)



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
Data Engineer	Data Integration	USN-1	As a developer, I want to collect and integrate liver test records and clinical data	Data sources integrated and stored in raw form	High	Sprint-1
Data Engineer	Data Preprocessing	USN-2	As a developer, I want to preprocess and clean the liver dataset	Dataset cleaned, transformed, and validated for modeling	High	Sprint-1
ML Engineer	Model Building	USN-3	As a developer, I want to build a model to predict the risk of liver cirrhosis	Model trained with ≥80% accuracy	High	Sprint-2
ML Engineer	Model Evaluation	USN-4	As a data scientist, I want to evaluate the model using precision, recall, and AUC	Metrics computed and performance validated	Medium	Sprint-2
DevOps	Model Deployment	USN-5	As a developer, I want to deploy the trained model for real-time liver risk prediction	Model hosted and accessible via REST API	High	Sprint-3
Doctor (Admin)	Dashboard Access	USN-6	As a doctor, I want to see cirrhosis predictions and patient status in a dashboard	Dashboard shows prediction scores and relevant clinical flags	High	Sprint-4
Healthcare Provider	Clinical Insight Reports	USN-7	As a clinician, I want to generate reports for at-risk patients	Reports exportable by patient ID/date and highlight risk levels	Medium	Sprint-3
Patient	Health Monitoring	USN-8	As a patient, I want to get notified if I'm at high risk based on recent test results	SMS/email alerts triggered for high-risk predictions	Low	Sprint-4
Hospital IT Team	API Integration	USN-9	As a developer, I want to integrate liver prediction API into hospital systems	API returns responses <2s and supports authentication	High	Sprint-2