Project Design Phase-II

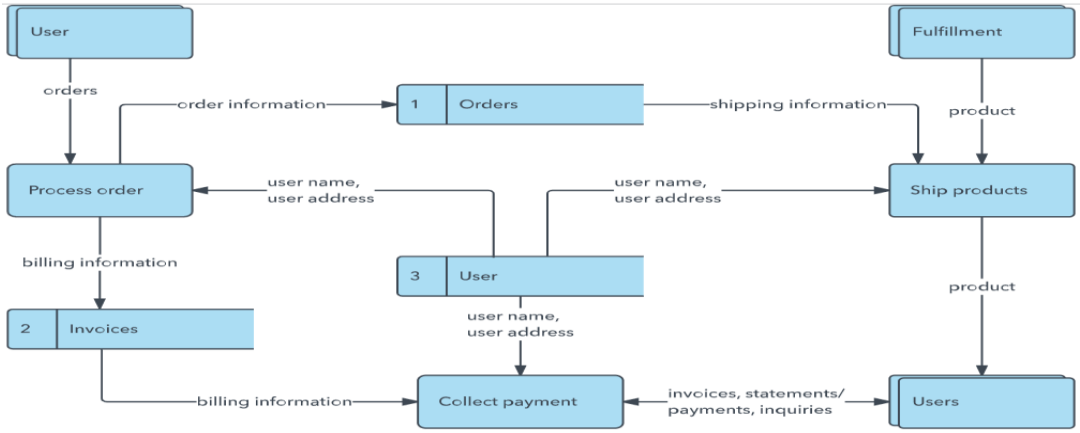
Data Flow Diagram & User Stories

Date	27 JUNE 2025
Team ID	LTVIP2025TMID59764
Project Name	Hematovision:Advanced Blood Cell Classification using Transfer Learning
Maximum Marks	4 Marks

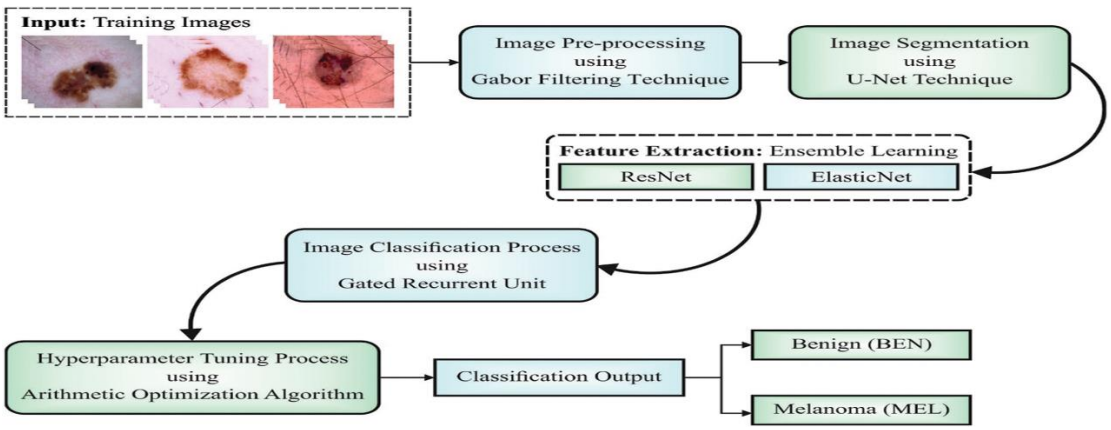
Data Flow Diagrams:

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)



Example : DFD Level 0



User Stories

User Type	User Role	User Story Number	User Story / Task	Acceptance Criteria
Customer (Mobile user)	Medical Lab Tech	USN-1	As a medical lab technician, I want to upload blood smear images so that I can analyze them automatically.	Upload button available; Supports standard image formats (JPG, PNG); Shows upload confirmation.
	ML Engineer	USN-2	As an ML engineer, I want to apply transfer learning models (e.g., ResNet, EfficientNet) so that training is efficient and accurate.	Pretrained model can be loaded; Custom layers can be fine-tuned; Logs accuracy and loss metrics.
	Researcher	USN-3	As a researcher, I want to visualize the dataset distribution so that I can detect imbalance issues.	Bar chart of class distribution; Option to download summary stats (CSV).
	Data Scientist	USN-4	As a data scientist, I want to evaluate model performance metrics so that I can assess its reliability.	Confusion matrix, accuracy, precision, recall, F1 score available post-evaluation.
	User (General)	USN-5	As a lab administrator, I want the system to log predictions with timestamps so that we can audit reports.	UI loads without error; Contains clear options for upload, predict, view results.
	Lab Admin	USN-6	As a lab administrator, I want the system to log predictions with timestamps so that we can audit reports.	Each prediction stored with date, time, image ID, and predicted class in a retrievable log.