Project Design Phase
Solution Architecture

Date	27 June 2025
Team ID	LTVIP2025TMID38326
Project Name	Revolutionizing Liver Care: Predicting Liver Cirrhosis Using Advanced Machine Learning Techniques
Maximum Marks	4 Marks

Solution Architecture:

- The business problem is early and accurate prediction of liver cirrhosis, which is critical for timely treatment and reducing mortality.
- The project uses clinical datasets and applies supervised machine learning algorithms like Random Forest or Logistic Regression for prediction.
- The system allows input of patient data such as lab results, medical history, and symptoms.
- The model processes this data and predicts the likelihood of liver cirrhosis.
- The architecture includes data collection, preprocessing, training, evaluation, and a user-friendly front-end for interaction.
- Deployment is planned via a web-based or cloud-hosted solution using tools like Flask, Google Colab, or Streamlit**.**

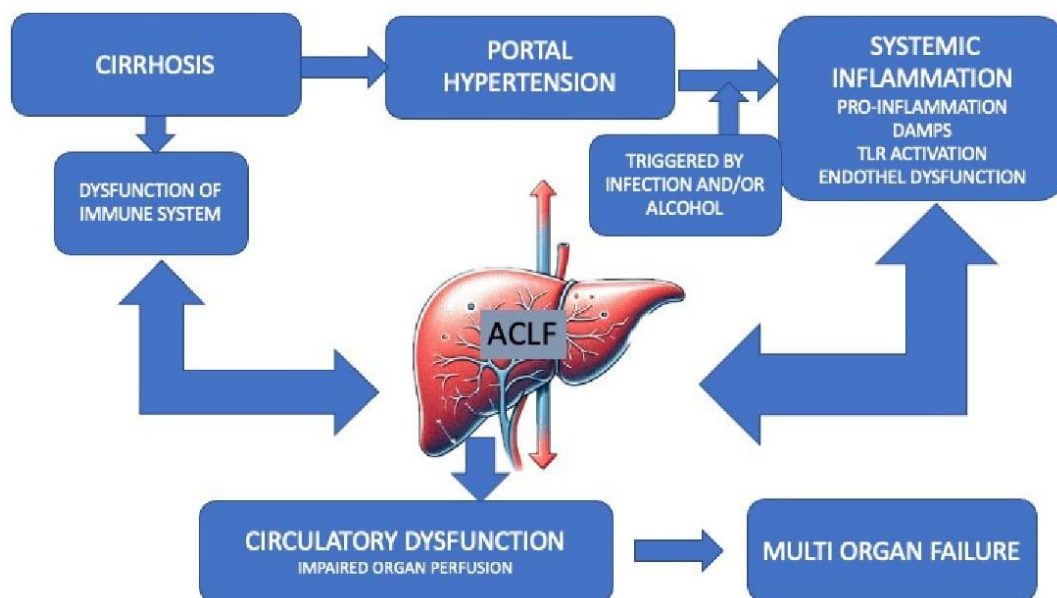## Example - Solution Architecture Diagram:

Figure 1: Progression of Liver Cirrhosis to Acute-on-Chronic Liver Failure (ACLF)