Project Design Phase
Proposed Solution

Date	27 June 2025
Team ID	LTVIP2025TMID38326
Project Name	Revolutionizing Liver Care: Predicting Liver Cirrhosis Using Advanced Machine Learning Techniques
Maximum Marks	2 Marks

Proposed Solution :

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Liver cirrhosis is a progressive disease that can be fatal if not diagnosed early. Traditional diagnostic methods are often time-consuming, expensive, and inaccessible in remote areas. There is a need for a fast, accurate, and cost-effective solution to predict liver cirrhosis using patient data.
2.	Idea / Solution description	The project aims to develop a machine learning-based system that predicts liver cirrhosis using clinical data. The system takes patient attributes such as age, lab results, and symptoms, and applies classification algorithms to predict the presence of cirrhosis. This tool assists doctors in making timely decisions and helps in early diagnosis.
3.	Novelty / Uniqueness	This solution automates diagnosis using machine learning, reducing human error and time in clinical assessments. The model can continuously learn and improve with more data, unlike static rule-based systems. It also makes diagnosis accessible in resource-limited settings without requiring specialized equipment.
4.	Social Impact / Customer Satisfaction	Early and accurate detection of liver cirrhosis can significantly improve patient outcomes and reduce mortality. The tool helps underprivileged and rural populations who lack access to expert medical services. It increases patient trust by offering reliable predictions and enhances overall healthcare quality.
5.	Business Model (Revenue Model)	Offered as a subscription-based or freemium web tool for hospitals and clinics. Can be integrated with EHR systems for wider adoption.
6.	Scalability of the Solution	The system is adaptable for other diseases, languages, and geographies. Cloud deployment allows easy access and multi-user support.