**Project Design Phase**

**Proposed Solution Template**

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| Date | 15 February 2025 |
| Team ID | LTVIP2025TMID33878 |
| Project Name | Revolutionizing Liver Care : Predicting Liver Cirrhosis using Advanced Machine Learning Techniques |
| Maximum Marks |  |

**Proposed Solution Template:**

Project team shall fill the following information in the proposed solution template.

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| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | Liver cirrhosis is often diagnosed at a late stage due to lack of awareness, delayed testing, and limited access to affordable diagnostic tools, especially in rural areas. |
|  | Idea / Solution description | A web-based ML-powered predictive tool that can analyze patient data (lab values, symptoms) and provide early warnings for potential liver cirrhosis risk, allowing for timely intervention. |
|  | Novelty / Uniqueness | Unlike traditional methods that rely on costly and invasive procedures like biopsies, this tool offers a non-invasive, data-driven, fast, and user-friendly interface for early-stage prediction. |
|  | Social Impact / Customer Satisfaction | Improves access to liver disease diagnosis in underserved regions, increases awareness, empowers patients and doctors with early warning systems, and reduces fatality rates through prevention. |
|  | Business Model (Revenue Model) | Freemium model: Basic prediction free for individuals; subscription-based advanced analytics for hospitals/clinics; data analytics services for research organizations and pharma companies. |
|  | Scalability of the Solution | Can be scaled nationally and globally via cloud deployment. Easily integrable into hospital systems or mobile health apps; adaptable to other chronic diseases beyond liver cirrhosis. |