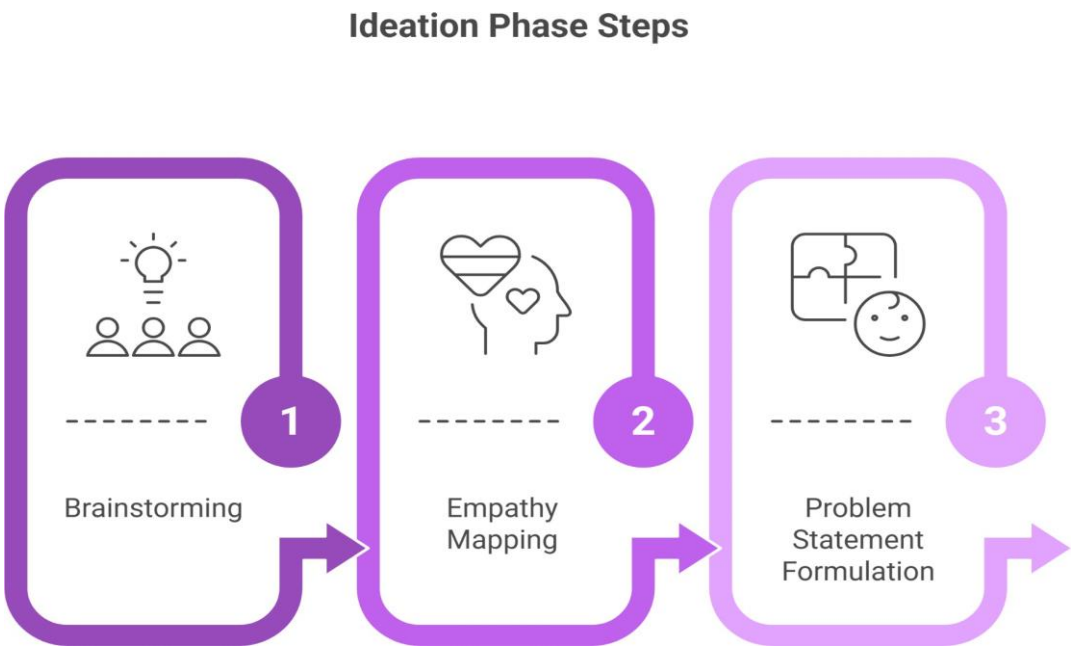
Ideation Phase

The Ideation Phase serves as the foundation of any successful project. It blends creativity, user empathy, and structured thinking to identify the core problem, generate meaningful ideas, and prioritize solutions that bring value to users. Where creativity and structured thinking combine to find meaningful and impactful documentation

In our project titled: **“**Revolutionizing Liver Care: Predicting liver cirrhosis**”**. This project aims to develop a predictive model for the early detection and prognosis of liver cirrhosis using machine learning techniques.

The ideation phase included three main steps:

1. Brainstorming
2. Empathy Mapping
3. Problem Statement Formulation



1. 🔹 Brainstorming & Idea Prioritization Template

Step 1: Team Gathering, Collaboration, and Selecting the Problem Statement

Our team convened with the goal of identifying inefficiencies in current liver disease diagnostics and proposing a tech-driven predictive healthcare solution.
Through collaborative meetings, medical research reviews, online whiteboards, and patient journey mapping, we collectively explored pain points faced by hepatologisits, lab technicians, and healthcare administrators. We reviewed real-world hospital practices and identified that most liver care systems still rely heavily on manual workflows for managing:

- Liver function test data interpretation
- Patient diagnosis and staging of cirrhosis
- Manual risk score calculations
- Periodic performance tracking of liver care programs

After several discussions, we clearly defined the core issue:

Problem Statement:

"Liver cirrhosis is often diagnosed late due to manual and inconsistent analysis of liver test results.
Healthcare systems lack predictive tools and centralized data, leading to delayed treatment and poor outcomes.
An automated, intelligent system is needed to assess liver health and predict cirrhosis risk in real time..

Step 2: Brainstorm, Idea Listing, and Grouping

We conducted a collaborative brainstorming session using a digital board, where each team member contributed ideas focused on enhancing liver care diagnostics. These ideas were grouped under key healthcare technology themes:

- **Data Management**: centralized storage of patient profiles, liver function test results, and diagnostic history
- **Automation**: real-time risk score calculation, alert generation for critical cases
- **Reporting**: visual dashboards showing liver health trends, patient risk levels, and diagnosis distribution
- **Validation & Access Control**: ensuring data accuracy with rule-based checks and role-based access for doctors and technicians

From around 25–30 ideas, we grouped and shortlisted the ones that aligned directly with operational efficiency.

Step 3: Idea Prioritization

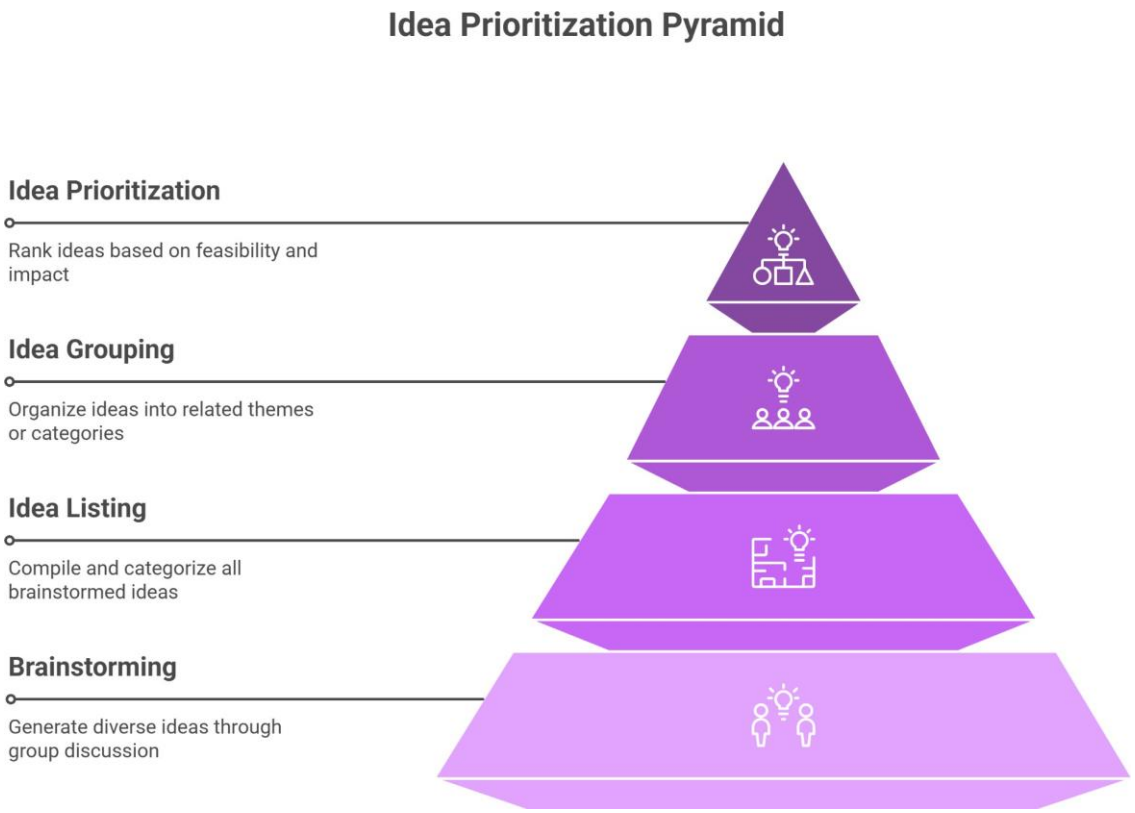
Each grouped idea was evaluated on:

- **Feasibility:** How easily the solution could be implemented using healthcare technology tools
- **Impact:** The value the feature would bring to early detection and patient outcomes
- **Urgency:** Whether the solution addressed a critical gap in current liver care workflows

We developed a decision matrix to help identify a Minimum Viable Product (MVP) that could provide immediate clinical benefit and support scalable development.

- **Top Priority Features**:
    - Automated liver test data updates
    - Role-based medical assignments
    - Trigger-based alerts for critical cases
    - Real-time summary dashboards (Visual summaries of liver health trends, patient risk levels)
    - Controlled field dependencies

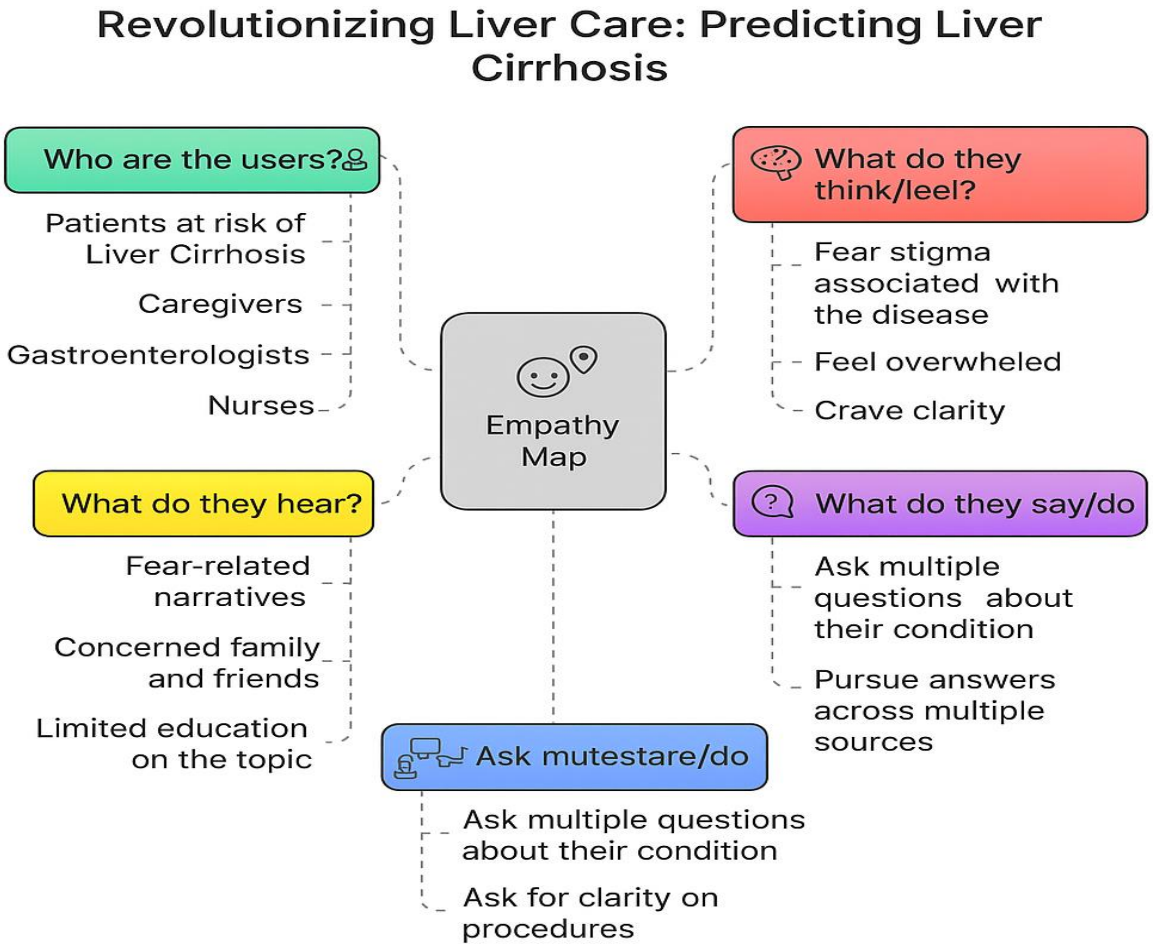
These features formed the scope of our system design in the subsequent development phases.



🔹 Empathy Mapping- Empathize & Discover

Empathy Map Canvas

An empathy map is a visual tool that helps teams deeply understand their users' experiences, pains, and expectations. We used it to map the daily challenges of liver care stakeholders, including hepatologists, lab technicians, healthcare admins and patients.



By stepping into the user’s shoes, we ensured that our Salesforce CRM features (formulas, flows, triggers, dashboards) directly addressed their key frustrations.

🔹 Define the Problem Statements

Customer Problem Statement Template

To build a successful solution, it's essential to clearly identify the core challenges user face. This ensures the system is focused on real-world medical needs rather than just technical implementation.

Final Customer Problem Statement:
Healthcare providers manage liver disease diagnosis through fragmented records and manual interpretation of liver function tests. This results in delayed diagnoses, increased risk to patients, and inconsistent clinical decisions. A centralized, intelligent system can digitize patient workflows, ensure accurate risk assessment, and deliver timely insights through predictive scoring, dashboards, and automation. This aligns with clinical expectations and informs the system's design, validations, and reporting capabilities.