Ideation Phase
Brainstorm & Idea Prioritization Template

Date	19/05/2025-30/6/2025
Team ID	LTVIP2025TMID45017
Project Name	GrainPalette - A Deep Learning Odyssey In Rice Type Classification Through Transfer Learning
Maximum Marks	4 Marks

Step-1: Team Gathering, Collaboration and Select the Problem Statement

Team Members:

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- Boya Janaki Ramu
- Kattubadi Munawar Hussain
- Lokesh Yadav

Our team gathered to discuss the main challenges faced by our target users — farmers, agricultural scientists, and home gardeners — regarding rice variety identification. Together, we analyzed user pain points and agreed on the following:

Selected Problem Statement:
Farmers and agriculture professionals lack an easy, quick, and accurate way to identify rice types, leading to uncertainty in crop planning and suboptimal cultivation practices.

Step-2: Brainstorm, Idea Listing and Grouping

During brainstorming, we listed ideas to address the selected problem:

- Develop an AI-based web app for rice type identification using image uploads.
- Use transfer learning with lightweight models like MobileNetv4 to support mobile/low-bandwidth use.
- Add real-time feedback for farmers with recommended cultivation tips for each rice type.
- Create an offline version for regions with poor internet connectivity.
- Integrate the app with existing agricultural advisory services for seamless farmer support.
- Provide a knowledge base to help gardeners and students learn about rice biodiversity.

Grouped Ideas:

- **Technology Solutions**: AI model, offline version, mobile optimization.
- **User Experience**: Real-time tips, integration with advisory services.
- **Educational Tools**: Knowledge base for students/gardeners.

Step-3: Idea Prioritization

We evaluated ideas based on impact, feasibility, and alignment with farmers' needs:

High Priority:

- Develop AI-based web app with real-time rice type predictions.
- Provide cultivation tips tailored to predicted rice varieties.
- Use lightweight transfer learning models for fast, accessible predictions.

Medium Priority:

- Build offline support for regions without reliable internet.
- Integrate with agricultural advisory platforms.

Low Priority:

- Develop a knowledge base for students and gardening enthusiasts (to be considered after core functionality is complete).