IdeationPhase Brainstorm & Idea Prioritization Template

Date	25 JUNE 2025
Team ID	LTVIP2025TMID59527
Project Name	Smart SDLC- AI Enhanced Software Development LifeCycle
Maximum Marks	4Marks

2.3 Brainstorming

During the ideation sessions, the team used structured brainstorming to generate innovative and feasible solutions. Below are key ideas that emerged across technical, user-experience, and strategic dimensions:

Functional Ideas:

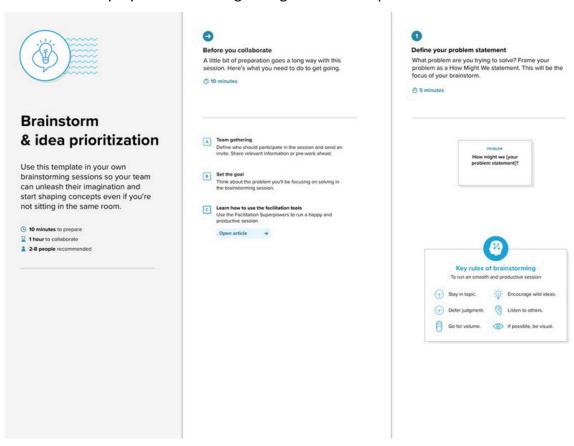
- Al-driven requirement extraction from PDFs using NLP (Natural Language Processing).
- Code generation engine based on prompt + language + framework selection.
- Automated test case generation (unit, integration, E2E).
- Natural language chat assistant to resolve developer queries instantly.
- "Explain this code" feature for knowledge transfer and junior onboarding.

Technical Ideas:

- Use IBM Granite Model for local, offline inference without API calls.
- · Use Streamlit for interactive UI and modular integration.
- Enable PDF parsing with PyMuPDF for versatile requirement input.
- Deploy with ngrok to provide shareable URLs for team demos without full deployment.

Experience & UI Ideas:

- Sidebar navigation for clean interaction flow.
- Option to download generated code/tests/requirements as .md or .txt files.
- Drag-and-drop PDF upload for non-technical users.
- Mobile-friendly layout for demoing during team stand-ups.



Step-3: Brainstorm, Idea Listing and Grouping

Business/Strategic Enhancements:

- Add enterprise compliance checks during code generation (e.g., security headers, input sanitization).
- Offer industry-specific templates (e.g., healthcare, e-commerce, banking).
- Version tracking and logging of generated outputs.
- Export capability to integrate outputs with project management tools (e.g., JIRA, Trello).

Final Shortlisted Features:

- Local model-based processing (Security First).
- Prompt + file-based requirement analyzer.
- Multi-language, multi-framework code generation.
- Al Assistant with enterprise context.
- Automated test generation from requirements or code.

Step-2: Idea Prioritization

