

Date	27 June 2025
Team ID	LTVIP2025TMID29288
Project Name	SmartSDLC – AI-Enhanced Software Development Lifecycle
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving.

Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich amount of creative solutions.

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

Selected Problem Statement:

There is no unified AI-powered solution to automate and simplify the Software Development Lifecycle (SDLC), which causes delays, inefficiencies, and a steep learning curve for both developers and non-technical stakeholders. This leads to slow delivery, communication gaps, and increased development effort.

Step 2: Brainstorm, Idea Listing and Grouping

Ideas Generated:

Idea No.	Idea Description	Group/Category
1	Build a platform that accepts unstructured PDF requirements and classifies them automatically	Requirement Analysis
2	Generate production-ready code from natural language descriptions	Code Generation
3	Create test cases using AI based on given code	Testing Automation
4	Implement AI-based bug fixing system	Debugging/Bug Resolution
5	Summarize and document code using generative AI	Documentation
6	Add a floating AI chatbot to assist with SDLC concepts and platform usage	Chatbot Assistant
7	Collect user feedback to improve AI outputs	Feedback Loop
8	Integrate GitHub for pushing AI-generated code, tracking issues, and syncing documentation	DevOps/GitHub Integration

Step 3: Idea Prioritization

Prioritized Ideas (Based on Impact & Feasibility):

Priority	Idea Description	Reason for Priority
High	Requirement classification from uploaded PDFs using AI	Solves initial bottleneck and saves planning time
High	Code generation from user stories using Hugging Face model	Automates a core SDLC task with high impact
High	Test case generation for provided code	Ensures quality and accelerates testing
Medium	Bug fixing using AI to correct logical/syntactical code errors	Reduces debugging time
Medium	Floating AI chatbot using LangChain to guide users	Enhances accessibility for all user types
Medium	Code summarization and documentation	Supports maintainability and team onboarding
Low	GitHub integration for syncing generated outputs	Useful for teams, not critical in MVP phase
Low	Feedback system for improving AI responses over time	More valuable in long-term iterations