Project Design Phase
Proposed Solution Template

Date	15 February 2025
Team ID	LTVIP2025TMID29410
Project Name	Smart SDLC using Generative AI on IBM Cloud
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Traditional Software Development Life Cycles (SDLCs) are often rigid, time-consuming, and lack intelligent automation, resulting in delays, higher costs, and quality issues. There is a need to modernize SDLC processes using AI-driven automation and cloud-native solutions for improved efficiency, traceability, and productivity.
2.	Idea / Solution description	The project proposes a Smart SDLC platform powered by Generative AI and hosted on IBM Cloud. The system leverages AI for automating requirements gathering, code generation, test case creation, and documentation. It integrates with DevOps tools and IBM Cloud services to ensure scalable deployment and real-time monitoring. The system also includes feedback-driven learning to improve future development cycles.
3.	Novelty / Uniqueness	- Use of Generative AI for code, test, and document generation. - Integration of IBM Watson AI and IBM DevOps toolchain for a fully cloud-based SDLC. - Feedback loops that enhance learning and reduce technical debt over time. - Automation of traditionally manual phases in SDLC, increasing development velocity.
4.	Social Impact / Customer Satisfaction	- Reduces time-to-market for applications, benefiting startups and enterprises. - Ensures higher software quality and customer satisfaction due to automation of testing and validation. - Promotes digital transformation by democratizing AI-assisted software development for non-technical users.
5.	Business Model (Revenue Model)	- Freemium model for educational institutions and small businesses. - Subscription-based SaaS for enterprises (monthly or annual). - Custom enterprise integrations and support services offered at premium tiers.

6.	Scalability of the Solution	- Built on IBM Cloud, the system supports horizontal scalability with containerization (Kubernetes). - Modular architecture allows integration of new AI models and DevOps tools. - Can be extended for multiple domains (e.g., healthcare, finance, education) with domain-specific data.