**Project Design Phase**

**Proposed Solution Template**

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| Date | 26 june 2025 |
| Team ID | LTVIP2025TMID59401 |
| Project Name | **SmartSDLC – AI-Enhanced Software Development Lifecycle** |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

Project team shall fill the following information in the proposed solution template.

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| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | Many businesses lack an intelligent, low-cost way to automate responses, generate content, or integrate AI without deep technical expertise. |
|  | Idea / Solution description | This project provides an AI-powered chatbot using IBM Watson/Watsonx integrated with FastAPI and Streamlit. It accepts user input and generates relevant AI responses with token management and efficient API usage. |
|  | Novelty / Uniqueness | Combines IBM Watson's enterprise-grade AI with lightweight, open-source tools like FastAPI and Streamlit. Implements token caching to reduce API load. |
|  | Social Impact / Customer Satisfaction | Enables small businesses, students, and startups to access advanced AI without high costs. Offers real-time feedback and personalized assistance. |
|  | Business Model (Revenue Model) | Can be offered as a SaaS chatbot solution for companies. Subscription-based pricing or API-call-based billing. Add-ons for analytics and custom training. |
|  | Scalability of the Solution | Scalable with minimal infrastructure. Can handle multiple users via API scaling. Easily extendable to support multiple languages and advanced NLP features. |