

Project Design Phase

Problem - Solution Fit Template

Date	15 February 2025
Team ID	LTVIP2025TMID36326
Project Name	Smart SDLC AI Assistant
Maximum Marks	2 Marks

1 Problem - Solution Fit Template

1.1 Purpose

The Problem-Solution Fit ensures that the identified customer problem is addressed by a solution that effectively resolves it. It helps identify behavioral patterns, leverage existing channels, sharpen communication strategies, increase touch-points, and build trust by solving frequent, urgent, or costly problems. The goal is to understand the current situation to improve it for the target group.

1.2 Problem - Solution Fit Canvas

Customer Segment	Software developers, students, and small development teams.
Problem	Time-consuming manual SDLC processes (e.g., requirement analysis, coding, testing, debugging, documentation), error-prone coding, and limited resources for small teams.
Customer Behaviors	Manually write and debug code, search online for solutions to bugs, struggle with unclear or complex requirements, and dedicate significant time to repetitive tasks.
Existing Solutions	Traditional IDEs (e.g., VS Code, IntelliJ), static code analysis tools (e.g., SonarQube), and partial automation tools (e.g., Selenium for testing), which lack integrated AI-driven automation.
Proposed Solution	Smart SDLC AI Assistant: A web-based platform with AI-driven features for requirement analysis, multilingual code generation (Python, Java, C++), automated test case creation, bug detection and fixing, code summarization, and a chatbot for SDLC queries.
Value Proposition	Automates repetitive SDLC tasks to save time, reduces errors with AI-driven analysis and fixes, supports multiple programming languages for flexibility, and provides real-time assistance via a chatbot, ideal for developers and teams with limited resources.

1.3 References

- <https://www.ideahackers.network/problem-solution-fit-canvas/>
- <https://medium.com/@epicantus/problem-solution-fit-canvas-aa3dd59cb4fe>