

AI-Driven Development — 30-Day Challenge

Task 2 — Official Submission

Part A — Theory (Written in Simple Language)

1. Nine Pillars Understanding

Using AI Development Agents like Gemini CLI is helpful because they handle boring setup tasks. This gives the developer more time to think about design and system structure. The Nine Pillars connect testing, specs, AI tools, agents, and automation, helping a developer grow skills in many related areas. This growth makes the developer an M-shaped developer with deep knowledge in multiple fields.

2. Vibe Coding vs Specification-Driven Development

Vibe coding creates problems after one week because there is no planning and no clear structure. The code becomes confusing and hard to extend. Specification-Driven Development solves this by creating clear, written rules before coding starts. This makes the project clean, easy to understand, and manageable.

3. Architecture Thinking

Architecture-first thinking changes the role of a developer because the developer now focuses on planning systems instead of only writing code. Developers must think in layers because layered thinking makes software organized, scalable, and easier to maintain. Raw code thinking cannot handle big systems.

Part B — Practical Task (Using Gemini CLI)

CLI Prompt:

"Generate a one-paragraph specification for an email validation function. The email must contain '@', must have a valid domain like .com or .org, and must return clear error messages."

Specification Generated by Gemini CLI:

"The email validation function should check that the input contains an '@' symbol, includes a proper domain ending such as .com or .org, and verifies the characters on both sides of the '@'. If any rule is broken, the function should return a clear and simple error message explaining what is wrong, instead of a generic failure."

Part C — Multiple Choice Answers

1. B

2. B

3. B

4. B

5. C