GA02 - Seminar Proposal

Student info

Name	Student ID
Hoàng Tiến Huy	22120134
Phan Thanh Tiến	22120368
Nguyễn Bùi Vương Tiễn	22120370

Self evaluation

Criteria	Description	Points
Relevance	Topic fits the course and current web development trends: Applied AI in development	2
Clarity	Objectives and scope are clearly defined	2
Originality	Demonstrates independent thinking or a unique angle	2
Feasibility	Can be realistically covered in a short seminar	2
Presentation Quality	Document is clear, concise, and well-formatted	2

=> Self evaluated score: 10

Seminar Proposal

1. Seminar Title

"Accelerating Web Application Development with Spec-Driven Development and Spec Kit"

2. Introduction / Background

In modern web application development, teams face pressure to deliver high-quality features rapidly while maintaining architecture consistency, proper testing, and alignment between product vision and implementation.

With the rise of AI-assisted coding tools, developers now have powerful aids to help generate code snippets, boilerplate, and even complex logic. However, integrating these tools into a coherent development workflow remains a challenge. If not managed well, the use of AI coding agents can lead to fragmented codebases, misaligned implementations, and increased technical debt.

The emerging paradigm of *Spec-Driven Development (SDD)* flips the traditional workflow by making specifications the primary artifact and enabling tools (such as Spec Kit) to translate those specs — often with AI assistance — into working implementations. The approach offers potential gains in aligning product

intent, reducing misinterpretation, and speeding up feature delivery in a web-stack context. ([GitHub Documentation][1])

3. Objectives:

By the end of this seminar, participants will be able to:

1. Explain the architecture and philosophy of Spec-Driven Development and how Spec Kit supports it.
2. Demonstrate how a web application feature (frontend + backend) can be scaffolded using Spec Kit's workflow.
3. Critically compare the benefits and limitations of Spec-Driven Development in real-world web dev teams.
4. Identify scenarios where Spec-Driven Development is most applicable, and where traditional workflows may still be preferred.

4. Scope and Relevance:

- This seminar will focus on the SDD workflow in the context of **modern web applications**: frontend (e.g., React/Vue/Svelte) + API/backend + database.
- We'll cover how Spec Kit integrates with AI coding agents (e.g., GitHub Copilot, Claude), and review how the spec → plan → tasks → implementation phases work.
- The discussion will include practical considerations such as when SDD is appropriate (greenfield vs. legacy), how it interacts with agile workflows, and how web-dev teams could adopt or resist it.
- It does **not** aim to deeply cover the internals of every supported AI agent, nor will it provide exhaustive code walkthroughs of a large system—rather, we'll use a representative web-feature to illustrate the workflow.

5. Expected Outcomes

Participants will leave with:

- A clear understanding of the concept of Spec-Driven Development (SDD) and its role in modern web development workflows.
- Knowledge of how SDD aligns product intent with implementation to reduce misinterpretation and technical debt.
- An understanding of how SDD integrates with AI coding tools like GitHub Copilot to enhance productivity.
- Practical insights into using Spec Kit to scaffold a web application feature, including both frontend and backend components.
- The ability to identify the strengths and limitations of SDD in comparison to traditional development workflows. Participants should able to determine which scenarios SDD should be applied to.

6. References

- Spec Kit official GitHub repository and documentation. ([GitHub][2])
- Blog article "Spec-Kit tames AI-coding chaos with Spec-Driven Development". ([virtuslab][3])
- Vietnamese article "Spec-Driven Development (SDD): Khám phá phương pháp…" ([Evotek][4])

[1]: https://github.github.com/spec-kit/index.html?utm_source=chatgpt.com "Spec Kit | Spec Kit Documentation"

[2]: https://github.com/github/spec-kit?utm_source=chatgpt.com "GitHub - github/spec-kit: 🪐 Toolkit to help you get started with Spec-Driven Development"

[3]: https://virtuslab.com/blog/ai/spec-kit-tames-ai-coding-chaos/?utm_source=chatgpt.com "Spec-Kit taming AI-coding chaos with Spec-Driven Development"

[4]: https://tuyendung.evotek.vn/spec-driven-development-sdd-kham-pha-phuong-phap-phat-trien-phan-mem-huong-dac-ta-trong-ky-nguyen-ai/?utm_source=chatgpt.com "Spec Driven Development (SDD): Khám Phá Phương Pháp Phát Triển Phần Mềm Hướng Đặc Tả Trong Kỳ Nguyên AI – Evotek Careers"