

# 20241129-aigrunn-ai-infused-sa-prompts

## AI Infused Software Architecture - aiGrunn 2024

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### Prompt 1 - Setup

"I am a software architect working on developing a new software architecture. I need help creating a high-level structure that includes key components, their responsibilities, and interactions. Can you guide me through this step by step or provide suggestions tailored to modern best practices?"

### Prompt 2 - Project start

"I am designing an online pizza ordering tool for a local pizza restaurant. Customers can browse the menu and place orders. Bakers need to track baking tasks, and delivery drivers should receive notifications when pizzas are ready and see delivery addresses. The backend uses Java with a PostgreSQL database, but the frontend technology is undecided. Can you help me:

- Design a scalable architecture for this system, ensuring clear responsibilities for each component?
- Propose frontend technologies that integrate well with the backend?
- Suggest database schema ideas to support customers, orders, and delivery logistics?

### Prompt 3 - C4 modelling

I want to create a C4 model using Structurizr that includes:

1. A Context diagram showing interactions with customers, bakers, delivery drivers, and external payment systems.
2. A Container diagram illustrating frontend, backend, and database components.
3. A Component diagram detailing backend services (e.g., Order Service, Baking Service).

Can you help generate Structurizr-compatible code and ensure the diagrams reflect good architecture practices, including clarity and scalability?"

### Prompt 4 - ADR's

We are modifying our architecture to use Microsoft SQL Server as the database instead of the current solution.

Could you draft an Architecture Decision Record (ADR) explaining the rationale, alternatives considered, and the implications of this decision?

Please format it in Markdown using the attached template file for consistency and clarity.

## **Prompt 5 - ArchUnit**

I would like you to write ArchUnit unit tests for the architecture we just designed. The tests should enforce key architectural rules, such as:

1. Ensuring specific dependencies between packages or layers.
2. Validating that services adhere to naming conventions.
3. Restricting certain components from accessing unauthorized layers or packages.

Please make the tests comprehensive, easy to extend, and aligned with Java best practices.