

A1: Conceptual Architecture

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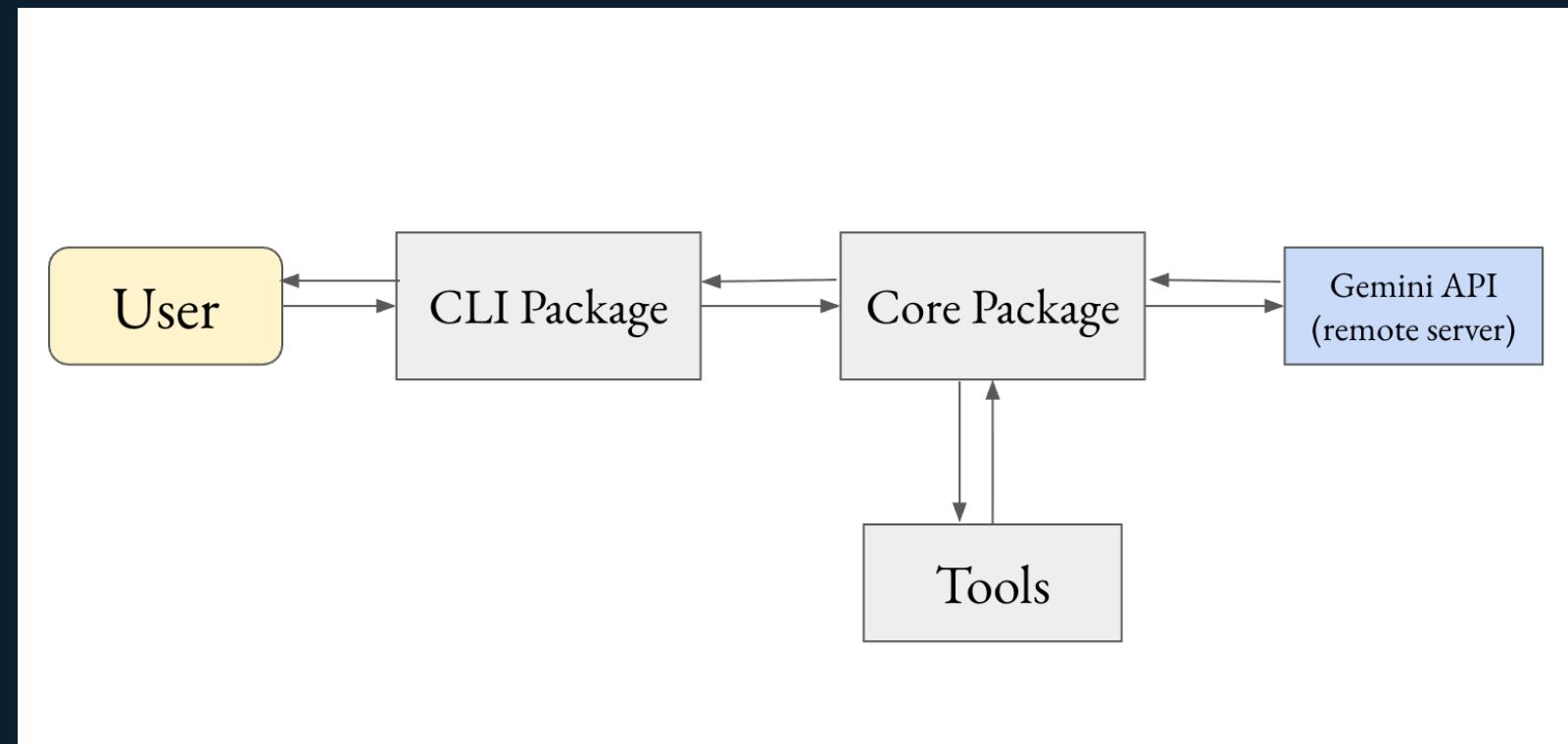


GETIPII

For getting started,
ask questions, edit files, or run commands.
Be specific for the best results.
Help for more information.

GEMINI CLI

Introduction and Architecture Overview



- Open-source CLI agent for Google Gemini
- Gemini 2.5 Pro in the command line
- Highly extensible & customizable

DERIVATION PROCESS

- Reading provided documentation
- Looking for external resources
- Group discussion
- Learned Lucidchart / Krita to make diagrams

CORE COMPONENTS

CLI Package

- Frontend package
- React/Ink Terminal user interface
- Command parsing
- Configuration and authentication

Core Engine

- Backend package
- Prompt instructions
- Agent control logic
- Safety checks

Tools

- Tool orchestration and validation
- Registry and execution

S U B S Y S T E M S

CLI Package Systems

User Interaction System

- UI and input management
- Connection to Core

Configuration System

- Account setup & security
- System and project settings

Core Engine Systems

Prompt Management

- Process prompts
- Sends history and files to AI

Agent Control Logic

- Manages workflow
- Execution controls

Tools Systems

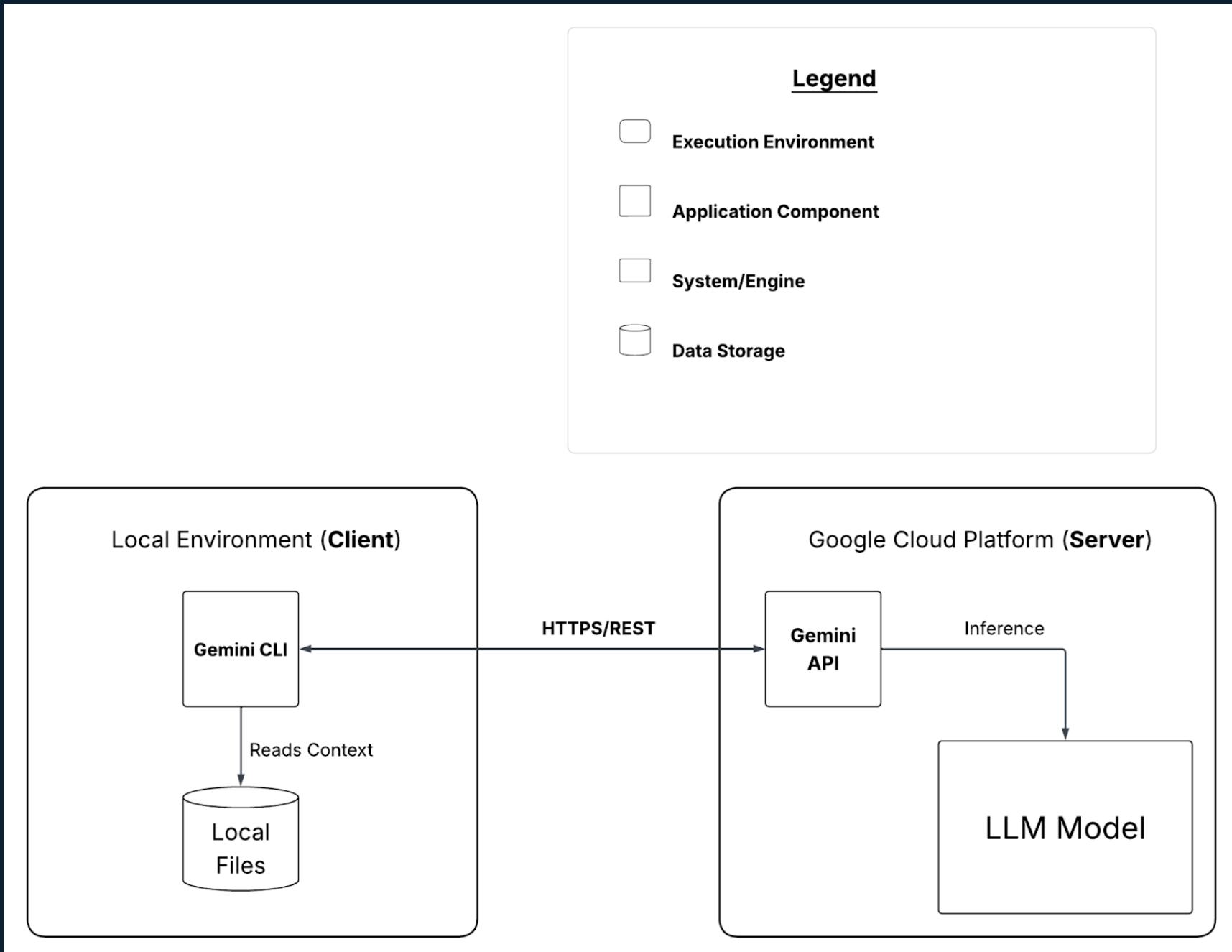
Tool Invocation

- Execute tools
- Permission checks and confirms rules

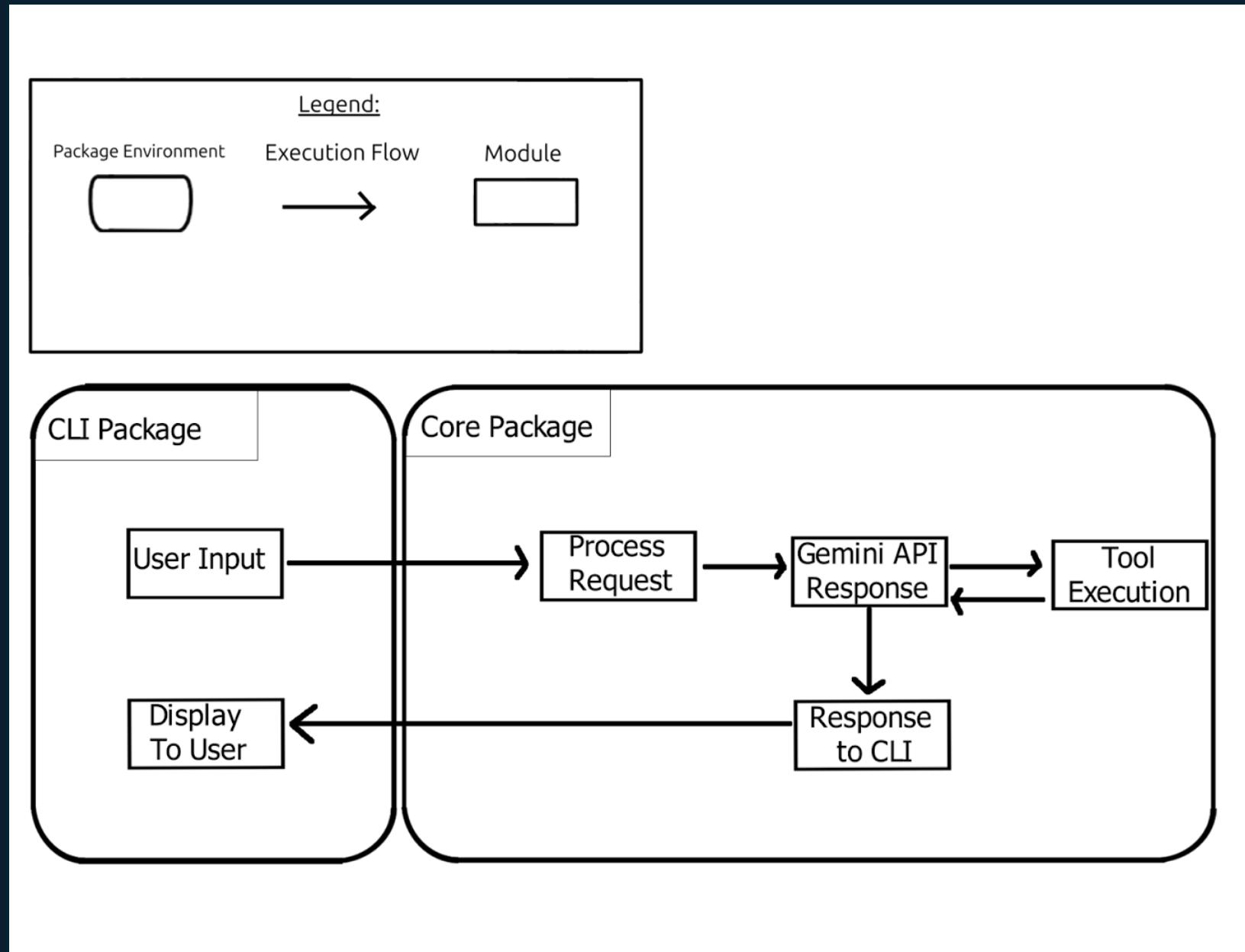
Tool Registry

- Stores tool definitions and logic
- Registers new tools

ARCHITECTURE STYLE #1 CLIENT-SERVER

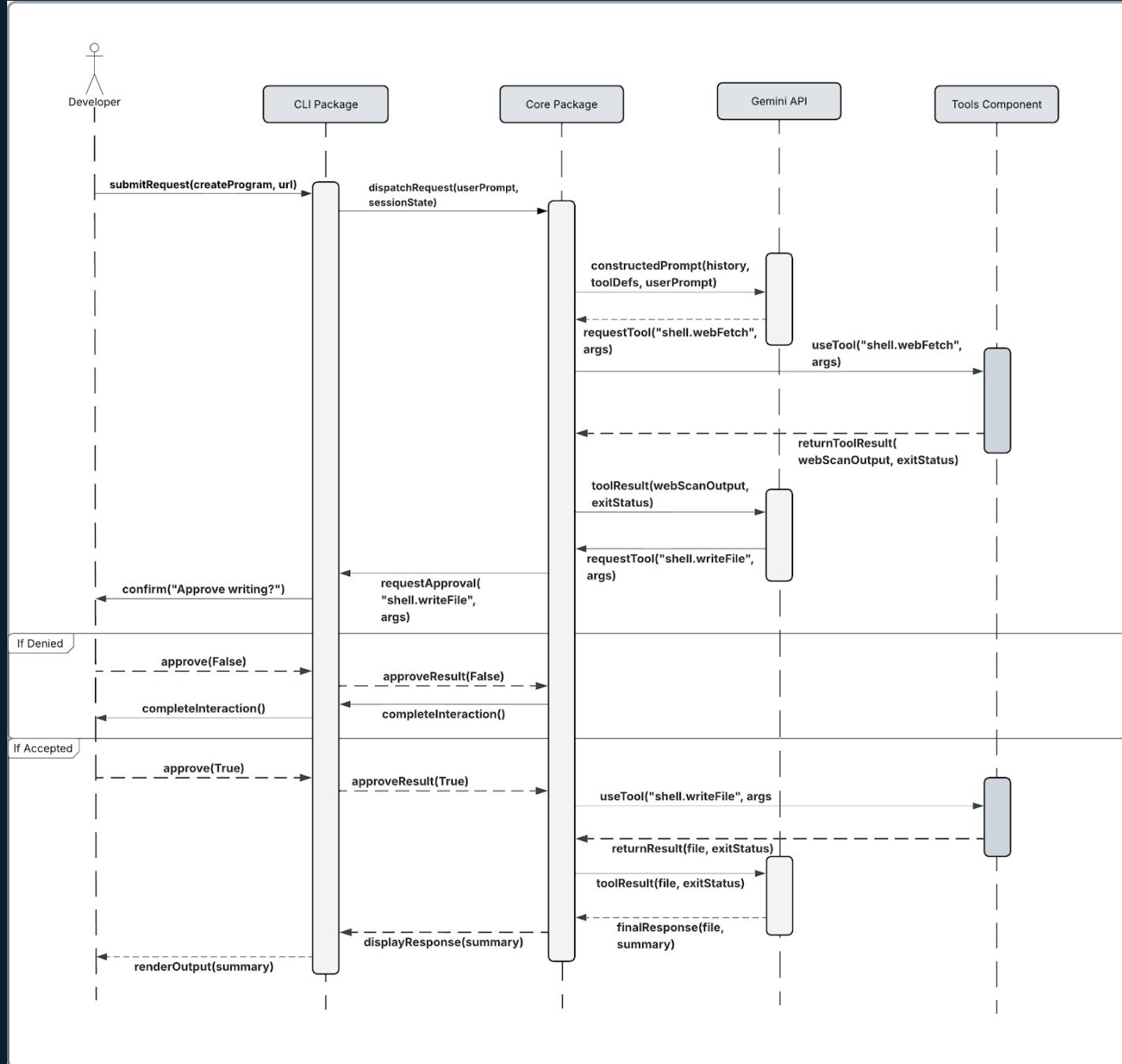


ARCHITECTURE STYLE #2 FEEDBACK CONTROL SYSTEM



USE CASE

Create a program based
on online specifications



LESSONS LEARNED

- pros and cons of a modular design
- How to analyze technical documentation and extracting architectural information
- Benefits of group collaboration and brainstorming

AI INTERACTION

A screenshot of an AI interaction interface. At the top left is a small icon of a rat. In the top right corner, there is a circular profile picture of a person wearing a cap, followed by two smaller circular images: one of a landscape and another of a person's face. To the right of these is a dark circular button with a white plus sign. Below the profile picture is a large, bold title: "GUSTAPO THE RAT". Underneath the title, the text "322 ai teammate" is displayed. A light gray rounded rectangular box contains the instruction: "Ask anything about GUSTAPO THE RAT. Type @ for sources and / for shortcuts." At the bottom of this box are three icons: a circle with a plus sign, a "Model" dropdown menu, a microphone icon, and a speaker icon.



CONCLUSION

- Gemini CLI's architecture has client-server and feedback-control styles
- Modular design, separate front and backend packages

