

PRESENTED BY :

Louis Grignola

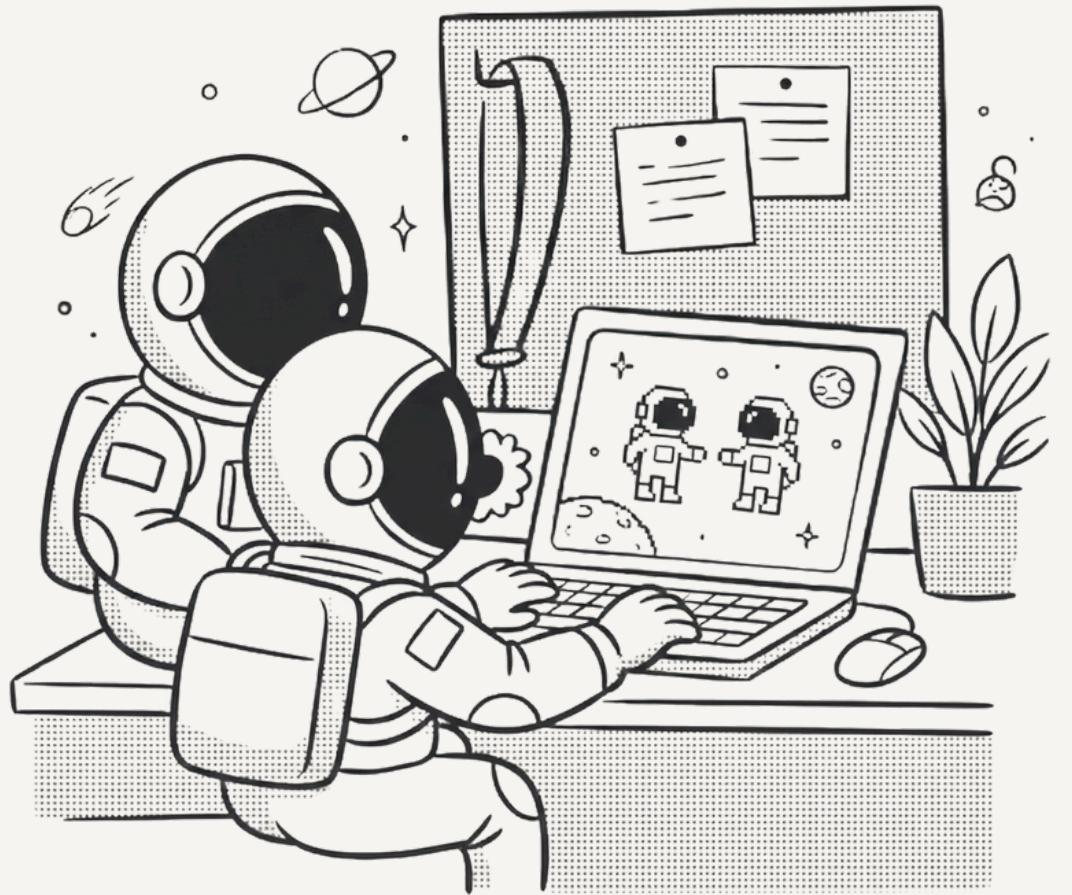
Amaury Allemand



ORA

AI AGENTS INTERACTION PLATFORM

isep 
École d'ingénieurs du numérique



PROJECT OVERVIEW



WHAT IS ORA?

- Native Android application (Kotlin + Jetpack Compose)
- Conversational interface for AI agents with real-time streaming

AGENT ARCHITECTURE

- Multiple specialized agents, each with unique capabilities
- isolated environments: each agent–user pair is independent
- No cross-contamination between agent scopes

PROJECT PURPOSE

- Production-ready boilerplate for AI-driven mobile apps
- Complete chat system: streaming, tool calls, history, markdown
- Clean Architecture foundation for scalability

VIDEO DEMO

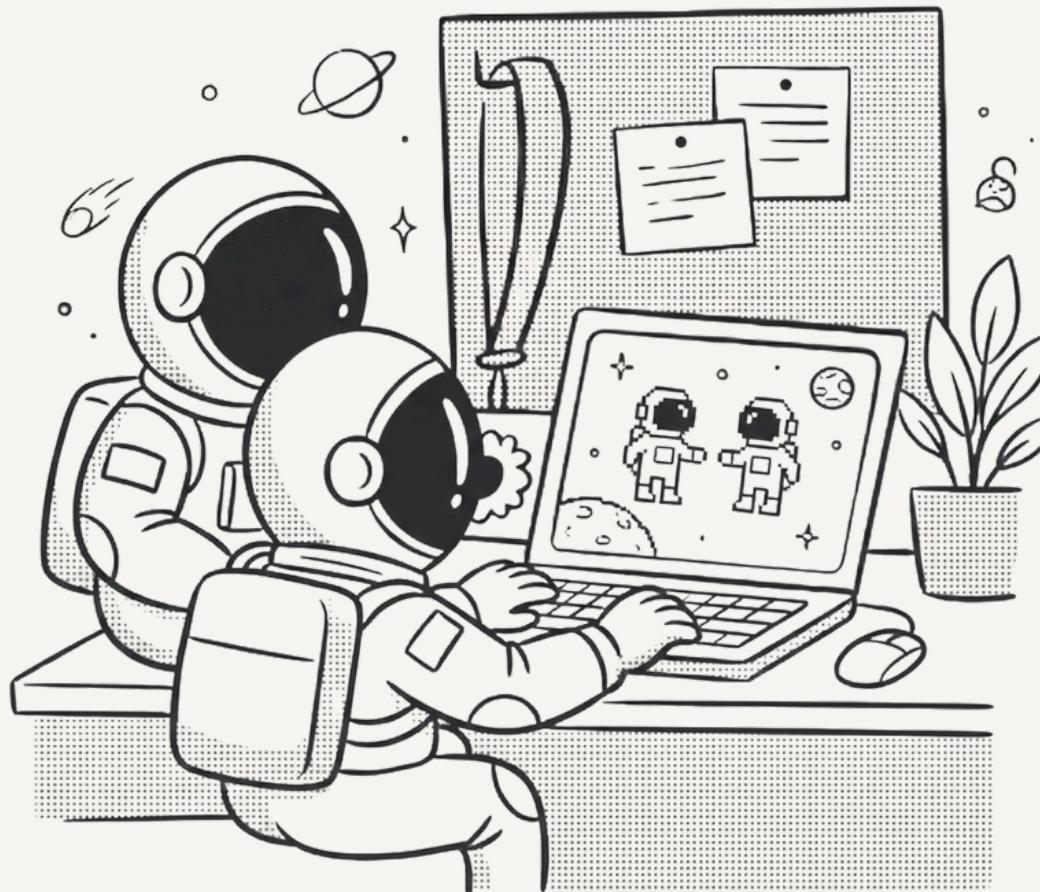


AUTH FEATURES



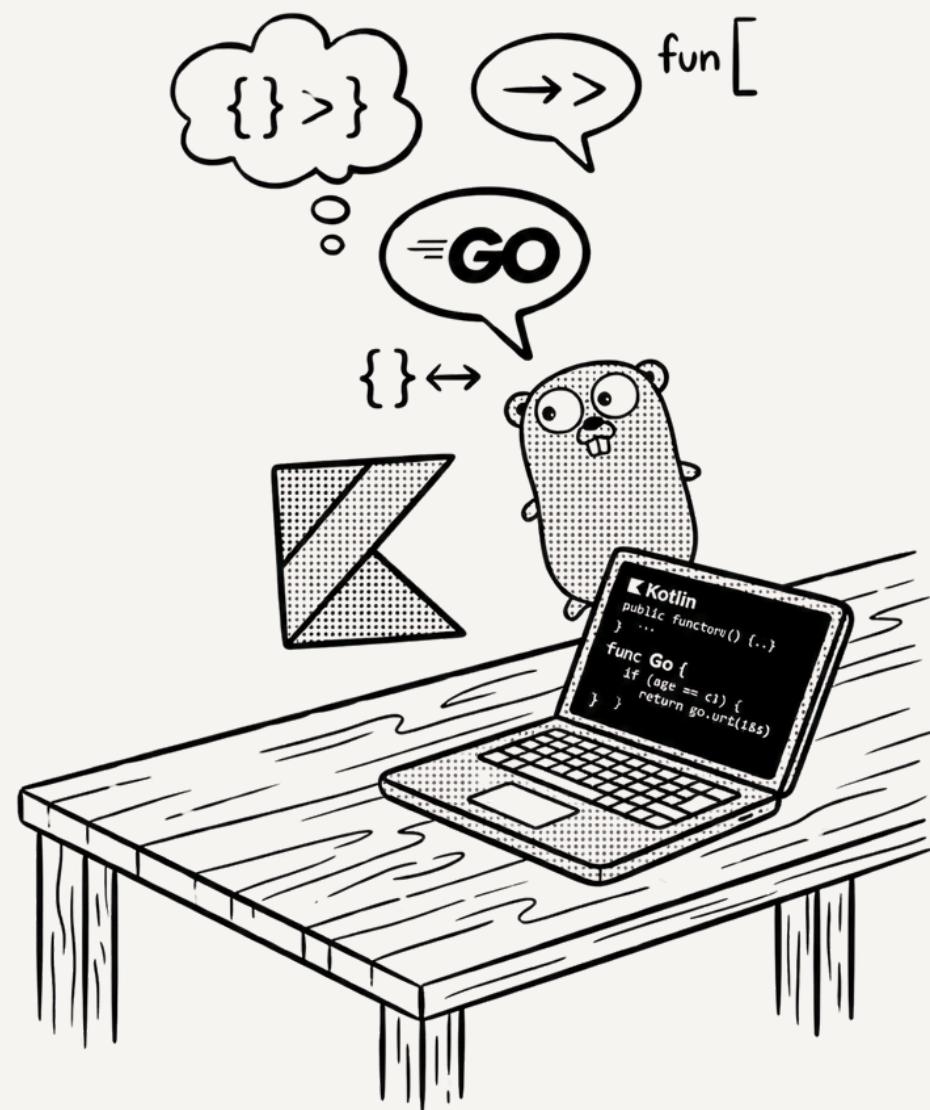
- REGISTRATION
- LOGIN / LOGOUT
- SECURED JWT TOKEN MANAGEMENT
- PROFILE MANAGEMENT
- PROFILE PICTURE UPLOAD
- SECURED INTERACTION

AGENT FEATURES



- MULTIPLE SPECIALIZED AGENTS
- ISOLATED ENVIRONMENT PER USER
- CUSTOM GREETING PER AGENT
- TOOL EXECUTION
- REAL-TIME STREAMING RESPONSES
- CONVERSATION HISTORY PER AGENT
- SESSION MANAGEMENT (CRUD)

GLOBAL ARCHITECTURE



MOBILE FRONTEND – KOTLIN + JETPACK COMPOSE

HTTP + SSE

BACKEND API – GO + HEXAGONAL ARCHITECTURE

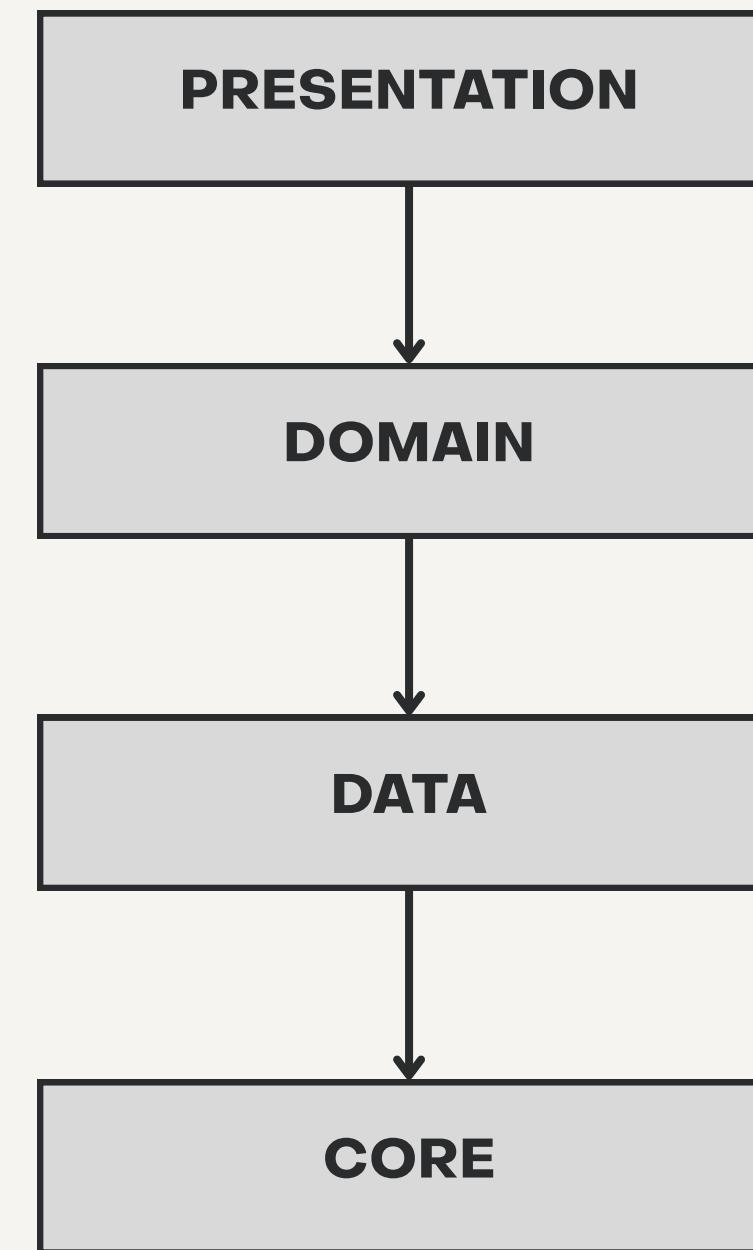
POSTGRES

REDIS

MINIO

PHOENIX

CLEAN ARCHITECTURE



Compose UI, ViewModels,
MVI

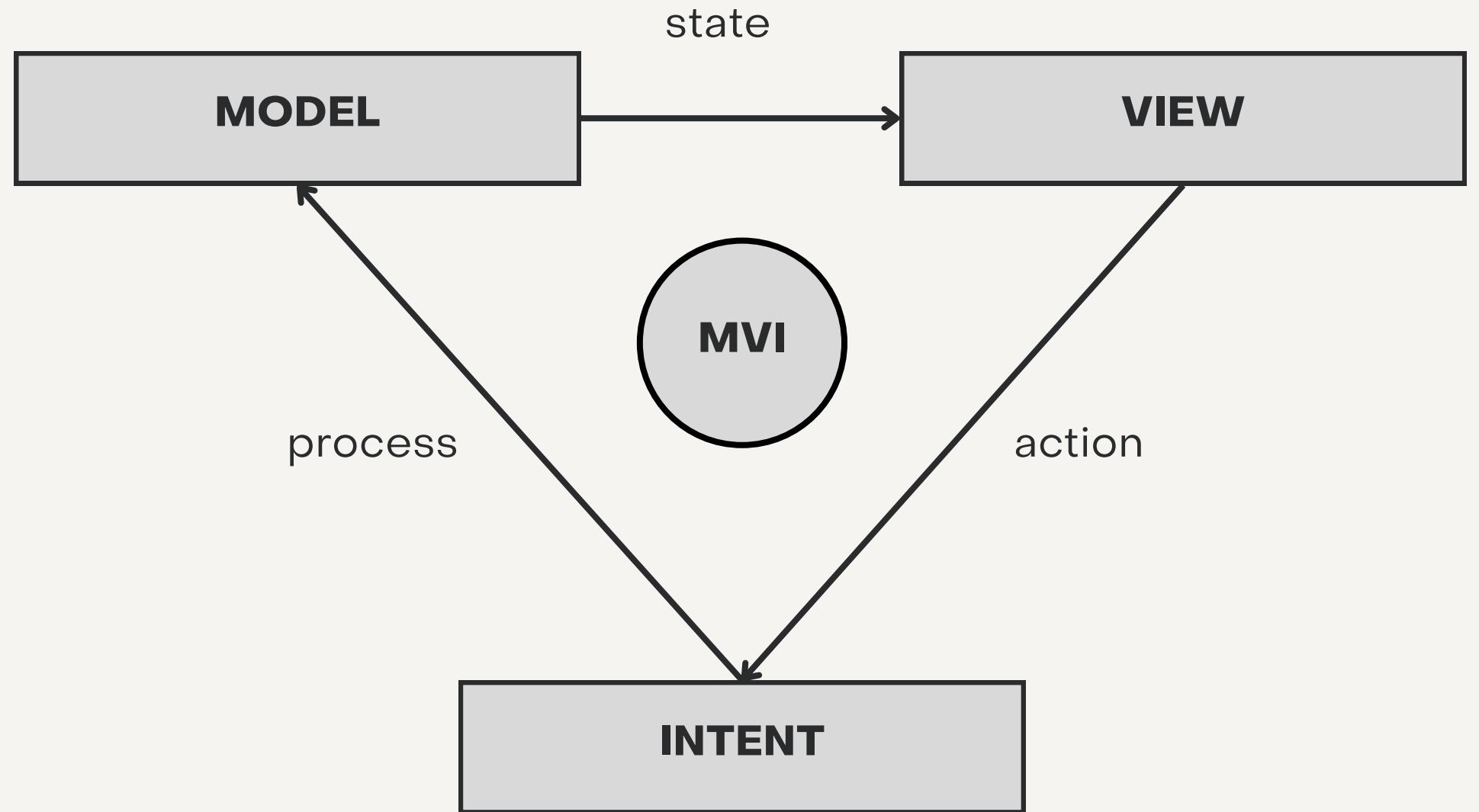
Use Cases, Models

Repositories, API, DTOs,
Mappers

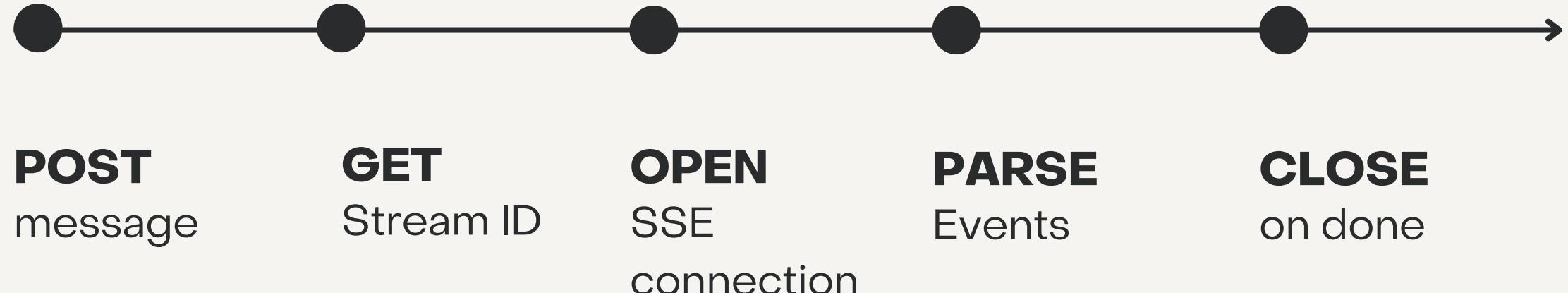
DI modules, Utils, Error
handling

MVI PATTERN

- Predictable state Critical for streaming updates
- Immutable states Optimizes Compose recomposition
- Explicit intents Clear audit trail for debugging

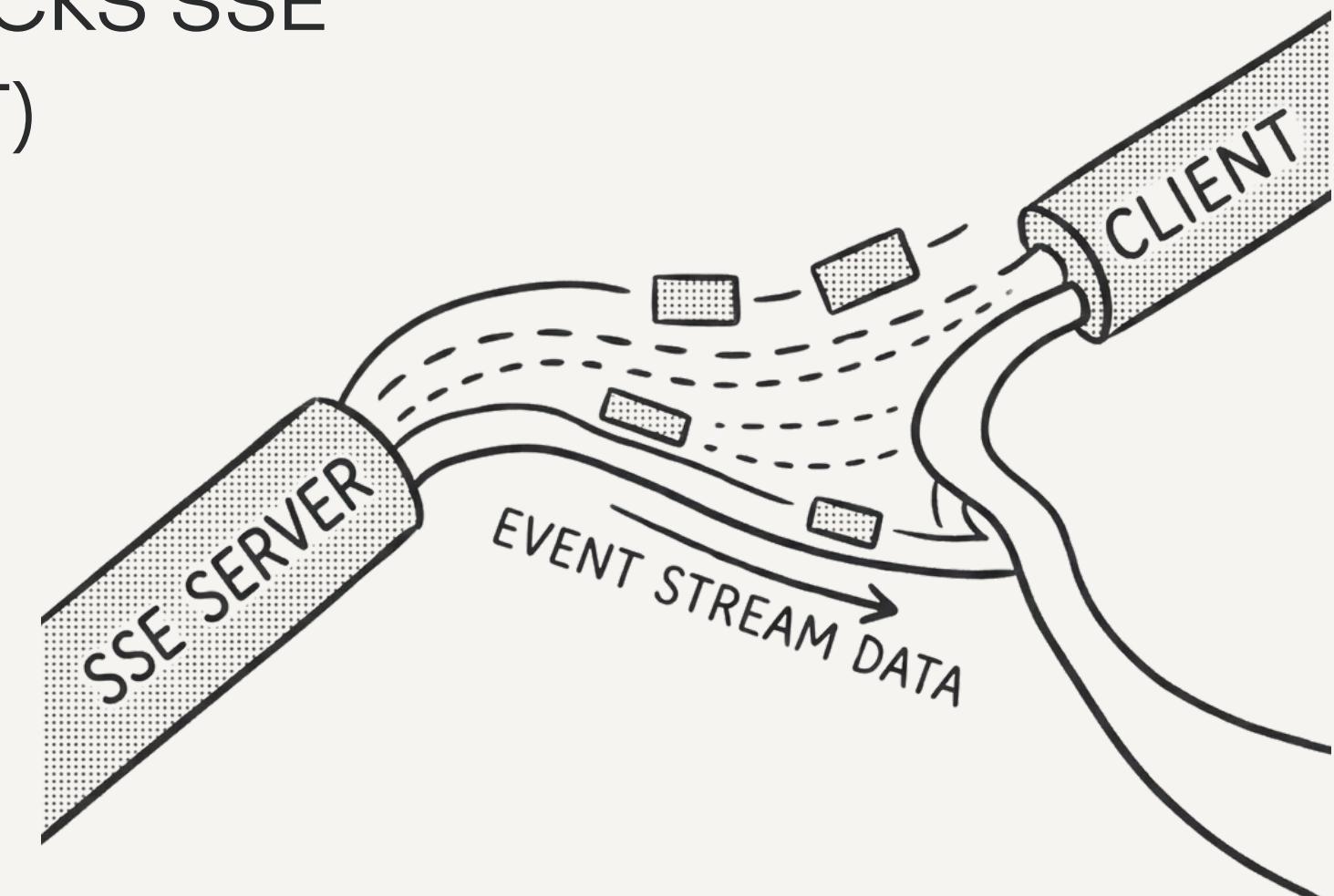


SERVER SENT EVENTS

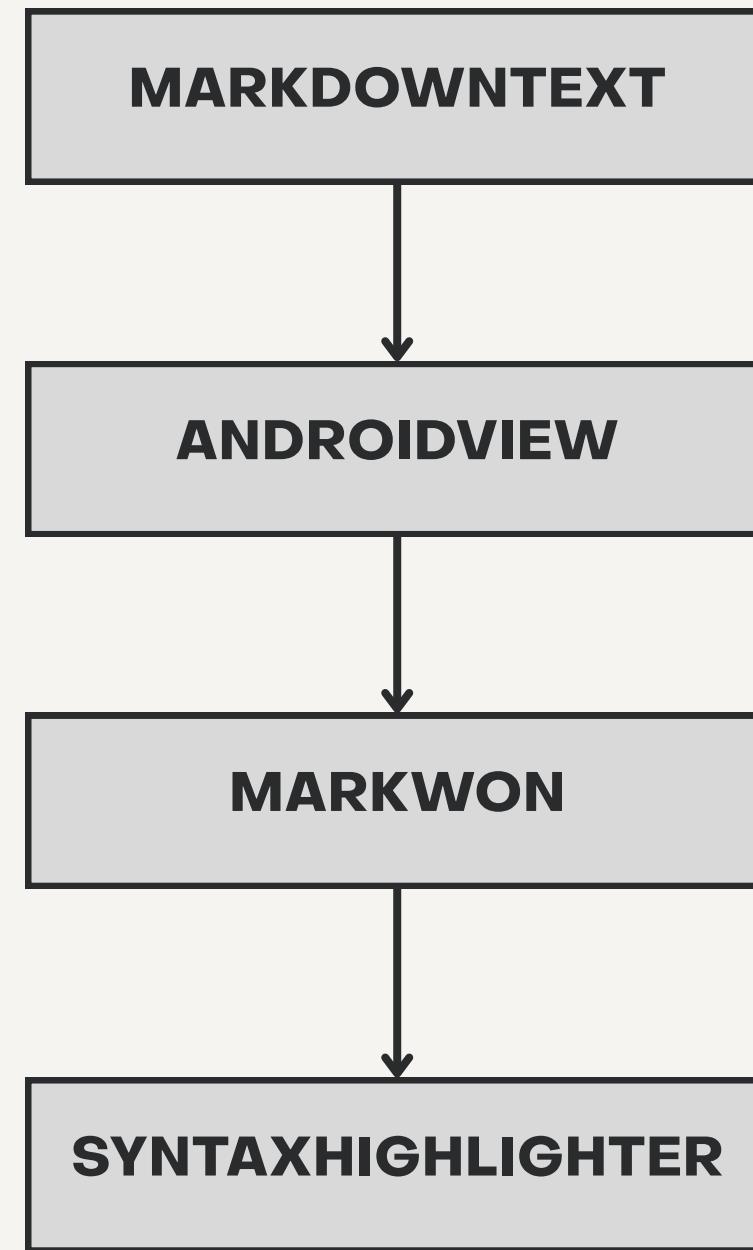
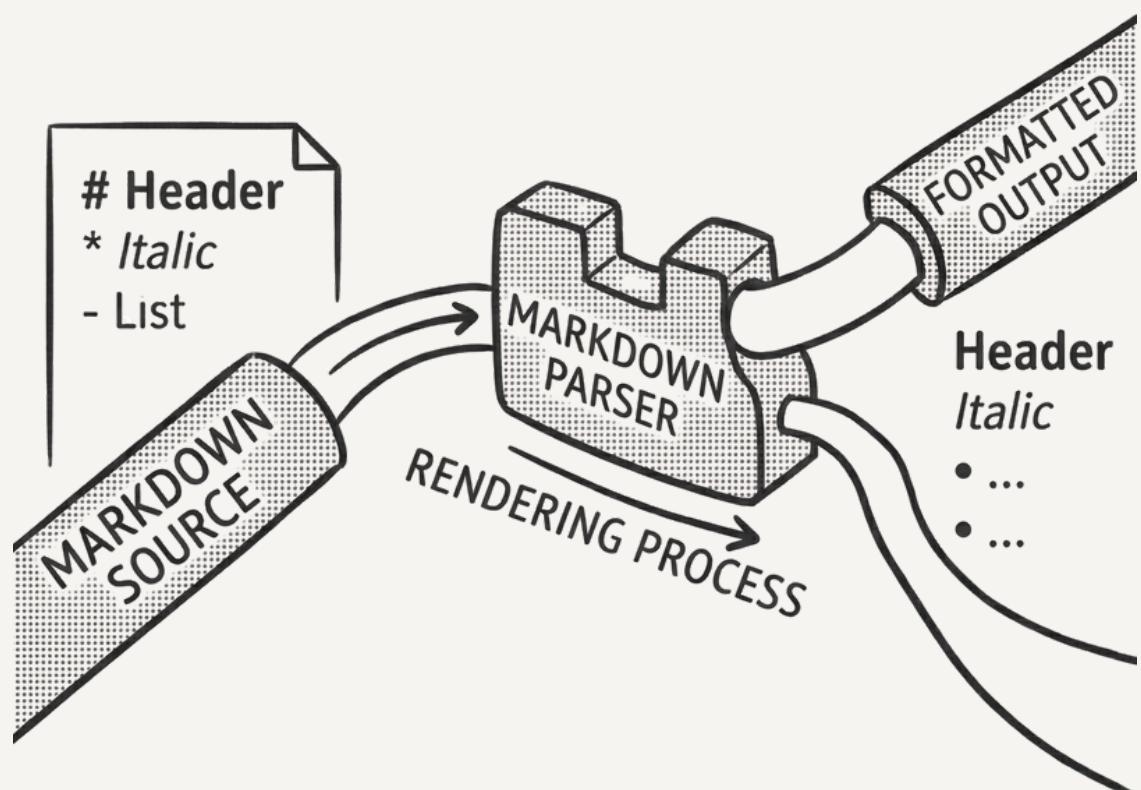


Event	Description
delta	Content token
reasoning	AI thinking
tool_call	Tool invocation
tool_response	Tool result
error	Error with code
done	Stream complete

OKHTTP EVENTSOURCE (KTOR LACKS SSE SUPPORT)



MARKDOWN RENDERING



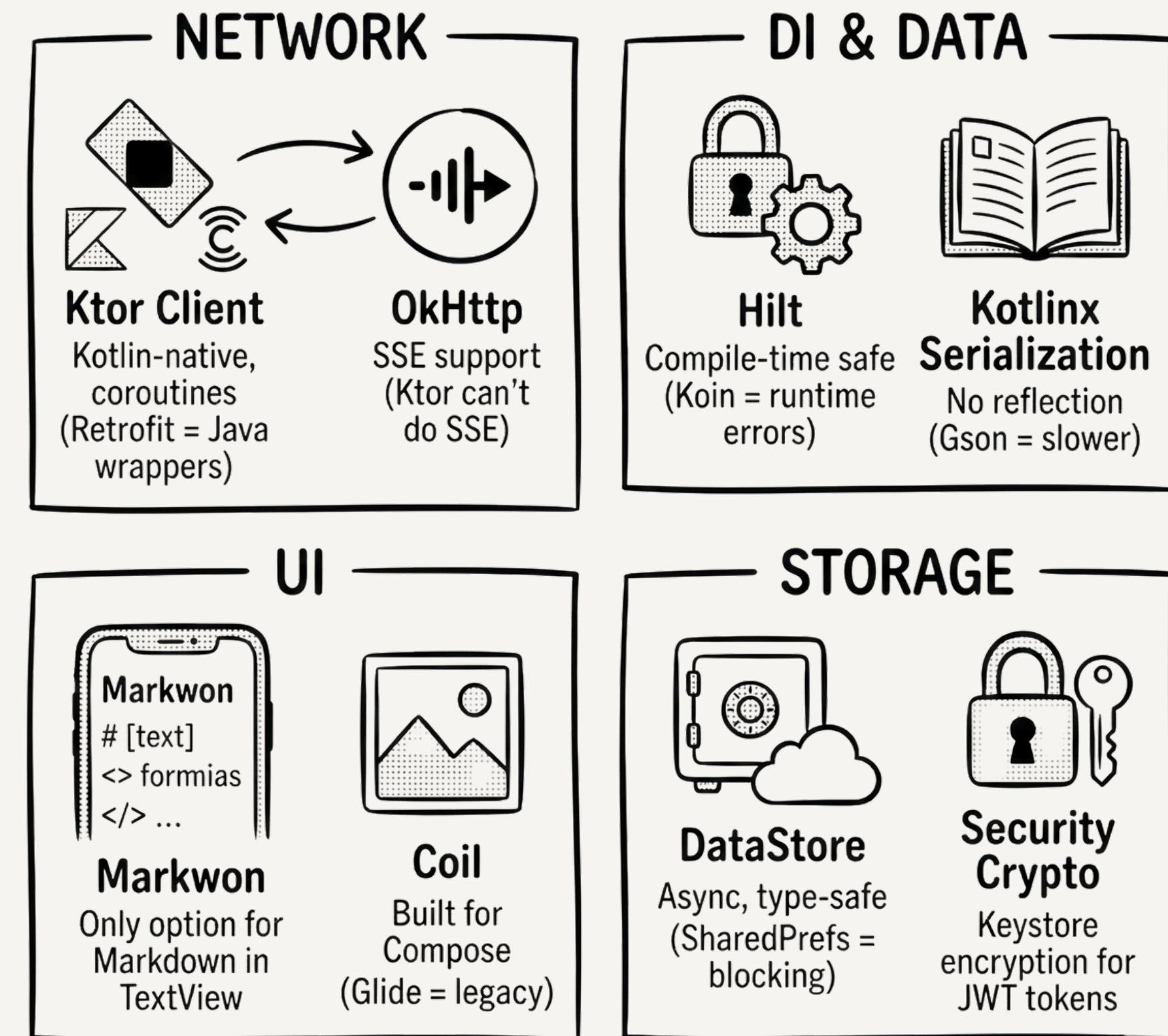
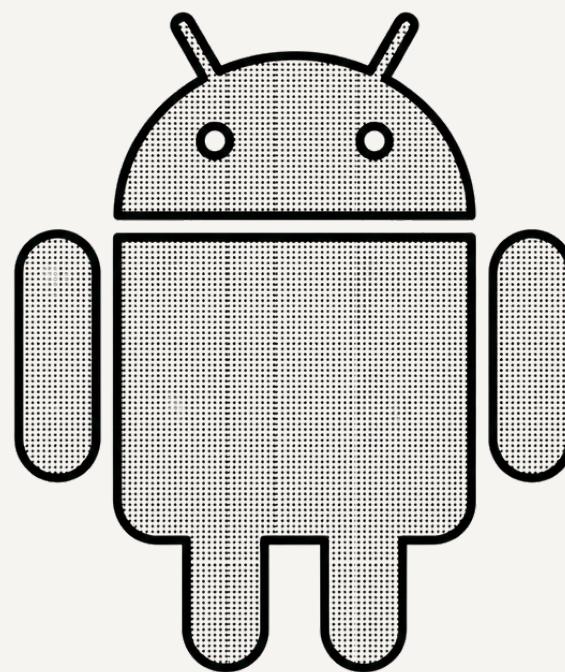
Jetpack Compose has no native
Markdown support

TextView

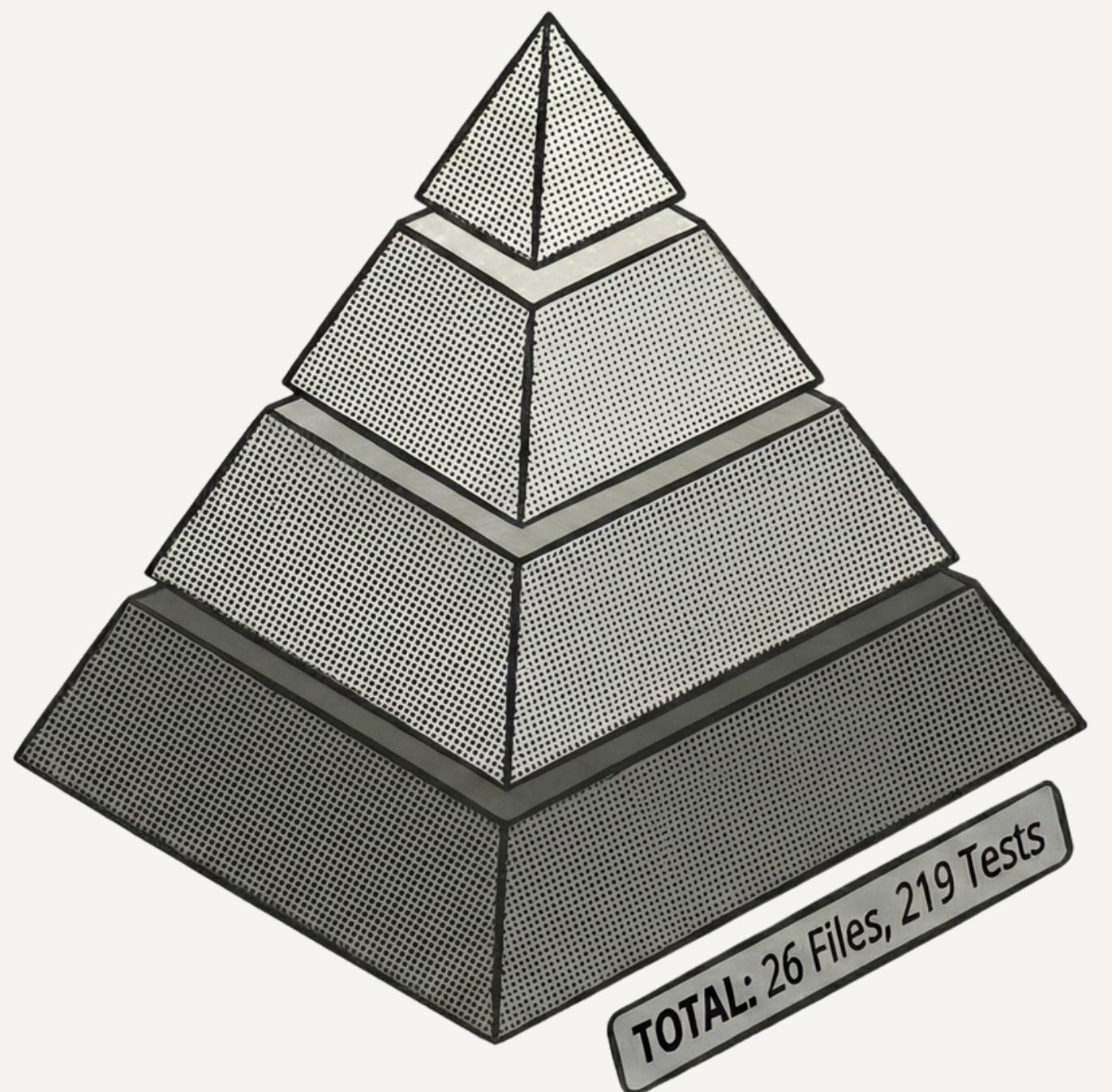
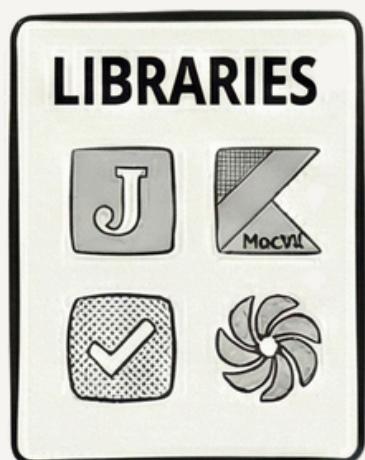
Android lib to render Markdown in
a TextView.

Syntax Highlighting 13 languages
supported, the impl is based on
regex detection

EXTERNAL LIBS

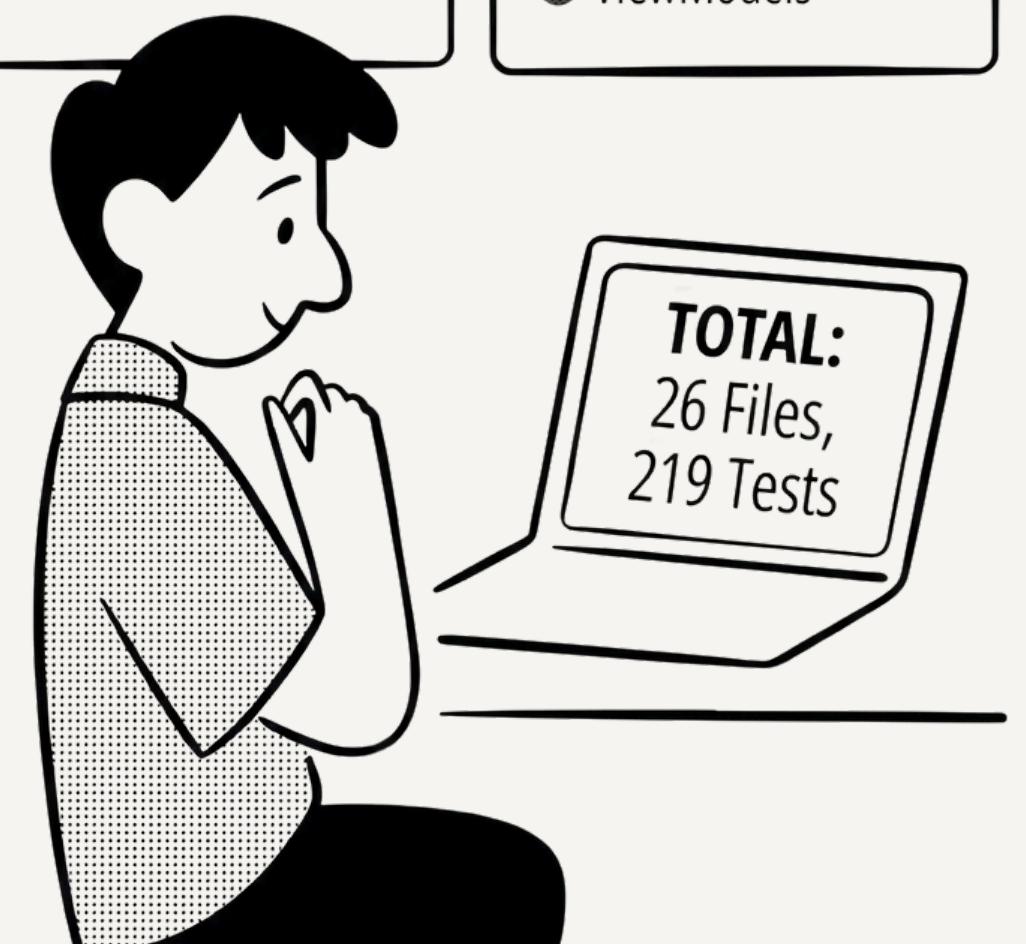


TESTING STRATEGY



TESTING LAYERS & COVERAGE	
	PRESENTATION: 3 Files, 48 Tests
	DATA: 5 Files, 69 Tests
	DOMAIN: 14 Files, 72 Tests
	CORE: 4 Files, 30 Tests

CRITICAL TESTS & PRIORITIES	
CRITICAL TESTS	SSEEventMapperTest, SessionInteractionsTest, AuthInterceptorTest
PRIORITY TIERS	<ul style="list-style-type: none">● Security & Parsing● Use Cases● Mappers & Repos● ViewModels



TESTING STRATEGY



MULTIMODAL SUPPORT •

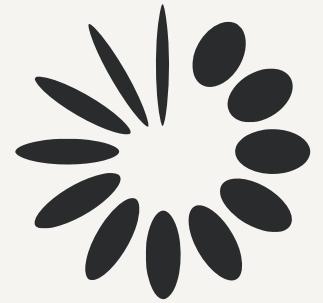
- Image attachments •
- Document uploads (PDF, Word) •
- Voice input with transcription

ADDITIONAL FEATURES •

- Offline mode (Room DB) •
- Push notifications •
- Agent customization

KNOWLEDGE BASE •

- Personal document repository •
- Semantic search •
- Source visualization



THANKS

grignolalouis/Ora-mobile



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Contributor

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Issues

0

Stars

0

Forks



grignolalouis/Ora-mobile

Contribute to grignolalouis/Ora-mobile development by creating an account on GitHub.

 GitHub



x

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