

**AI Engineer**

SINGAPORE

# A Piece Of PI

Embedding The OpenClaw Coding Agent In Your Product

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 TAVON.ai /talks

We use our agents only internally

AI Engineer  
SINGAPORE

OpenClaw was too scary

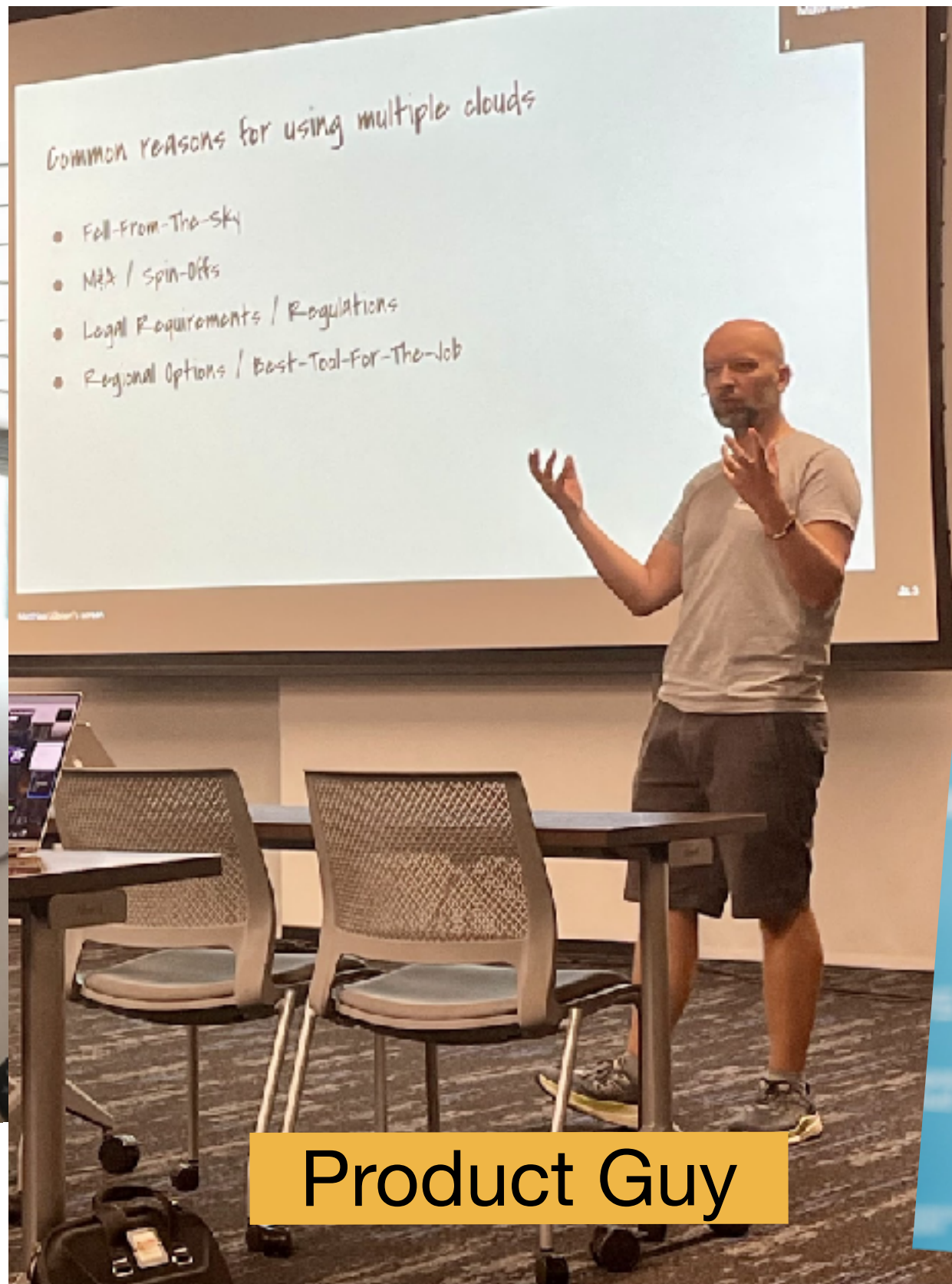
I want to control my agent.



- **We are all getting started.**
- **Let's learn. Let's tinker.**
- **Together.**



Developer



Product Guy



Manager



Tinkerer



TAVON.ai

# Put AI Agents to Work



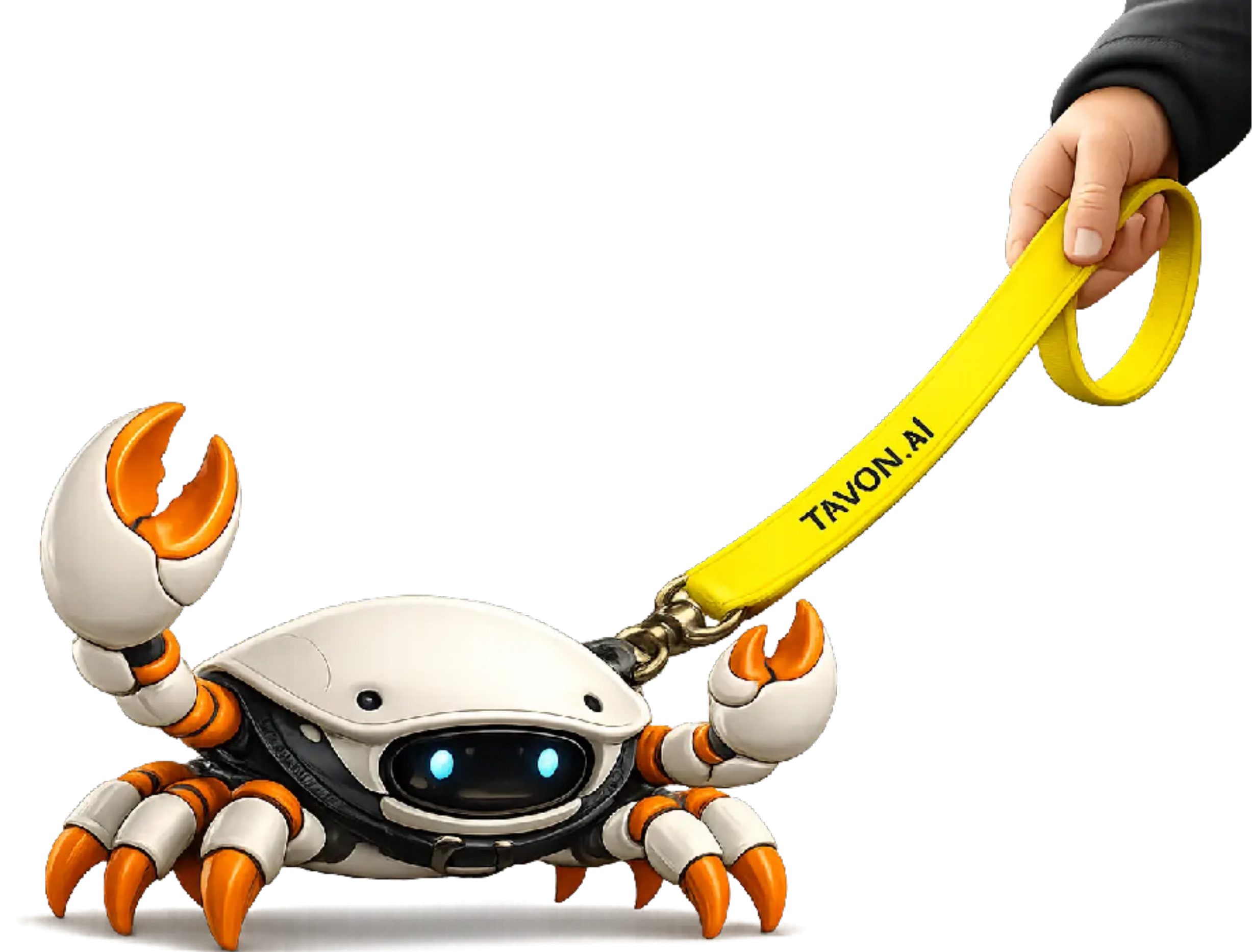
Strategy



Training



Implementation



## DataBox

Give agents  
**safe** data access



**What Is PI?**

```
π - talk-agents

pi v0.74.0
escape interrupt · ctrl+c/ctrl+d clear/exit · / commands · ! bash · ctrl+o more
Press ctrl+o to show full startup help and loaded resources.

Pi can explain its own features and look up its docs. Ask it how to use or extend
Pi.

[Context]
  CLAUDE.md

[Skills]
  agent-browser, frontend-design

[Extensions]
  pi-answer, ping-on-done.ts

~/workspace/luebken/talk-agents (main)
$0.000 (sub) 0.0%/272k (auto) (openai-codex) gpt-5.4 · medium
```



pi.dev



mariozechner.at

# What Is Not Part of Pi?

- No MCP
- No Sub-Agents
- No Permission popups
- No Plan Mode
- No built-in TODOs
- No background bash

π - tmp

pi v0.74.0

escape interrupt · ctrl+c/ctrl+d clear/exit · / commands · ! bash · ctrl+o more  
Press ctrl+o to show full startup help and loaded resources.

Pi can explain its own features and look up its docs. Ask it how to use or extend Pi.

### [Skills]

agent-browser, frontend-design

### [Extensions]

ping-on-done.ts

---

Create a PI extension that asks for permission when I want to push the main branch to remote! █

---

~/workspace/tmp

\$0.000 (sub) 0.0%/272k (auto)

(openai-codex) gpt-5.4 · medium

π - tmp

```
read docs examples/extensions/permission-gate.ts (ctrl+o to expand)
```

```
read docs examples/extensions/dirty-repo-guard.ts (ctrl+o to expand)
```

```
read docs examples/extensions/confirm-destructive.ts (ctrl+o to expand)
```

```
read docs examples/extensions/README.md (ctrl+o to expand)
```

*Thinking...*

:: Working...

~/workspace/tmp

↑16k ↓460 R1.0k \$0.048 (sub) 7.2%/272k (auto)

(openai-codex) gpt-5.4 • medium

π - tmp

Done.

Files:

- `.pi/extensions/confirm-main-push.ts`
- `README.md`

Behavior:

- Prompts before `git push` when PI detects a push to `main`
- Also prompts on plain `git push` if the current branch is `main`
- Blocks by default in non-interactive mode

To use it:

- Start `pi` in this folder, or
- Run `/reload` in PI to load the new extension

If you want, I can also make it:

- protect `master` too
- only allow push after typing a confirmation phrase
- cover force-pushes with a stronger warning

---

~/workspace/tmp

↑44k ↓2.4k R36k \$0.155 (sub) 8.1%/272k (auto)

(openai-codex) gpt-5.4 • medium

π - tmp

```
create mode 100644 .pi/extensions/confirm-main-push.ts  
create mode 100644 README.md
```

Took 0.1s

```
$ git push origin main (timeout 30s)
```

```
:: Working...
```

---

```
Push main?  
Allow this command to push main to a remote?
```

```
git push origin main
```

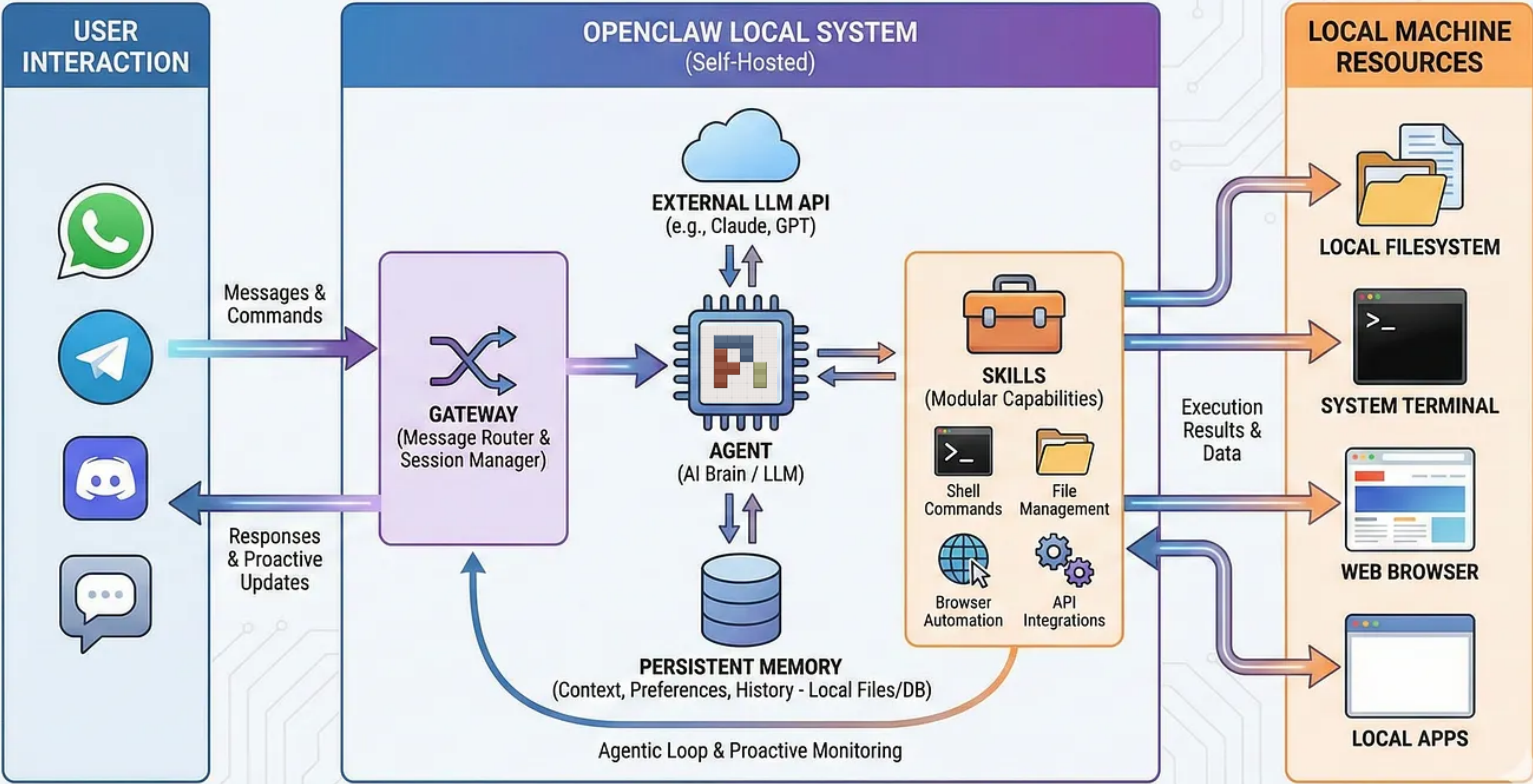
```
→ Yes  
  No
```

```
↑↓ navigate  enter select  escape/ctrl+c cancel
```

---

```
~/workspace/tmp (main)  
↑7.5k ↓587 R4.6k $0.029 (sub) 1.0%/272k (auto)
```

```
(openai-codex) gpt-5.4 • medium
```



**So what is a Coding Agent?**

**Chat**

# Chat

 custom-instructions.md

User

What's the best AI conference?

# Chat

 custom-instructions.md

User

What's the best AI conference?

Assistant

That's: ai.engineer

# Chat

custom-instructions.md

User

What's the best AI conference?

Assistant

That's: ai.engineer

User

Where are the coolest developers?

# Chat

custom-instructions.md

User

What's the best AI conference?

Assistant

That's: ai.engineer

User

Where are the coolest developers?

Assistant

In Singapore.

**Tools**

# Tools

User

I have a meeting with a buyer tomorrow. Help me prepare.

# Tools

User

I have a meeting with a buyer tomorrow. Help me prepare.

Assistant

Let me check your calendar.

```
🔗 calendar.get("tomorrow")
```

# Tools

User

I have a meeting with a buyer tomorrow. Help me prepare.

Assistant

Let me check your calendar.

```
🔗 calendar.get("tomorrow")
```

Tool result

```
{ "14:00": "Meeting with FreshMart –  
quarterly review" }
```

# Tools

User

I have a meeting with a buyer tomorrow. Help me prepare.

Assistant

Let me check your calendar.

```
🔗 calendar.get("tomorrow")
```

Tool result

```
{ "14:00": "Meeting with FreshMart – quarterly review" }
```

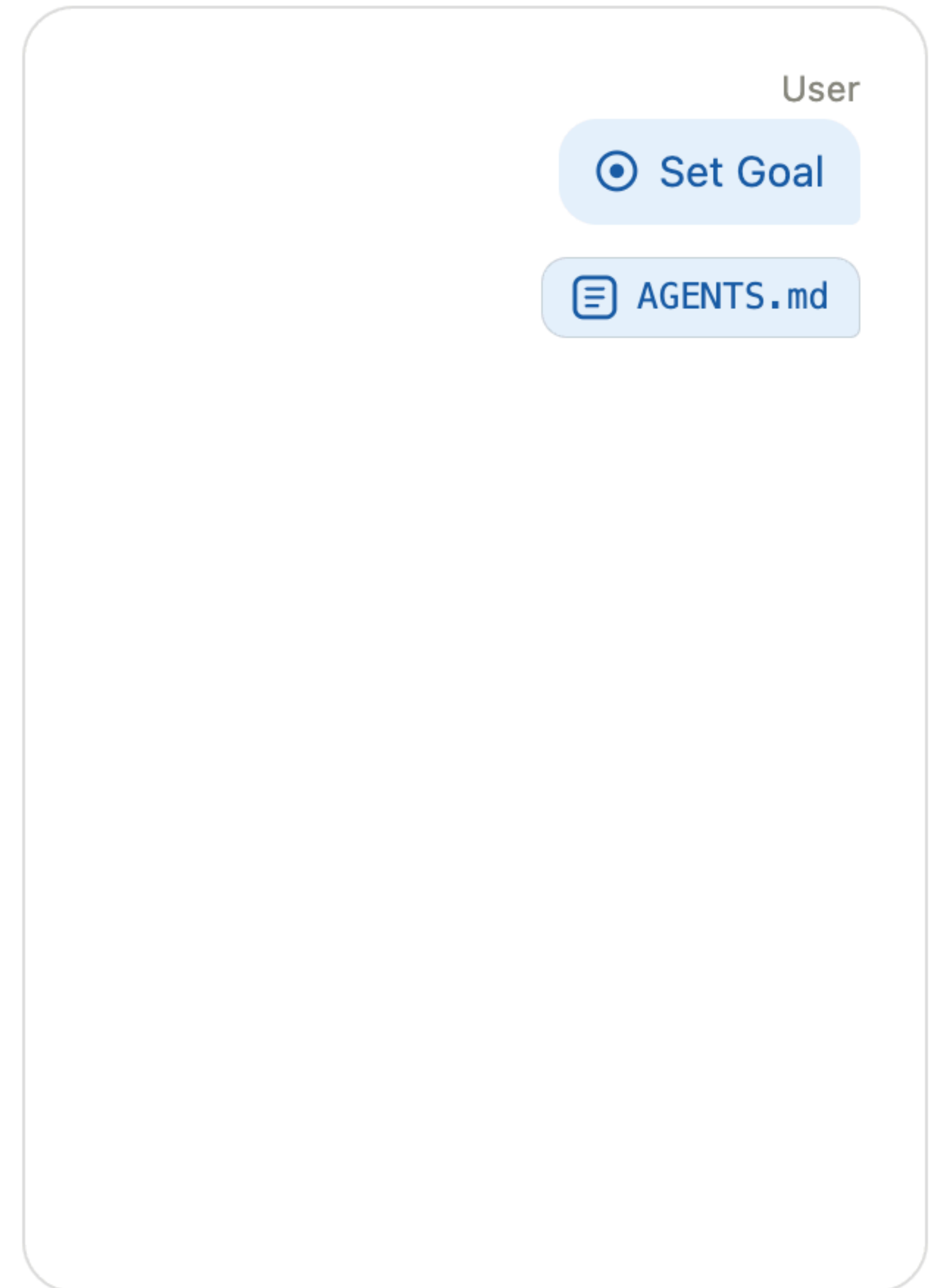
Assistant

Your meeting is with FreshMart at 2 pm — it's a quarterly review. Want me to look up their recent orders?

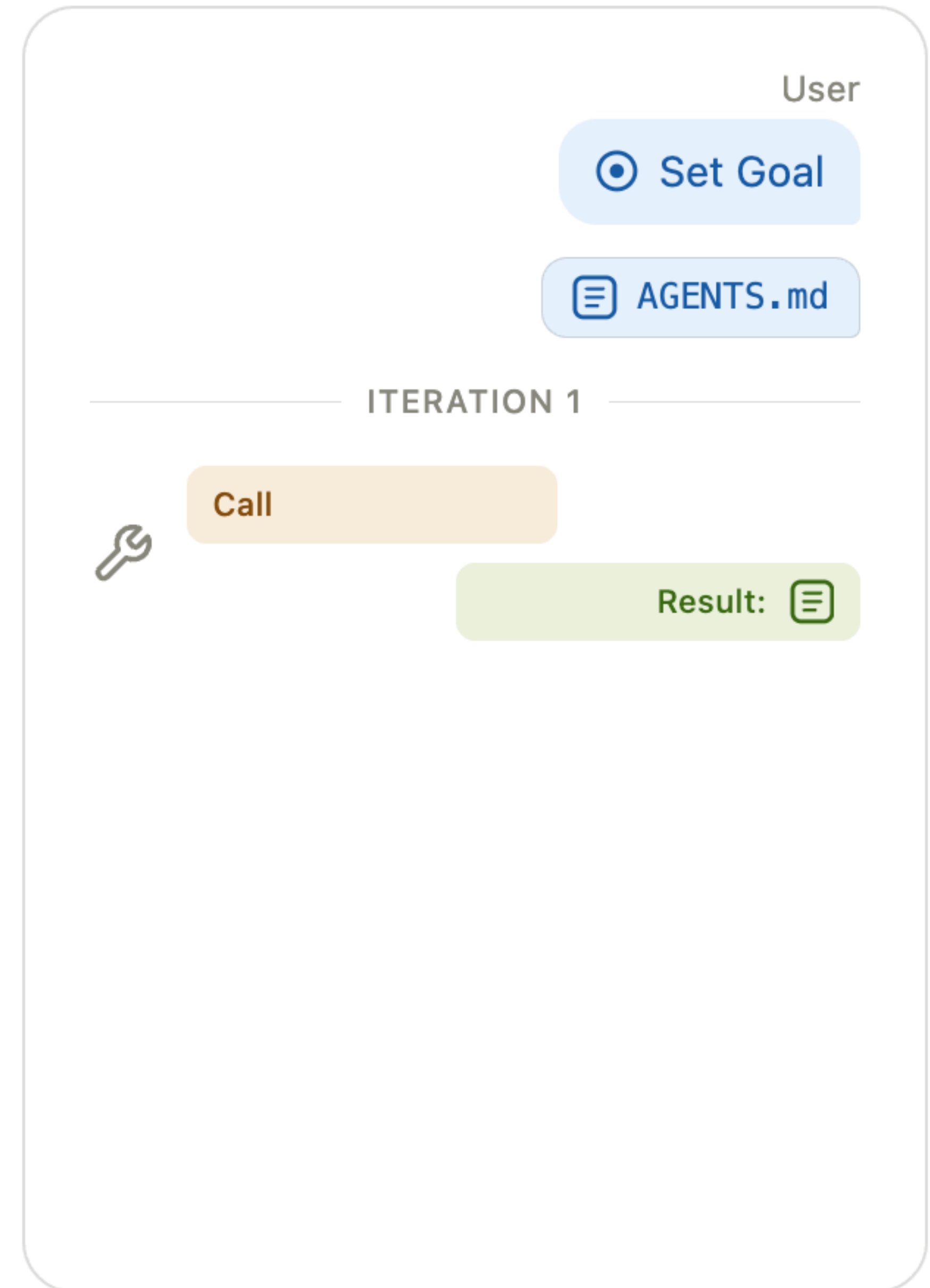
**Again, what is a Coding Agent?**

**Agent: run tools  
in a loop to  
achieve a goal.**

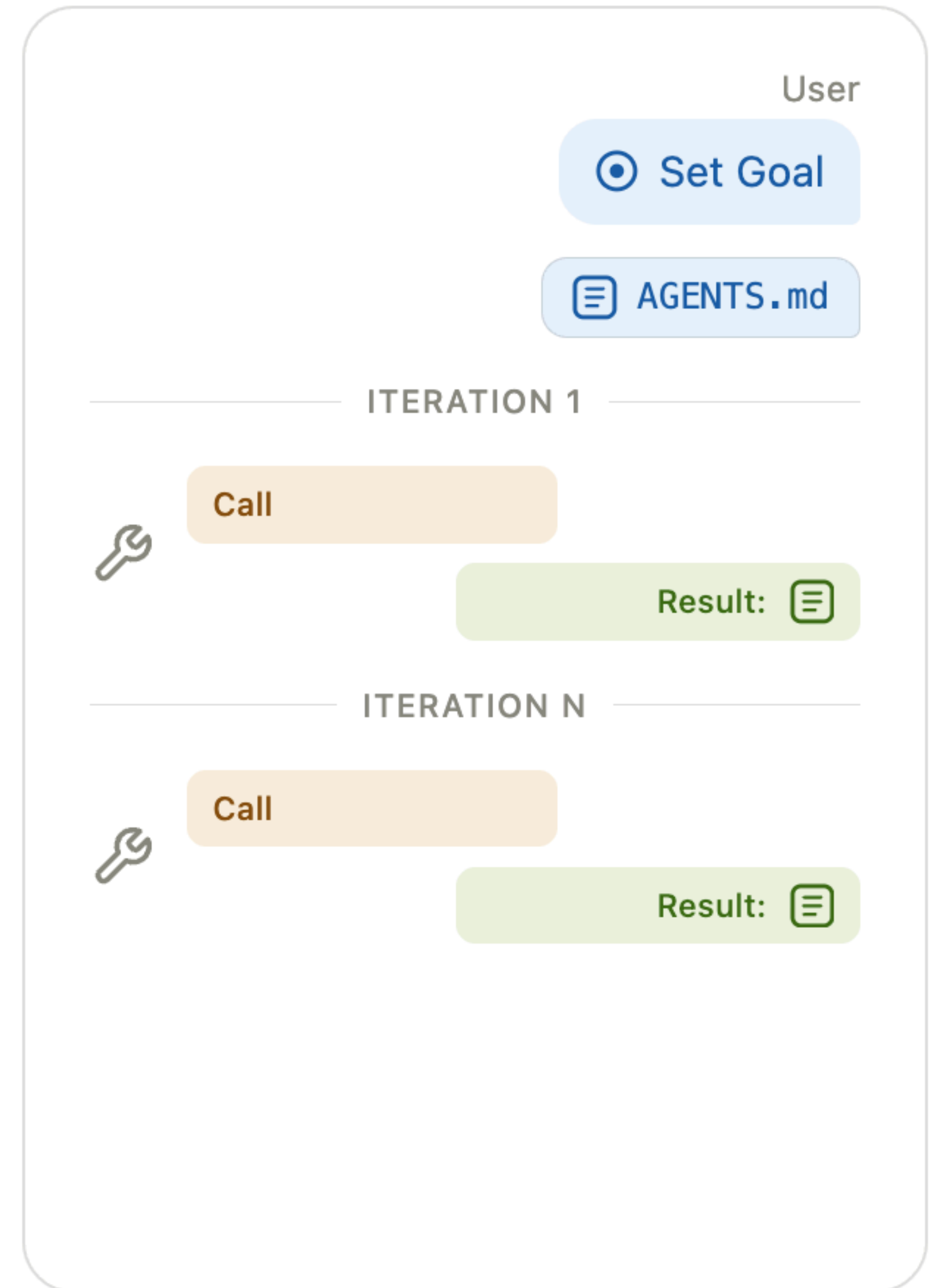
**Agent: run tools  
in a loop to  
achieve a goal.**



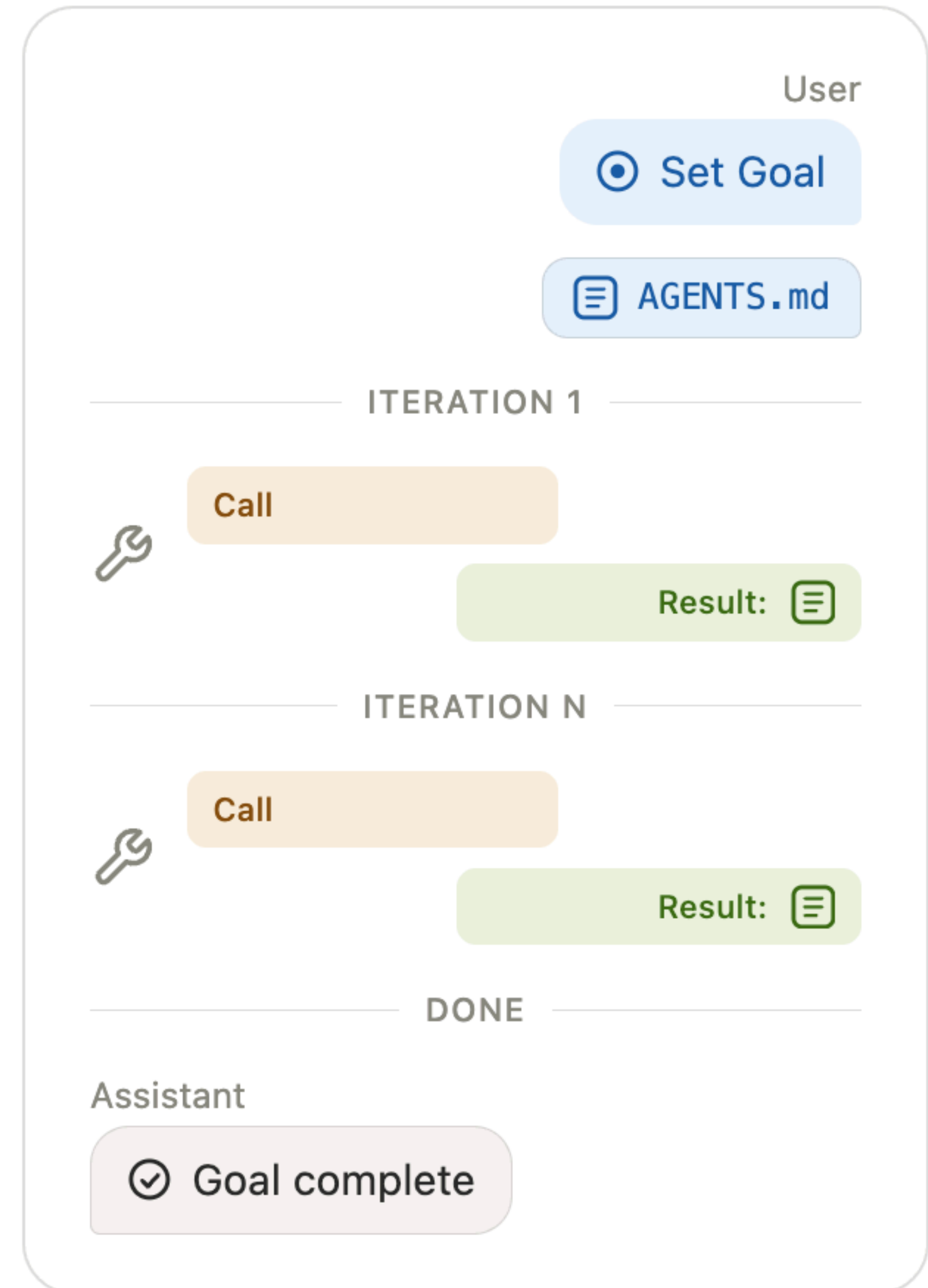
**Agent: run tools  
in a loop to  
achieve a goal.**



**Agent: run tools  
in a loop to  
achieve a goal.**



**Agent: run tools  
in a loop to  
achieve a goal.**



```

import { Agent, type AgentTool } from "@earendil-works/pi-agent-core";

const tools: AgentTool[] = [
  {
    name: "get_strawberry_price",
    label: "Get Strawberry Price",
    description: "Returns the current standard price per crate.",
    parameters: Type.Object({}),
    execute: async () => ({
      content: [{ type: "text", text: `Standard price is €$
        {this.pricePerCrate}.` }],
      details: { pricePerCrate: this.pricePerCrate, currency: "EUR" },
    }),
  },
  ...
];

this.agent = new Agent({
  initialState: {
    model: getModel("anthropic", "chatgpt"),
    systemPrompt: [
      "You are a strawberry B2B sales agent.",
      "Use tools whenever the user asks for pricing or a quote.",
    ].join(" "),
    tools,
  },
});

```

```

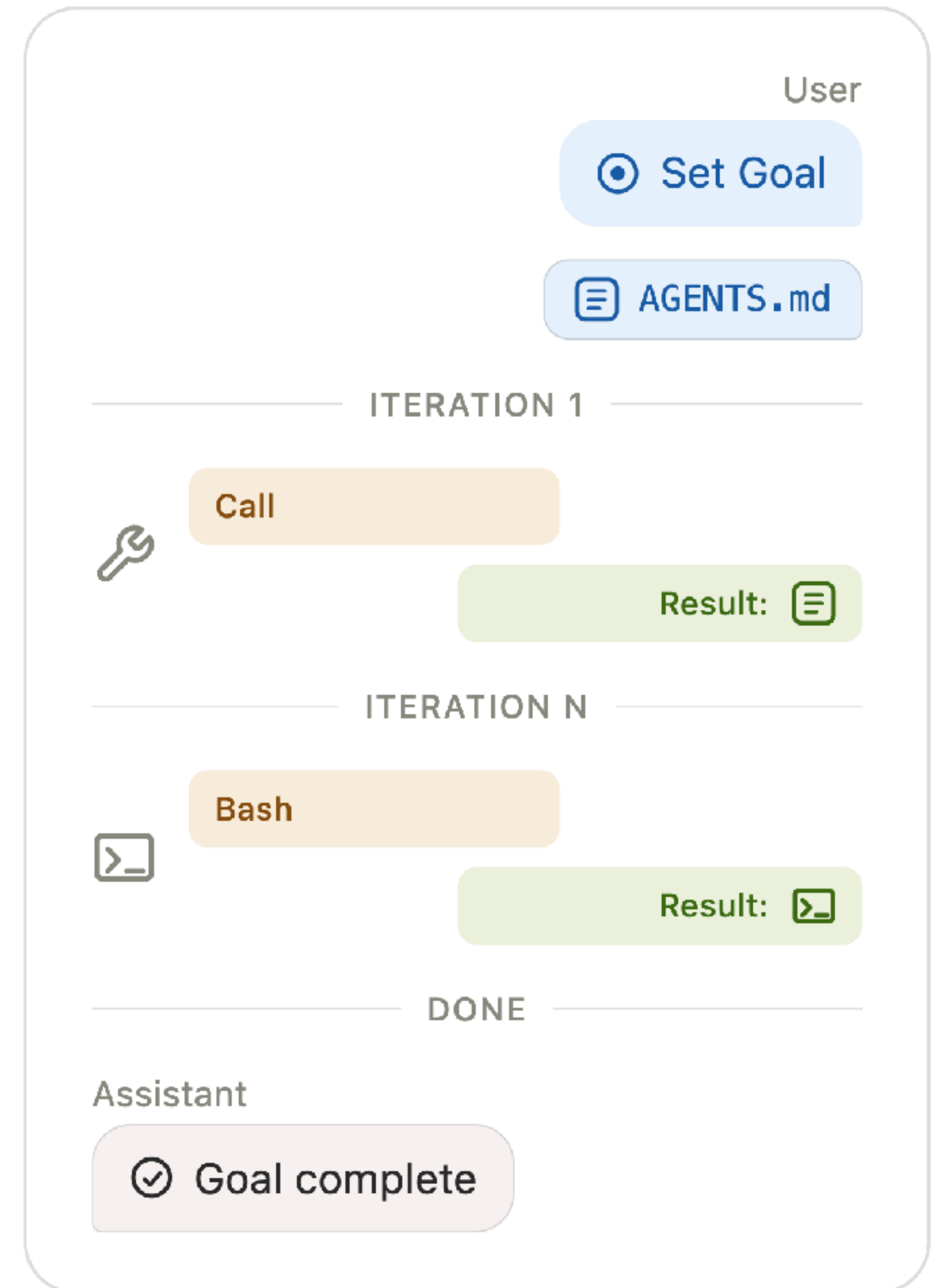
this.agent.subscribe((event) => {
  switch (event.type) {
    case "message_update":
      if (event.assistantMessageEvent.type === "text_delta") {
        process.stdout.write(event.assistantMessageEvent.delta);
      }
      break;
  }
});

async run() {
  await this.agent.prompt("What's our strawberry price per crate?");
  await this.agent.prompt("Create a quote for 10 crates.");
}

```

# Coding Agents

# Coding Agents are Agents (tools in a loop) + bash / runtime

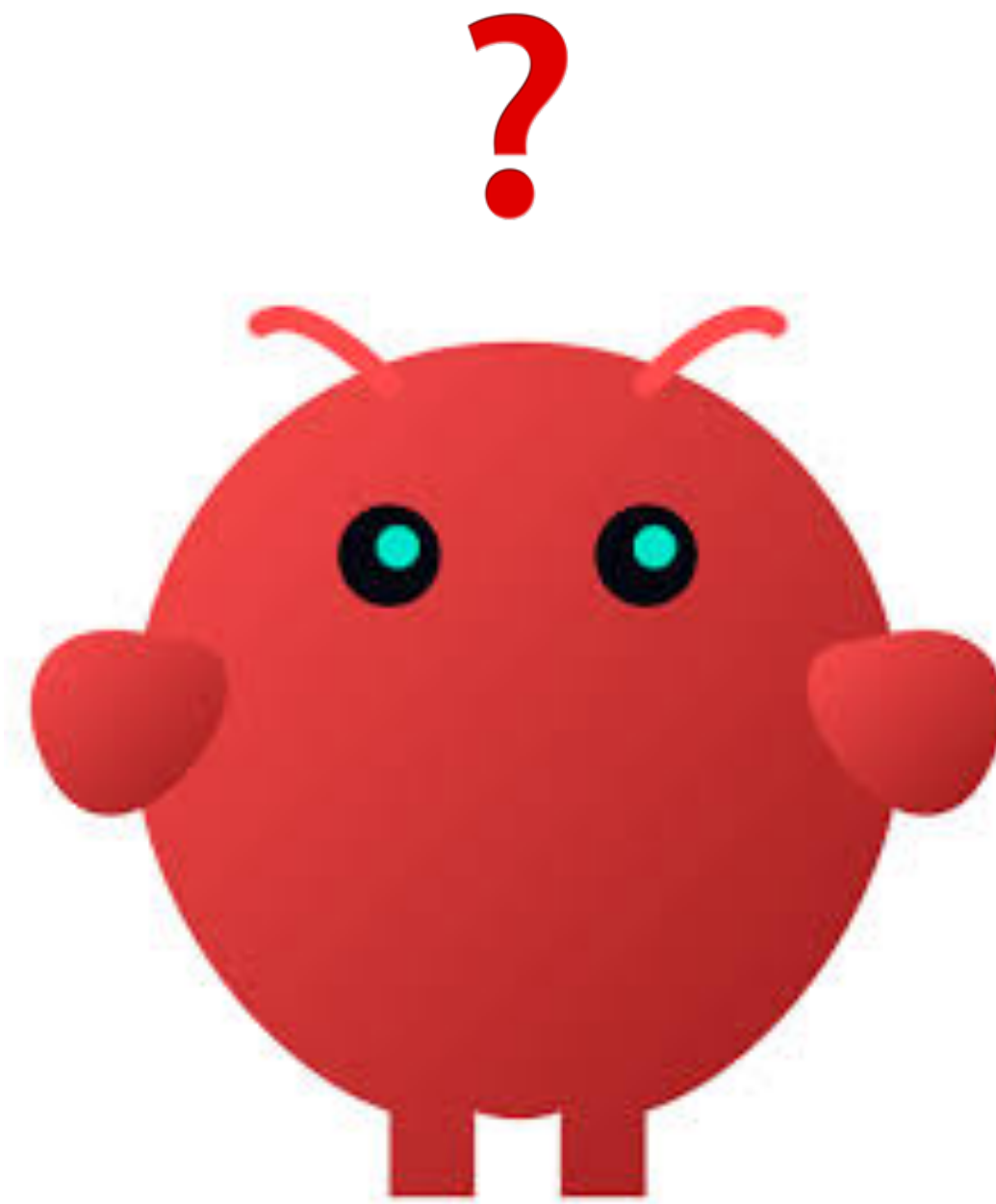


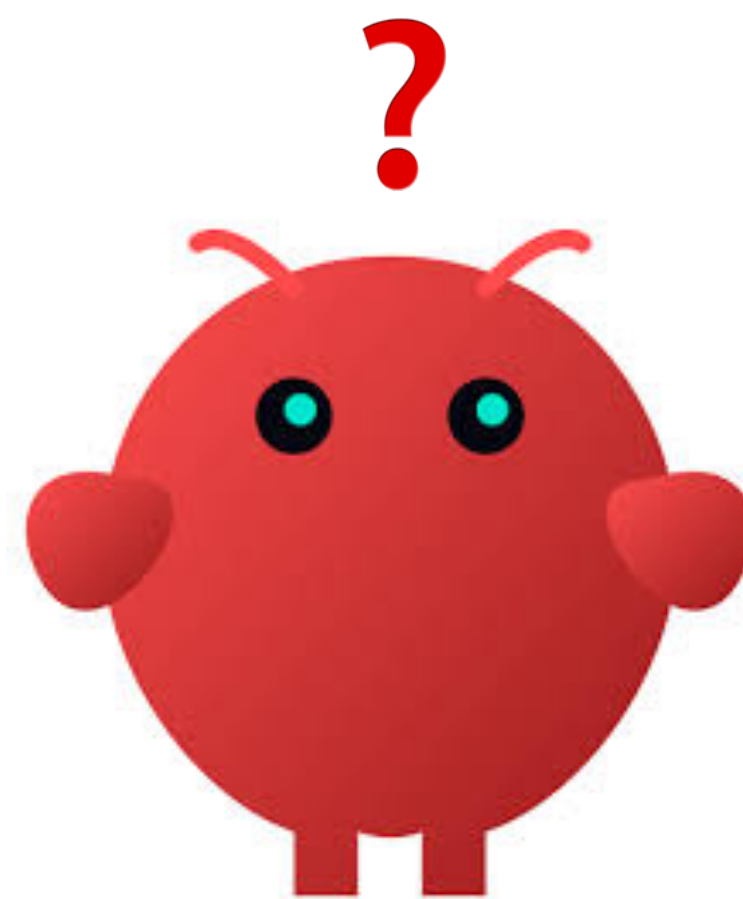
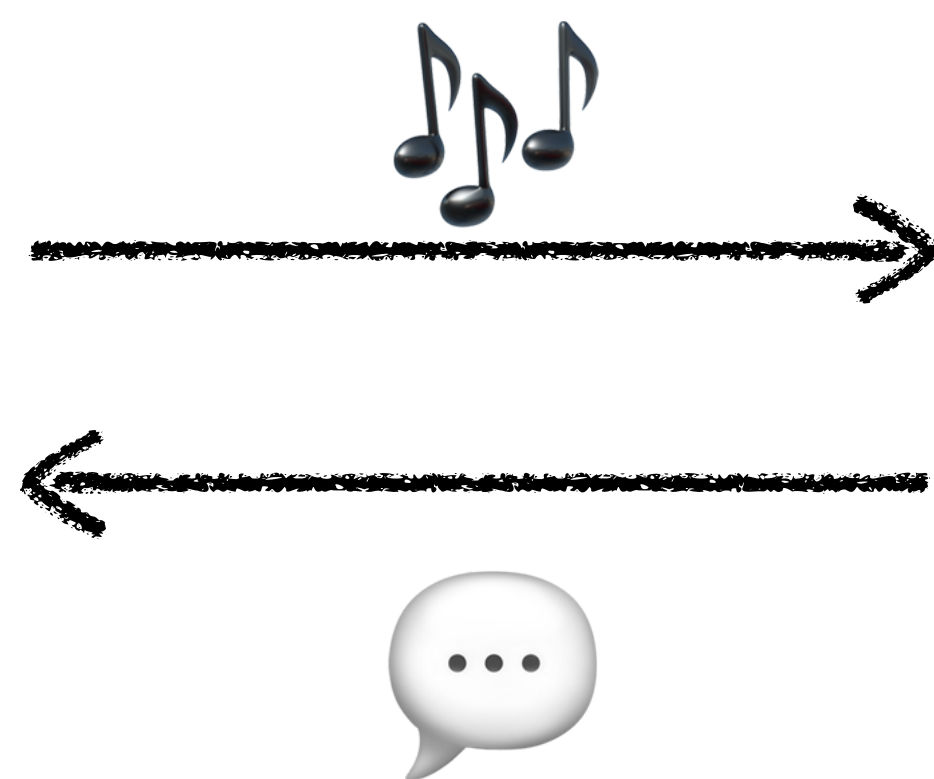
```
import { createAgentSession } from "@earendil-works/pi-coding-agent";
```

```
const { session } = await createAgentSession({  
  cwd,  
  model : getModel("google", "qwen-3"),  
  tools: ["bash", "read", "ls"],  
  sessionManager: SessionManager.inMemory(cwd),  
});
```

```
session.subscribe((event) => {  
  switch (event.type) {  
    case "message_update":  
      if (event.assistantMessageEvent.type === "text_delta") {  
        process.stdout.write(event.assistantMessageEvent.delta);  
      }  
      break;  
    }  
  });
```

```
await session.prompt(  
  [  
    "You are a coding agent.",  
    "Use bash for shell work.",  
    "First inspect the workspace, then use bash to count.",  
    "Finally answer with the line count.",  
  ].join(" "),  
);
```

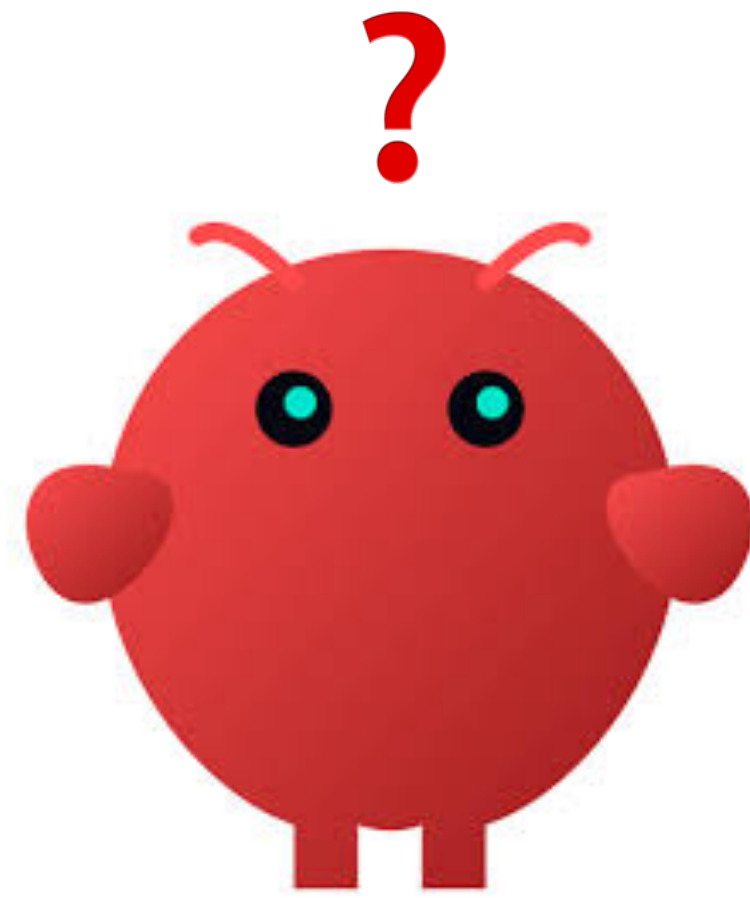
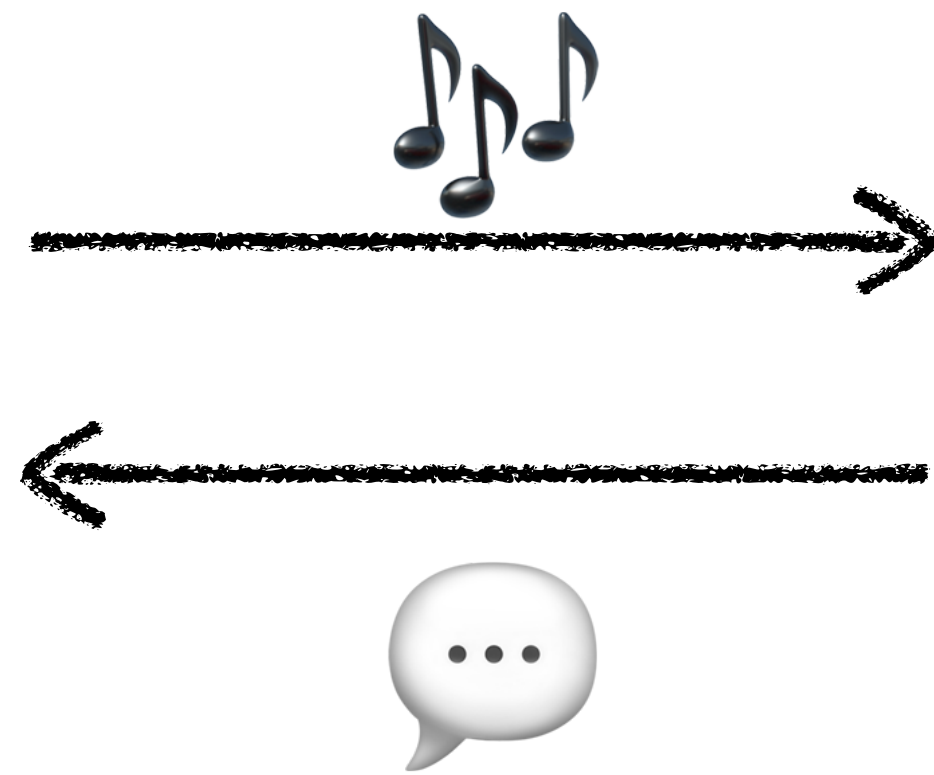




User

You are a personal assistant.

Your tools: read, write, edit, bash.



User

You are a personal assistant.

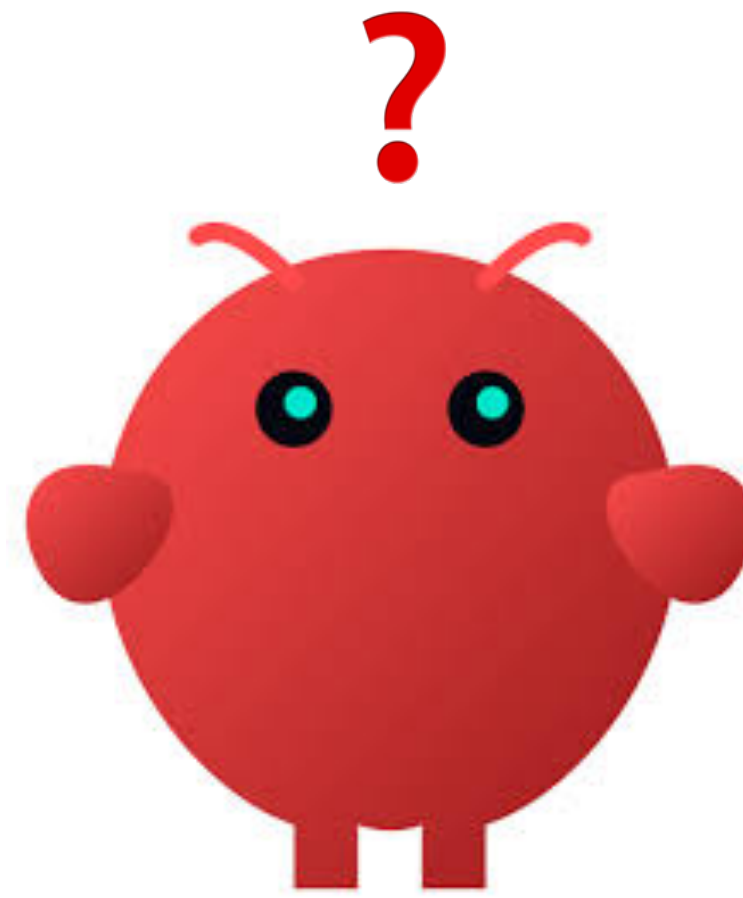
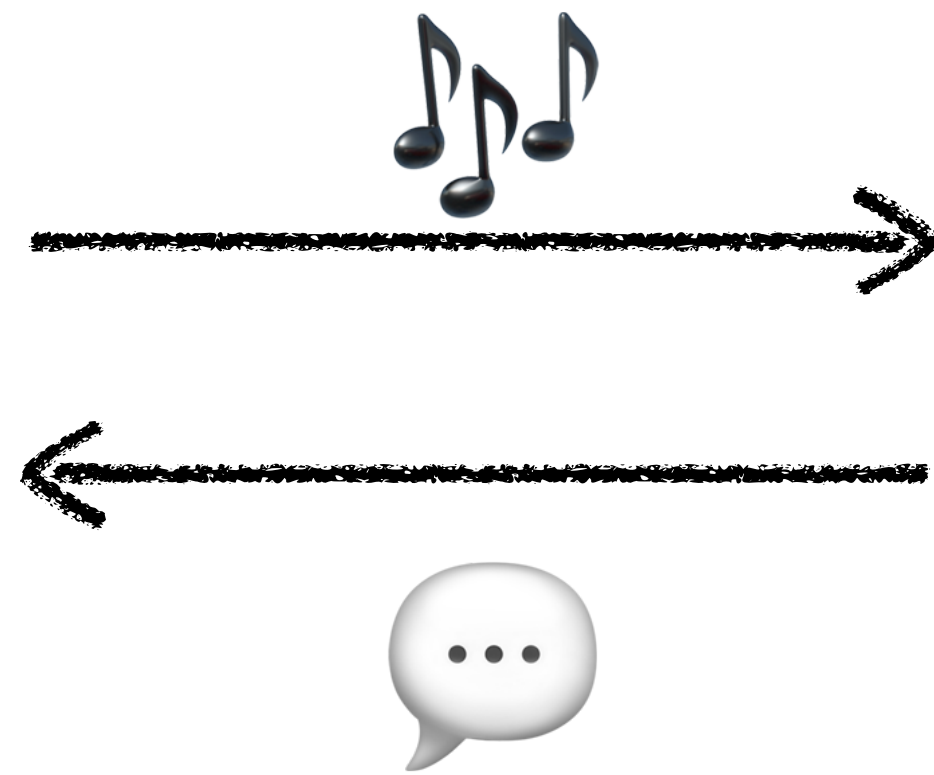
Your tools: read, write, edit, bash.

---

ITERATION 1

>\_ \$ file voice-message.b...

RIFF WAVE, 16 kHz



User

You are a personal assistant.

Your tools: read, write, edit, bash.

---

ITERATION 1

>\_ \$ file voice-message.b...

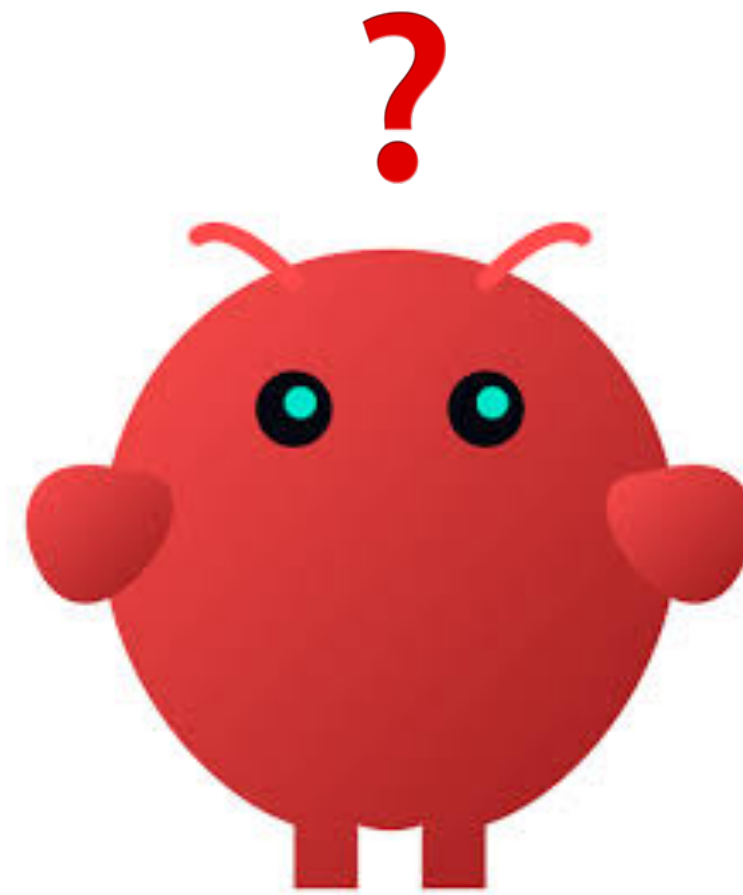
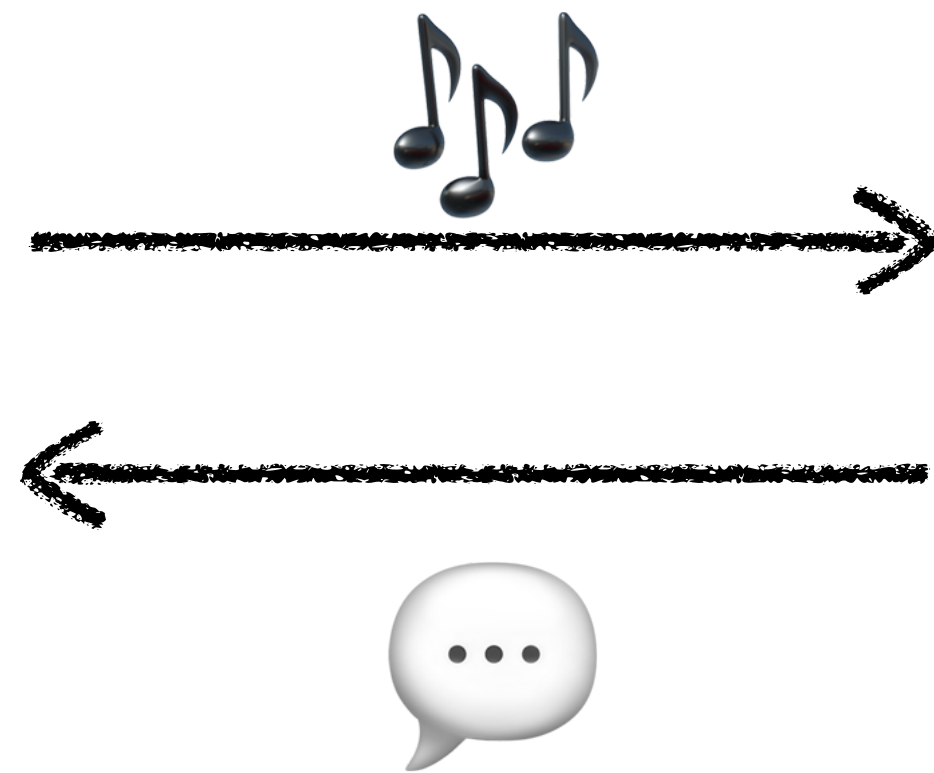
RIFF WAVE, 16 kHz

---

ITERATION 2

>\_ \$ whisper voice-messag...

command not found



User

You are a personal assistant.

Your tools: read, write, edit, bash.

---

ITERATION 1

>\_ \$ file voice-message.b...

RIFF WAVE, 16 kHz

---

ITERATION 2

>\_ \$ whisper voice-messag...

command not found

---

ITERATION N

>\_ \$ curl api.openai.com/...

"Hi, FreshMart purchas...

---

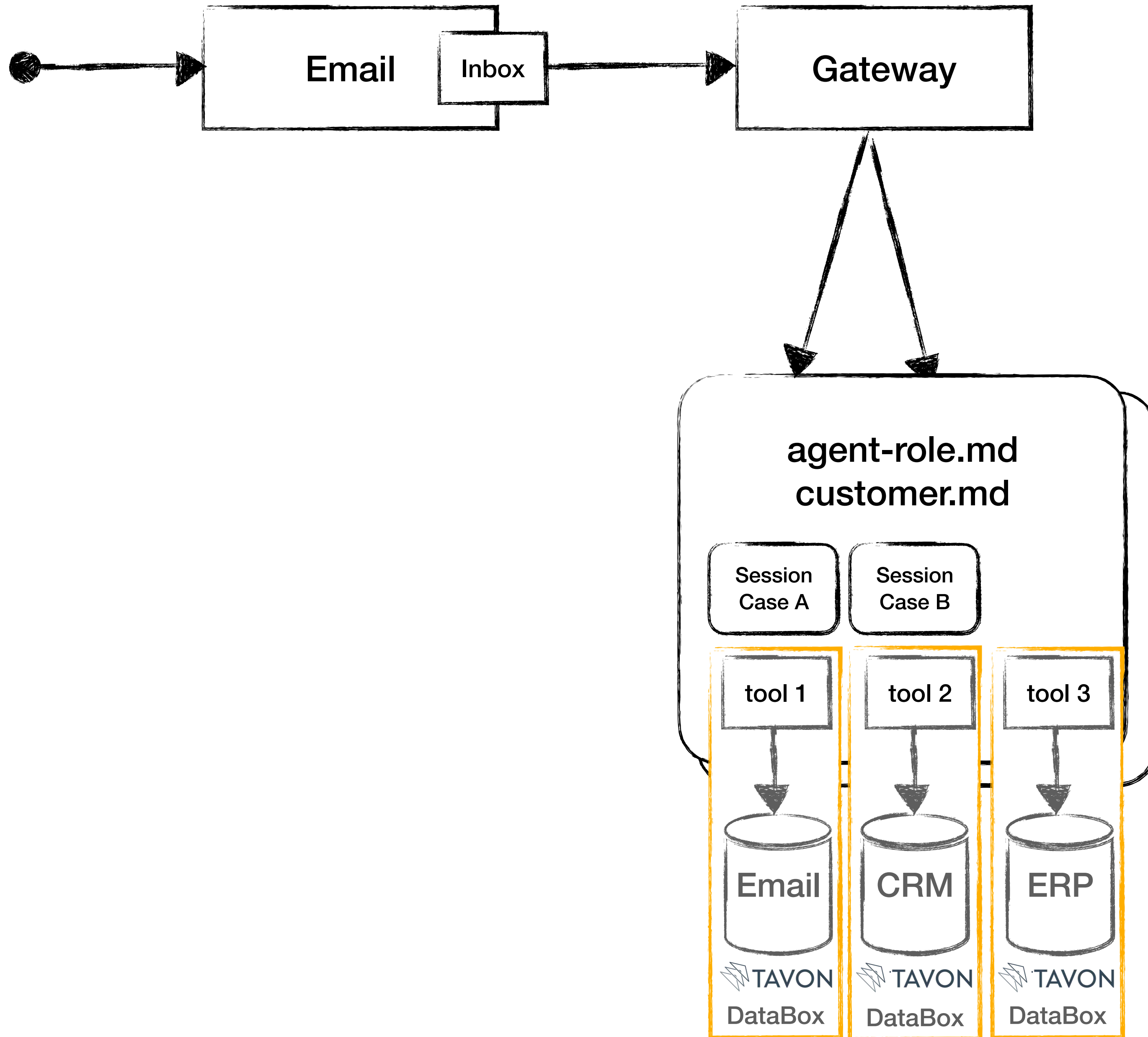
DONE

Assistant

☑ Goal complete

# Embedding PI

Example: Quote Automation



# Session / Tool Calls

The screenshot shows the QuoteGen application interface. The main chat area displays a conversation with an AI assistant (claude-sonnet-4-20250514) and two tool calls for parts lookup. The assistant's messages are in green, tool calls in orange, and tool results in light blue.

**Assistant Message 1:** Jetzt schaue ich die beiden angeforderten Artikel nach:  
+ 6 in + 118 out 3662 cached @ \$0.0043

**Tool Call 1:** parts\_lookup toolu\_014xrkeU4ACYJfyelYaAgYzM

**Tool Call 2:** parts\_lookup toolu\_01XRrHkb3CGLYStseWpJ9D5K

**Tool Result 1:** {"found": true, "count": 1, "parts": [{"partNumber": "RMB-3010", "description": "Dichtungssatz Abfüllanlage", "unitPrice": 34.5, "available": 150, "leadTime": 3, "category": "seals"}]}

**Tool Result 2:** {"found": true, "count": 1, "parts": [{"partNumber": "RMB-3020", "description": "O-Ring Set FDA-konform", "unitPrice": 18.75, "available": 300, "leadTime": 2, "category": "seals"}]}

**Assistant Message 2:** Ausgezeichnet! Beide Artikel sind auf Lager mit ausreichenden Mengen verfügbar. Ich erstelle nun ein Angebotsentwurf an den Kunden:  
+ 7 in + 533 out 3959 cached @ \$0.0103

The dashboard provides an overview of the quote generation system. It includes a 'Recent Activity' table and a 'Drafts' section with an email editor.

### Dashboard

Quote generation system overview

- EMAILS TODAY: 1
- DRAFTS PENDING: 1
- ACTIVE CLIENTS: 3
- TOTAL CASES: 1

### Recent Activity

TIME	CLIENT	TYPE	MESSAGE
03:44:00 PM	Frischgut	Processing	Client agent processing case
03:44:00 PM	Frischgut	Routed	Routed: Angebotsanfrage Dichtungssatz RMB-3010 (25 Stück) und O-Ring Set RMB-3020 (50 Stück)
03:43:52 PM	-	Received	Email from einkauf@frischgut-lebensmittel.de: Angebotsanfrage Dichtungssätze
03:43:33 PM	-	system_reset	System reset — all data cleared

### Drafts

Email drafts awaiting your review

TO	SUBJECT	CLIENT	CASE
einkauf@frischgut-lebensmittel.de	Re: Angebotsanfrage Dichtungss...	Frischgut	CASE-004

### Re: Angebotsanfrage Dichtungssätze

To: einkauf@frischgut-lebensmittel.de  
Subject: Re: Angebotsanfrage Dichtungssätze  
Client: Frischgut Lebensmittel GmbH  
Case: CASE-004  
Context: Angebot für Frischgut Lebensmittel GmbH - beide angeforderte Artikel (RMB-3010 und RMB-3020) sind auf Lager verfügbar. Standardangebot ohne Rabatt, da unter 100 Stück pro Artikel.  
Created: Apr 7, 03:44:18 PM

Email Body

Sehr geehrter Herr Krause,

vielen Dank für Ihre Anfrage. Gerne unterbreiten wir Ihnen folgendes Angebot:

Artikel RMB-3010 (Dichtungssatz Abfüllanlage): 25 Stück à €34,50 = €862,50 netto  
Artikel RMB-3020 (O-Ring Set FDA-konform): 50 Stück à €18,75 = €937,50 netto

Gesamtsumme: €1.800,00 netto zzgl. MwSt.  
Lieferzeit: 3 Werktagen ab Auftragsingang

Alle angeforderten Artikel sind auf Lager und können kurzfristig geliefert werden. Dieses Angebot ist 30 Tage gültig.

Buttons: Cancel, Save Changes, Demo Send

# Take Aways



1. Coding Agents Will Be a Core Building Block
2. Agents Are Not Magic
3. PI Is Perfect for Tinkering
4. Go Tinker



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