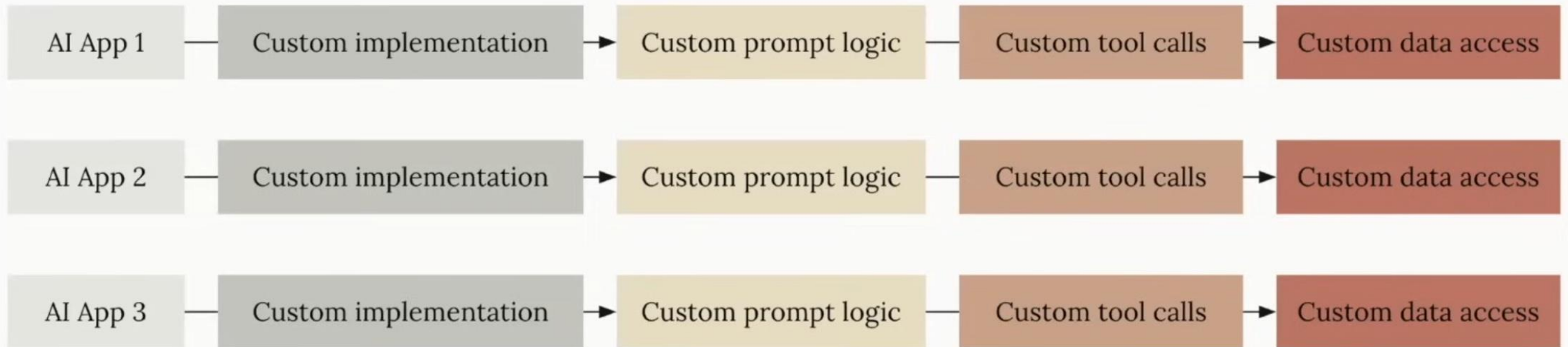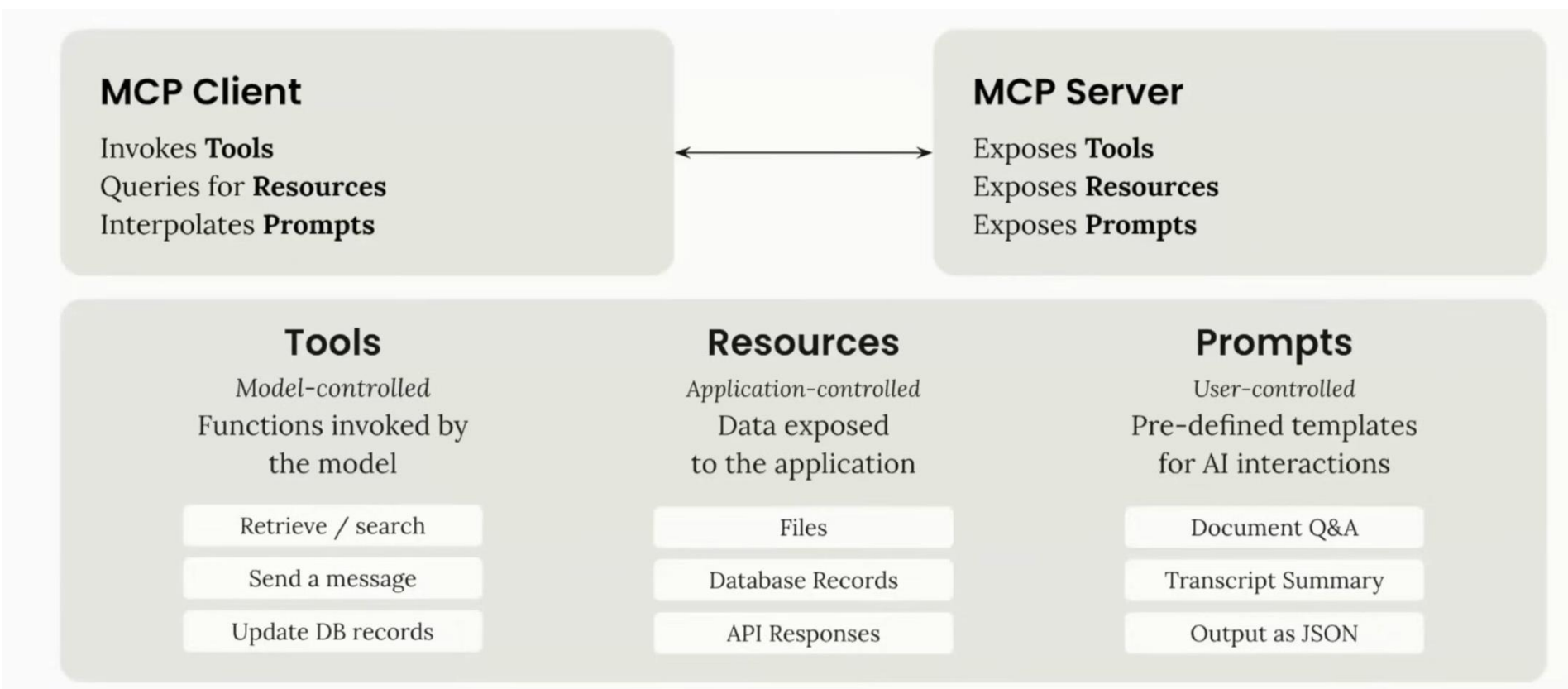# AI Agent using MCP

Uses of AI Agent

➢ Report Creation and Communicate.

➢ Automated chat answering and generating data.

➢ Cloud report generation and reporting it

➢ 50-80% AI agent work are report generation –communication , AI chat .

Traditional way to build AI Agent

AI App 1	—	Custom implementation	→	Custom prompt logic	—	Custom tool calls	→	Custom data access
AI App 2	—	Custom implementation	→	Custom prompt logic		Custom tool calls	→	Custom data access
AI App 3	—	Custom implementation	→	Custom prompt logic		Custom tool calls	→	Custom data access

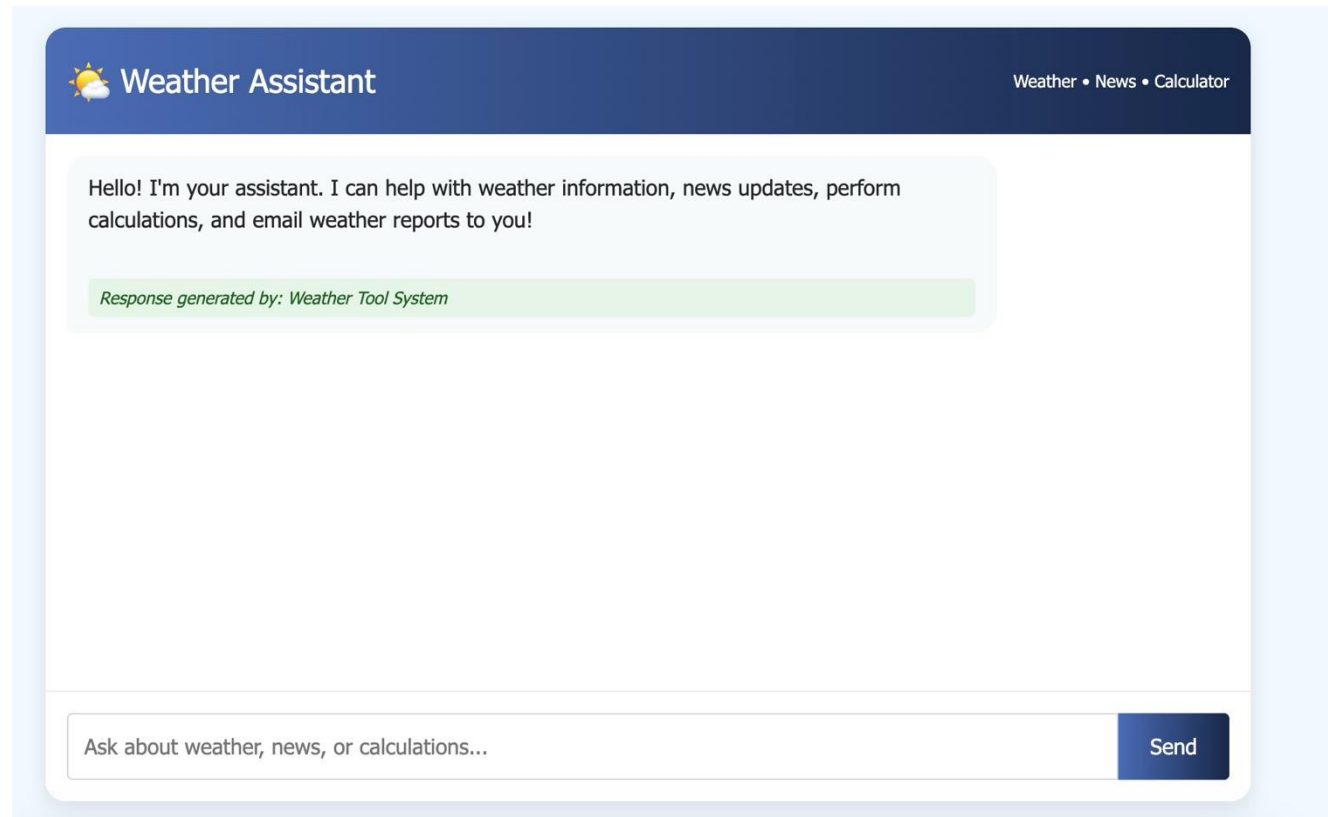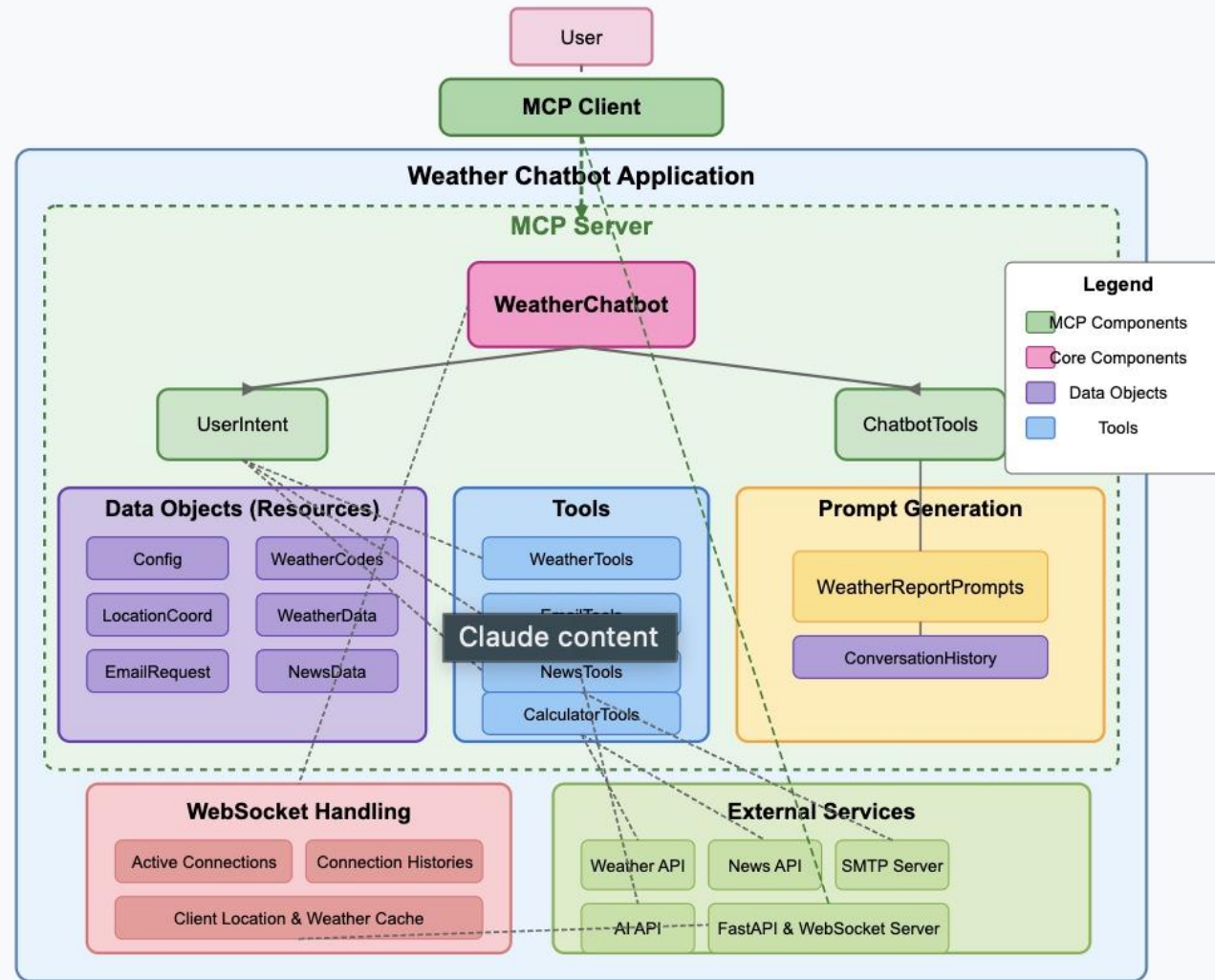# Anthropic Model Context Protocol (MCP)

Building the MCP Server & Client for the AI agent .
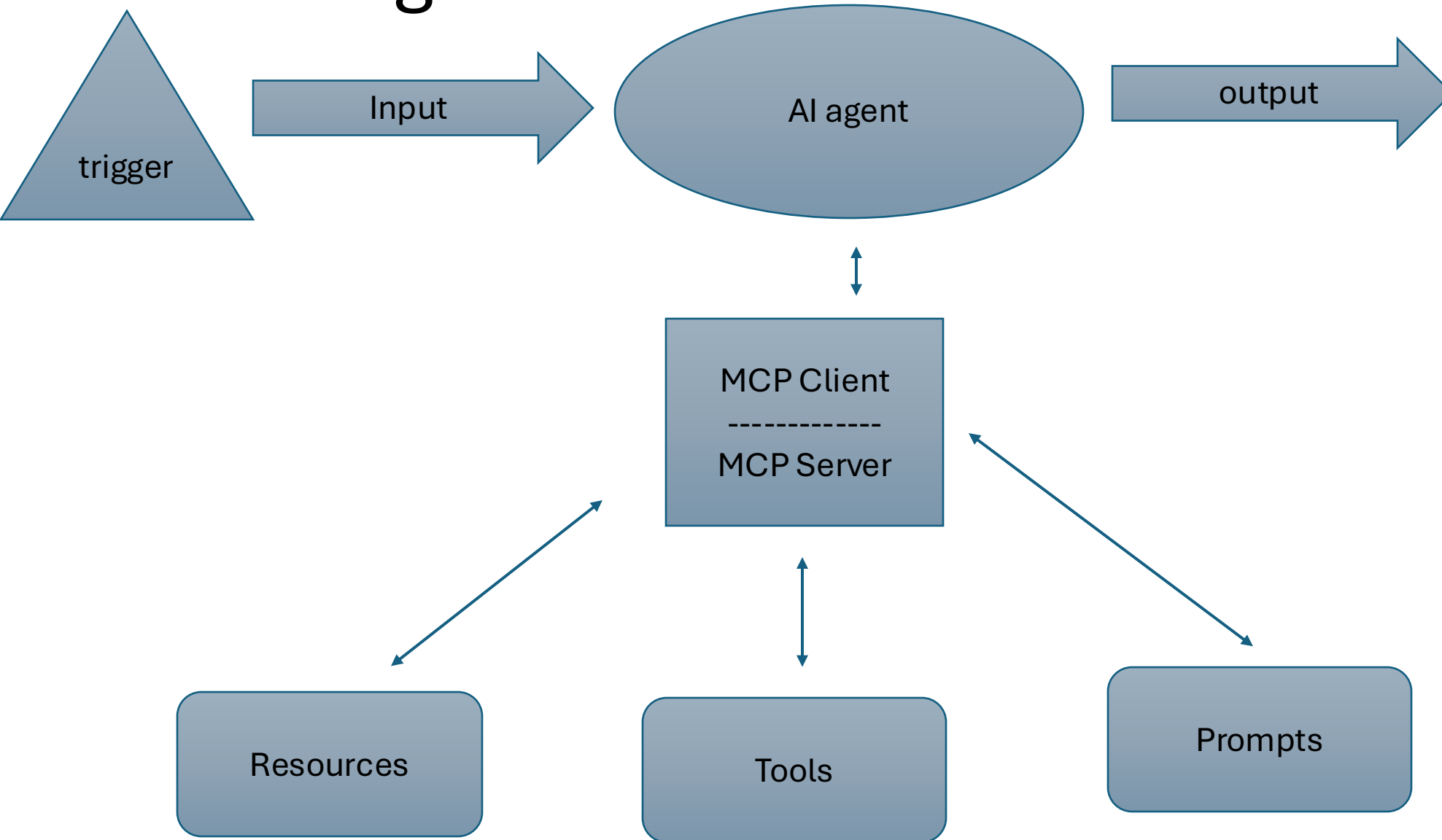
- Weather App build server custom Server & Client .
-

Weather Assistant

> new york weather

🌤️ **WEATHER REPORT:**

Currently in New York City, it's 73°F (23°C) and partly cloudy. Today's forecast calls for a high near 82°F (28°C) and a low around 64°F (18°C). Expect a mix of sun and clouds throughout the day with light winds out of the southwest at 5-10 mph. No significant precipitation is expected.

It should be a pleasant day to be outdoors, but you may want a light layer for the evening as temperatures cool down.

[Weather data source: National Weather Service]

Response generated by: Weather Tool

Ask about weather, news, or calculations... | Send

Weather Assistant

Let me know if you would like me to provide more details on any of these stories!

Response generated by: News Summary Tool

Response generated by: Weather Tool

> 1 + 9 + 7 + 8

📊 Calculation result:
1 + 9 + 7 + 8 = 25

Response generated by: Calculator Tool

Ask about weather, news, or calculations... | Send

Weather Assistant

> new york news

Here are the latest news headlines for New York City:

• Mayor Adams Announces Crackdown on Illegal Dirt Bikes and ATVs
• MTA Unveils New Subway Cars with Wider Doors and Open Gangways
• NYC Public Schools to Offer Expanded Summer Programming
• Mets and Yankees Both Leading Their Divisions as MLB Season Heats Up
• Broadway Sees Boost in Ticket Sales as Tourism Rebounds

The mayor's initiative aims to get dangerous vehicles off city streets. The MTA's new subway cars will increase capacity. NYC schools are providing more summer learning and enrichment opportunities for students. The Mets and Yankees are off to strong starts this baseball season. And Broadway shows are seeing increased attendance as visitors return to the city.

[News source: Various NYC media outlets]

Ask about weather, news, or calculations... | Send

Weather Chatbot Architecture

User

MCP Client

Weather Chatbot Application

MCP Server

WeatherChatbot

UserIntent

ChatbotTools

Legend
- MCP Components
- Core Components
- Data Objects
- Tools

Data Objects (Resources)
- Config
- WeatherCodes
- LocationCoord
- WeatherData
- EmailRequest
- NewsData

Tools
- WeatherTools
- EmailTools
- NewsTools
- CalculatorTools

Prompt Generation
- WeatherReportPrompts
- ConversationHistory

Claude content

WebSocket Handling
- Active Connections
- Connection Histories
- Client Location & Weather Cache

External Services
- Weather API
- News API
- SMTP Server
- AI API
- FastAPI & WebSocket Server

MCP using self made server and client

MCP using self made server and client

Advantages	Fully customizable tools can be created.
	Any LLM Can be used as AI.
	Can Hardcode Configuration.
Disadvantages	Time Consuming .
	Need more stabilization .
	Changes are hard to implement .

Anthropic MCP Client
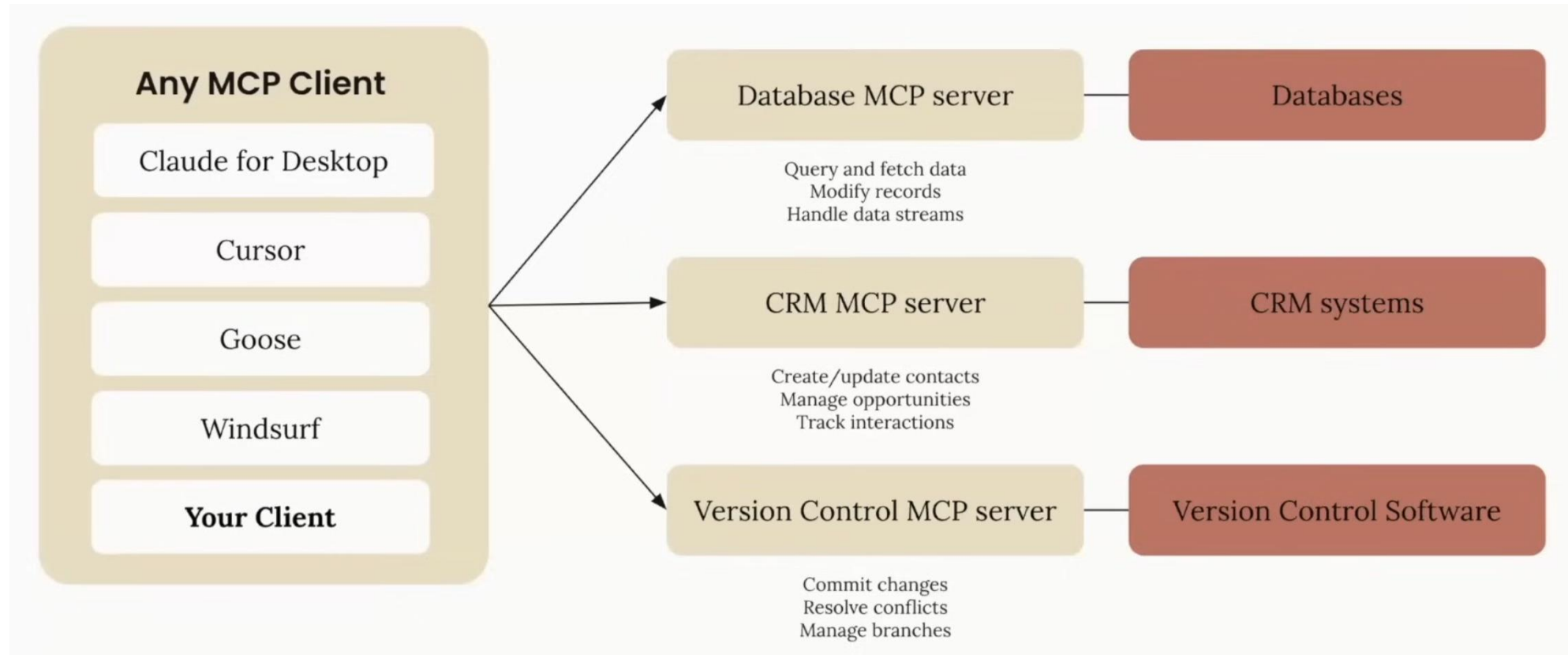
Making a MCP Client and use all the MCP server to make AI agent
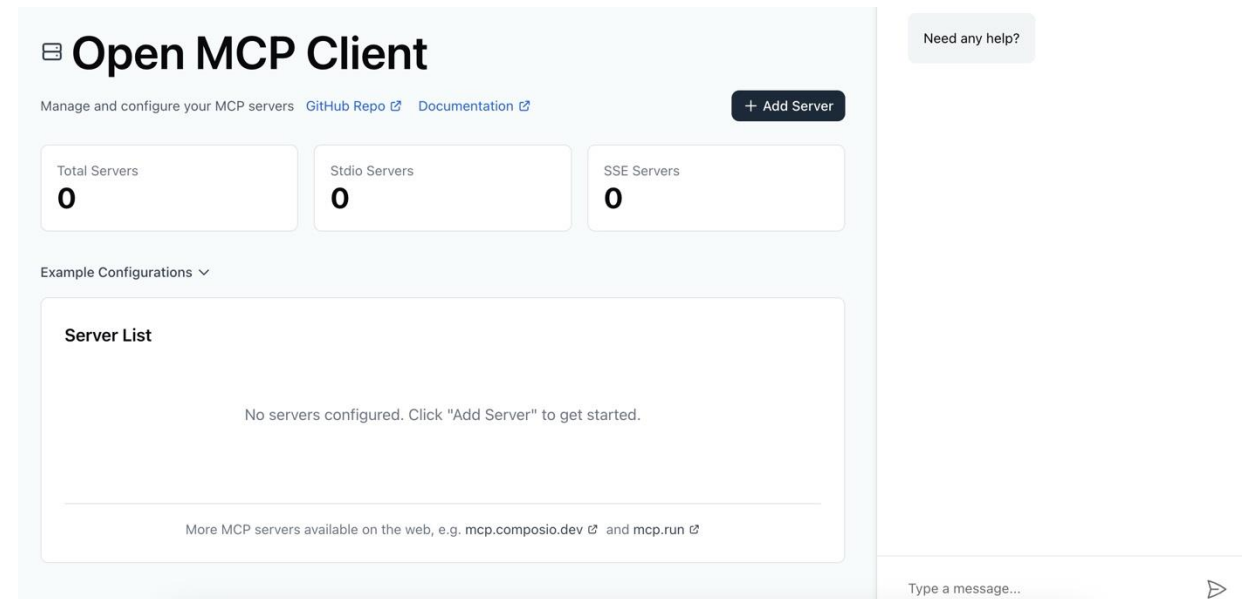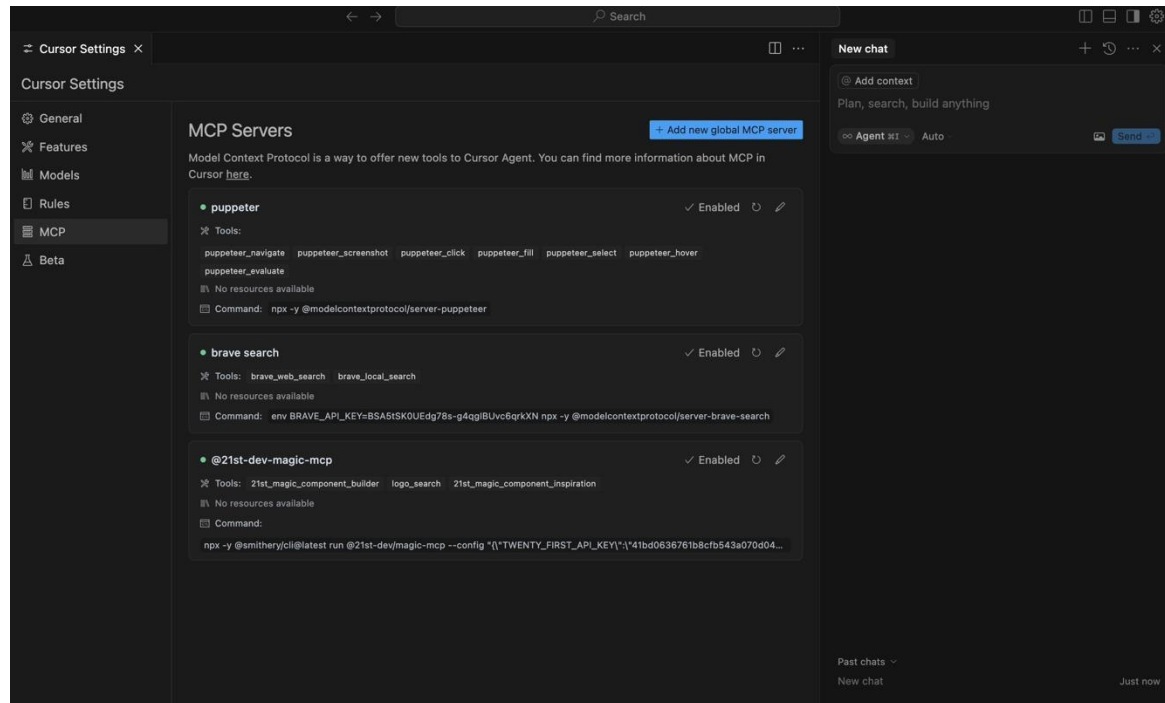
MCP Server

MCP using Existing servers of Anthropic
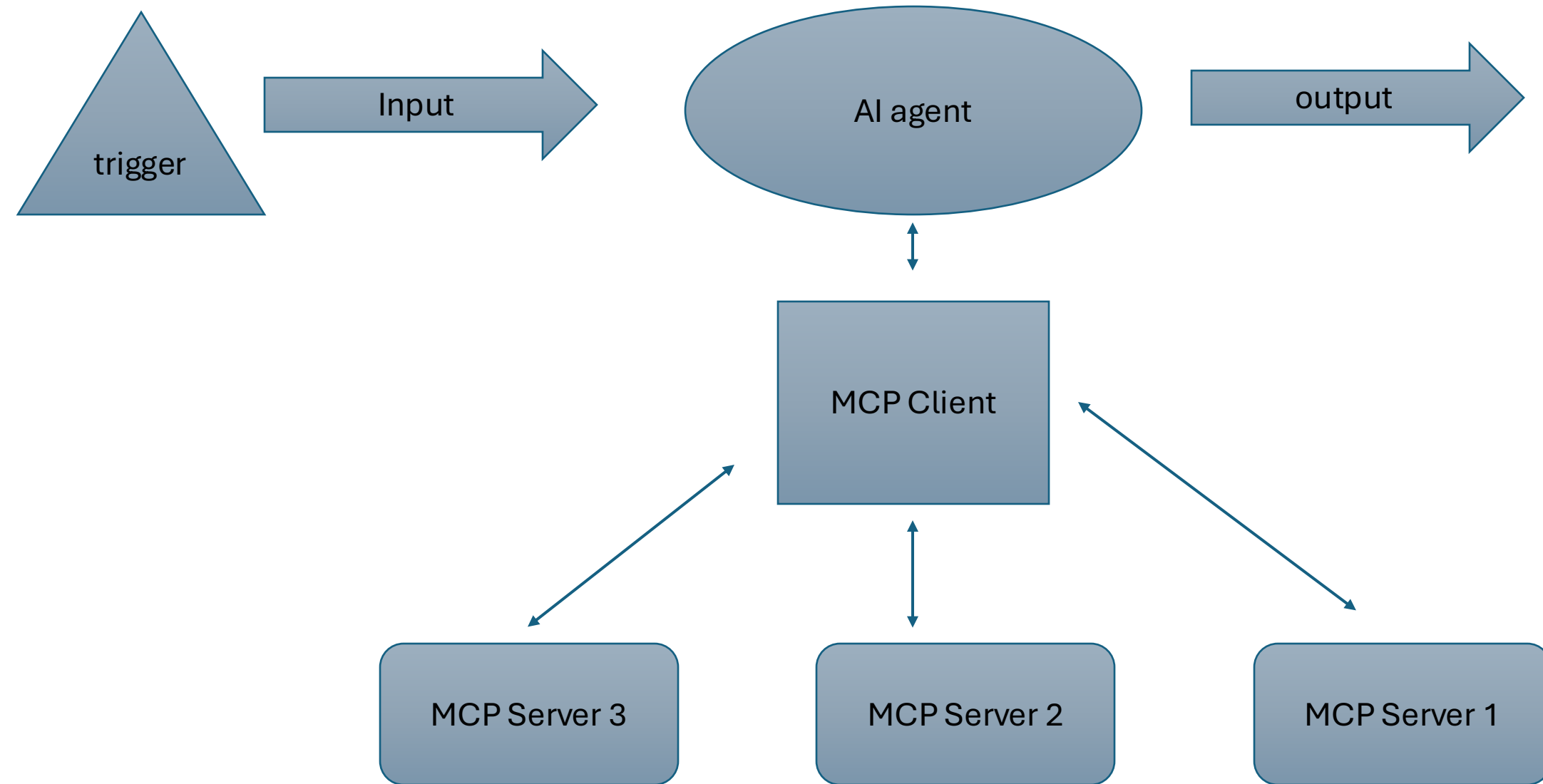
MCP using Existing servers of Anthropic

Advantages

MCP using Existing servers of Anthropic is more stable

Changes are easy to make .

Once the system is made it can reuse.

Disadvantage

Not all the apps are present in the MCP.(by time new MCP server will be available)

Need to crate MCP client which can access the MCP servers.

N8N workflow automation

- Most of the daily use application is available
- Easy Deployment .
- Any ai agent can be integrated
- Can develop and develop AI agents and Automation very quickly .
- Using this we can create AI agent workspace and start giving the access to everyone .
- Can create some customer UI can make it available a reuse UI.
- Any AI architect can be implemented