

CMPE492 - Week 4

Zeynep Buse Aydın - Asım Dağ

Levels of autonomy in LLM applications

HUMAN-DRIVEN

1

Code



2

LLM Call



one step only



3

Chain



multiple steps



4

Router



no cycles



AGENT-EXECUTED

5

State Machine



cycles



6

Autonomous



code

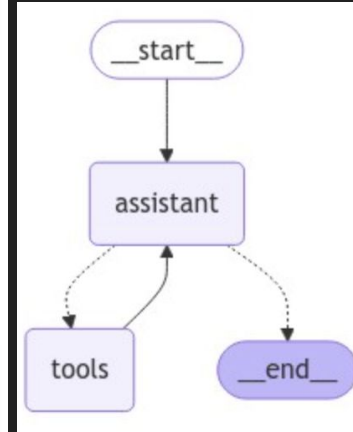
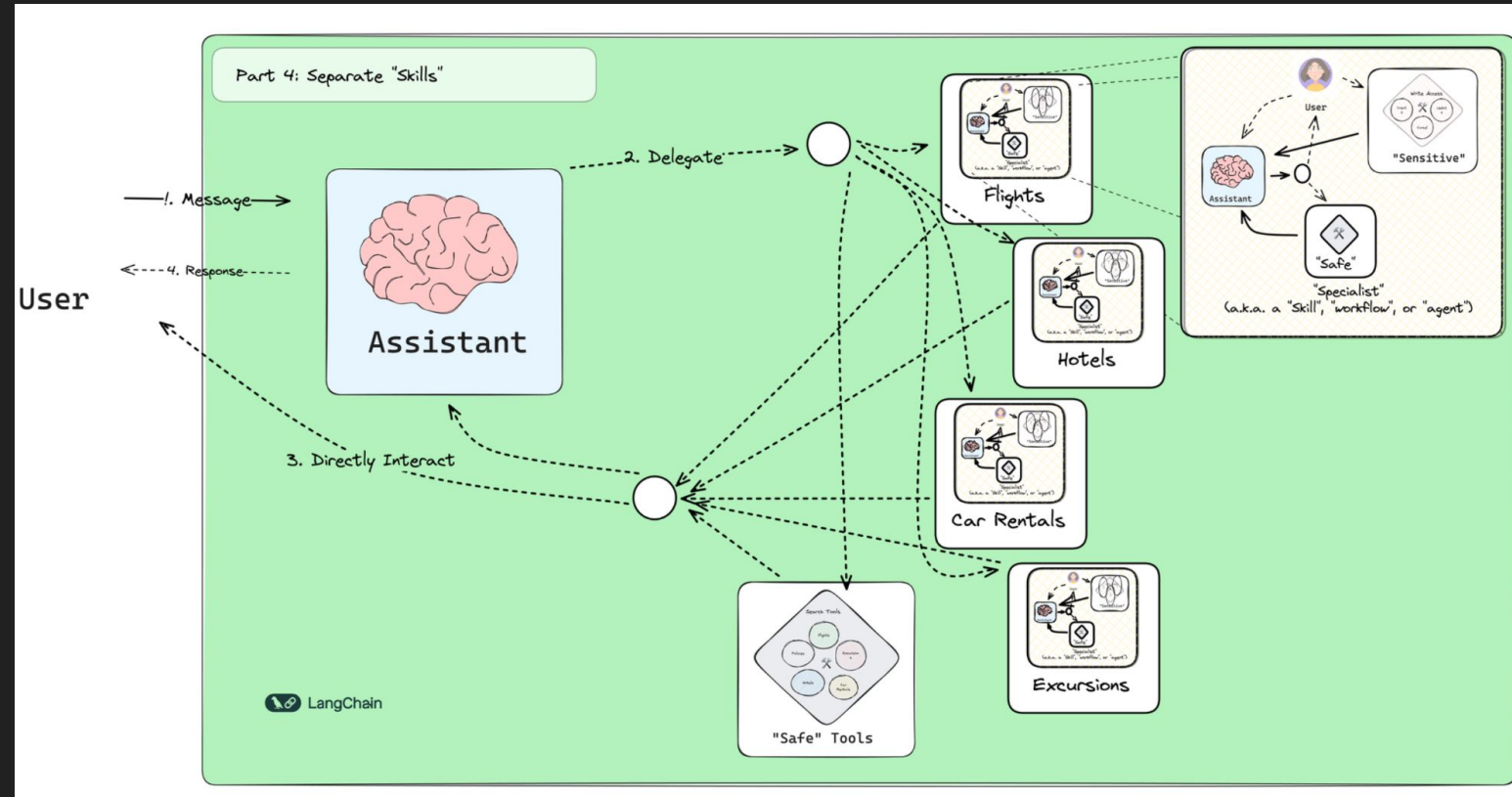


LLMs

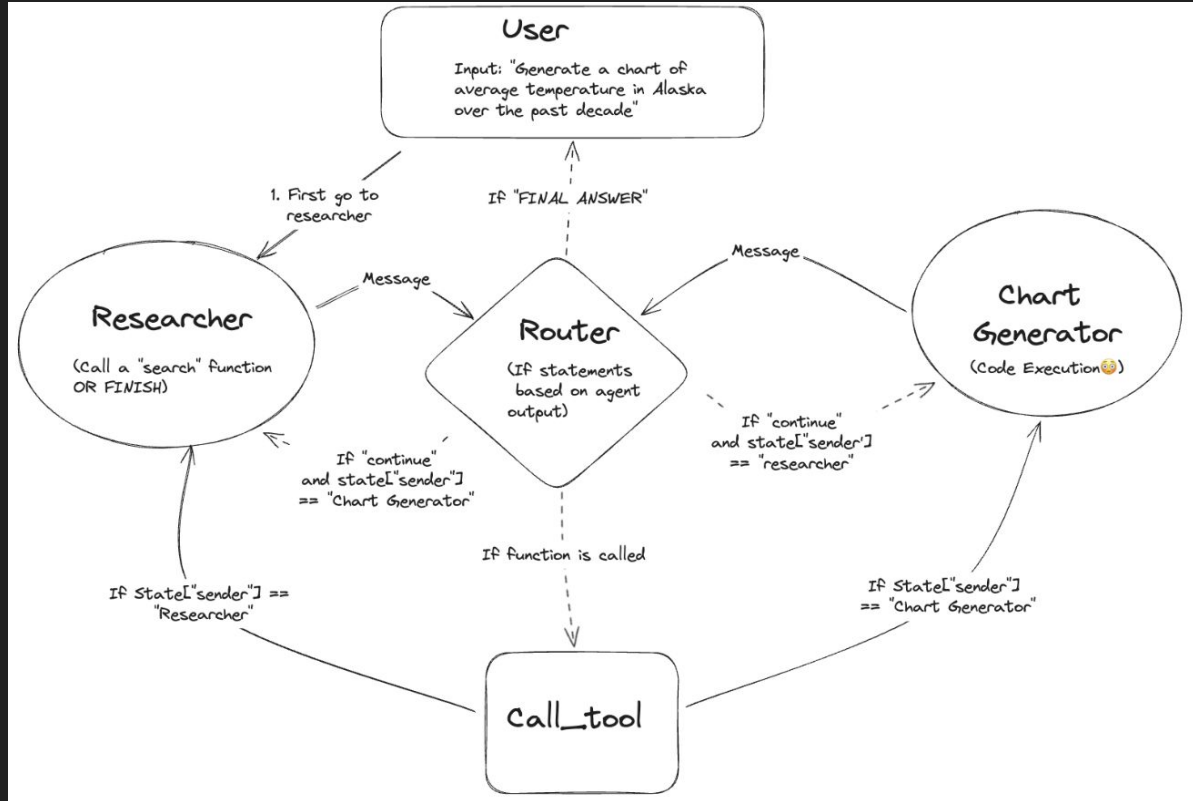


LangChain

Chatbots - Customer Support *

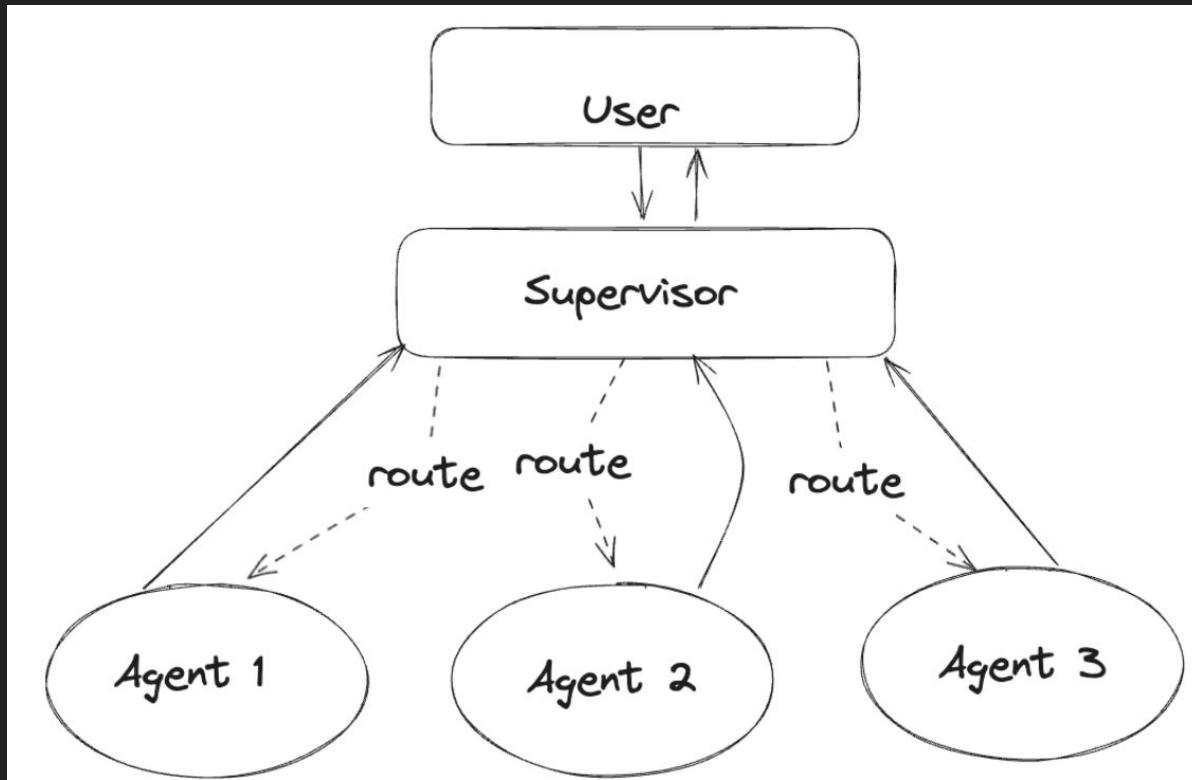


Multi-Agent Collaboration



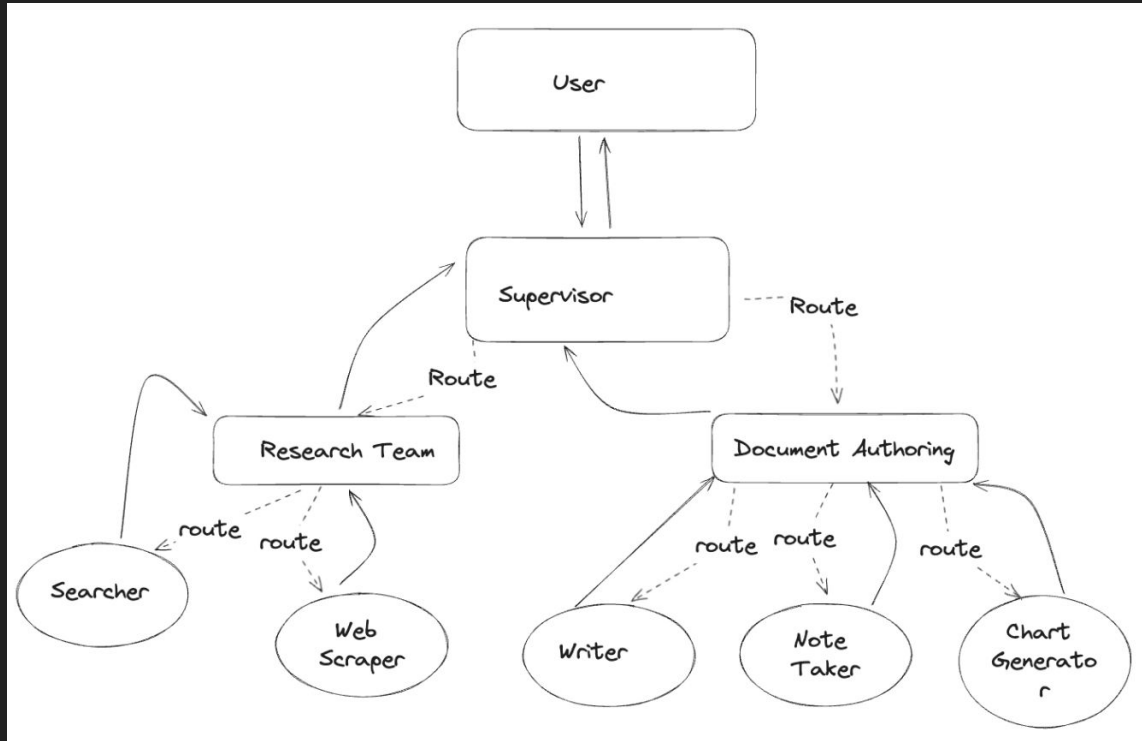
different agents
collaborate on a
shared scratchpad of
messages

Agent Supervisor



- The agents have their own independent scratchpads
- In this case, the independent agents are a LangGraph ReAct agent (graph). This means they have their own individual prompt, LLM, and tools.

Hierarchical Agent Teams



additional level of subgraphs and creating a top-level supervisor, along with mid-level supervisors

<https://langchain-ai.github.io/langgraph/concepts/memory/>