

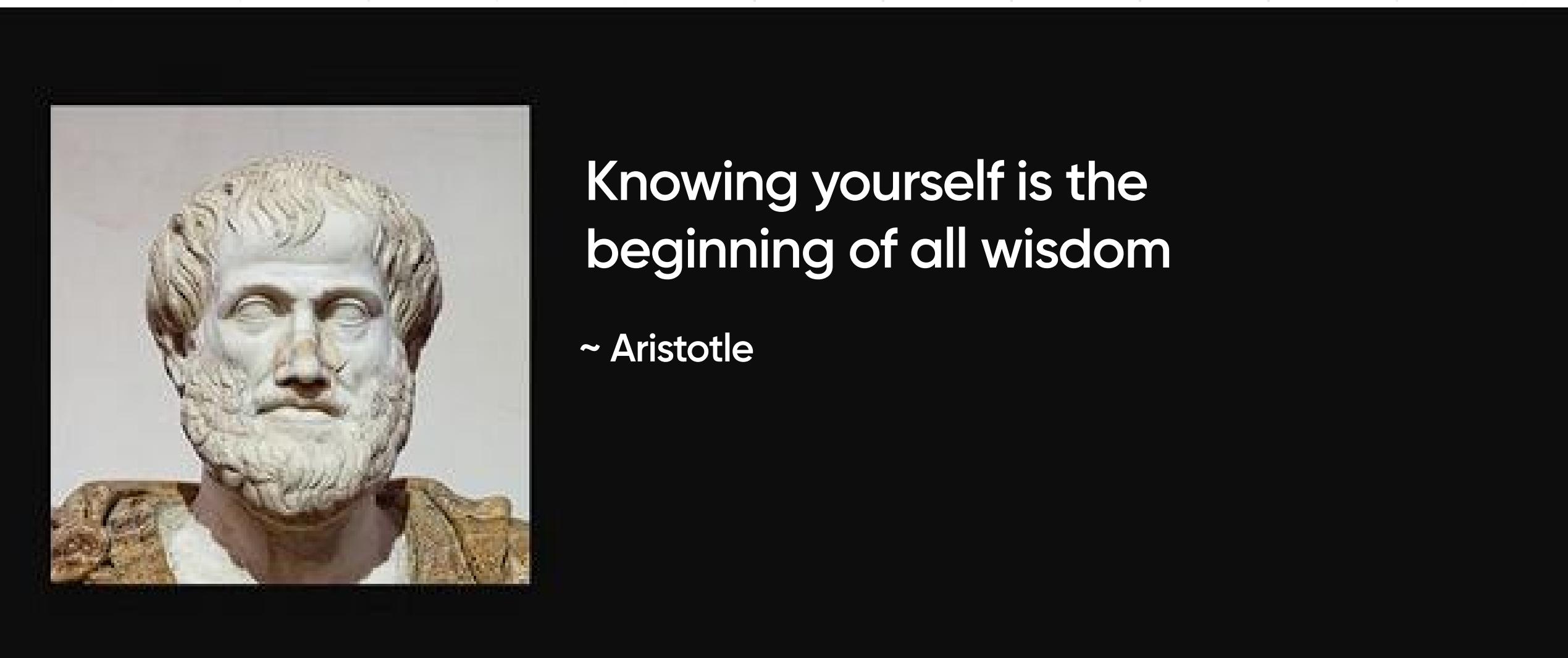
Agentic Design Patterns



Agentic Design Patterns

- **Reflection:** The LLM examines its own work to come up with ways to improve it.
- **Tool Use:** The LLM is given tools such as web search, code execution, or any other function to help it gather information, take action, or process data.
- **Planning:** The LLM comes up with, and executes, a multistep plan to achieve a goal (for example, writing an outline for an essay, then doing online research, then writing a draft, and so on).
- **Multi-agent collaboration:** More than one AI agent works together, splitting up tasks and discussing and debating ideas, to come up with better solutions than a single agent would.





**Knowing yourself is the
beginning of all wisdom**

~ Aristotle

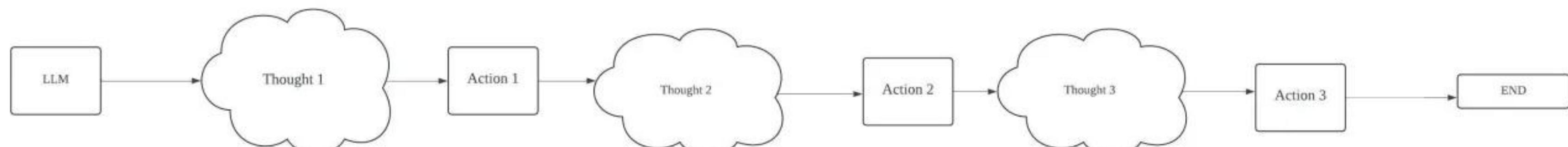


Self-Reflection

- As humans, when we self-reflect, we reflect on our action, critique it, learn from it, and then formulate our next step and action.
- We continue to self-reflect on the next actions till we feel we have accomplished the task as best as it can be done.
- Thinking is a linear process, whereas self-reflection is a cyclical process.
- In thinking, we think and do an action, and think again and do the next action and so on. The next thought is not taken after reviewing the previous thought.
- But, in self-reflection, we think, do an action, think about the action we did, and use the feedback to think about the next action and this cycle of feedback continues till we decide that we have achieved the task to the best of our abilities.

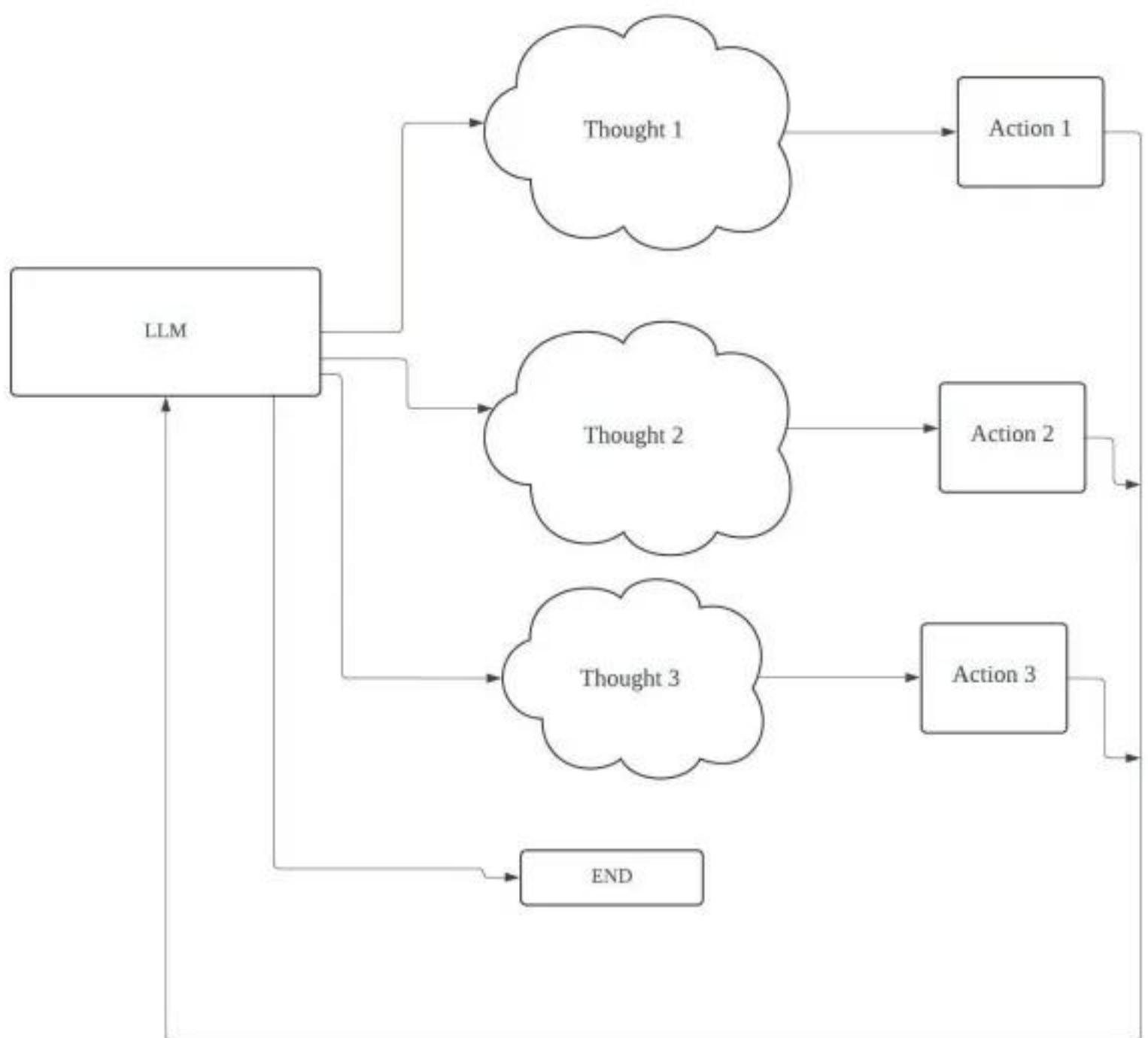


Thinking



Linear Process

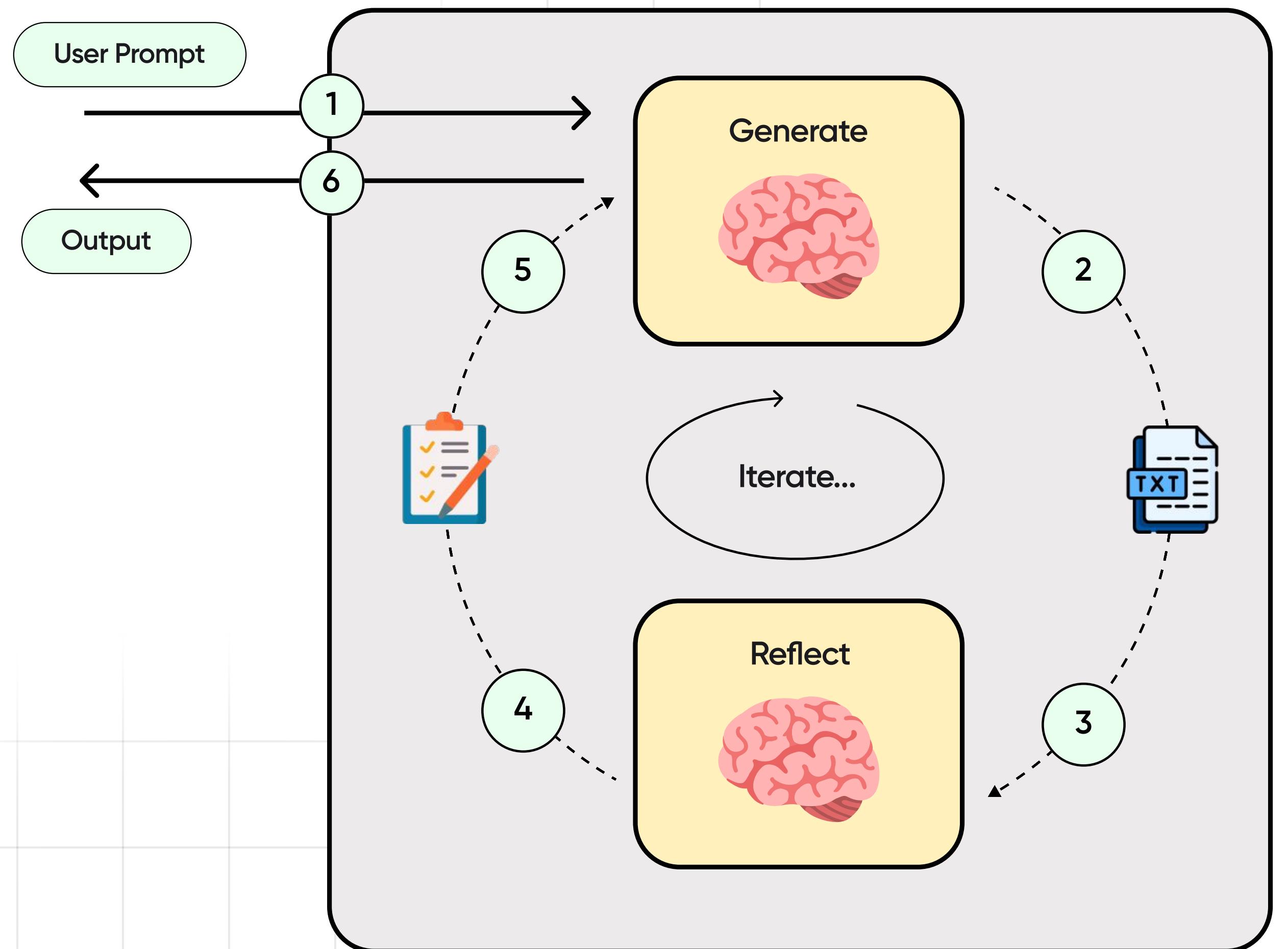
Reflection



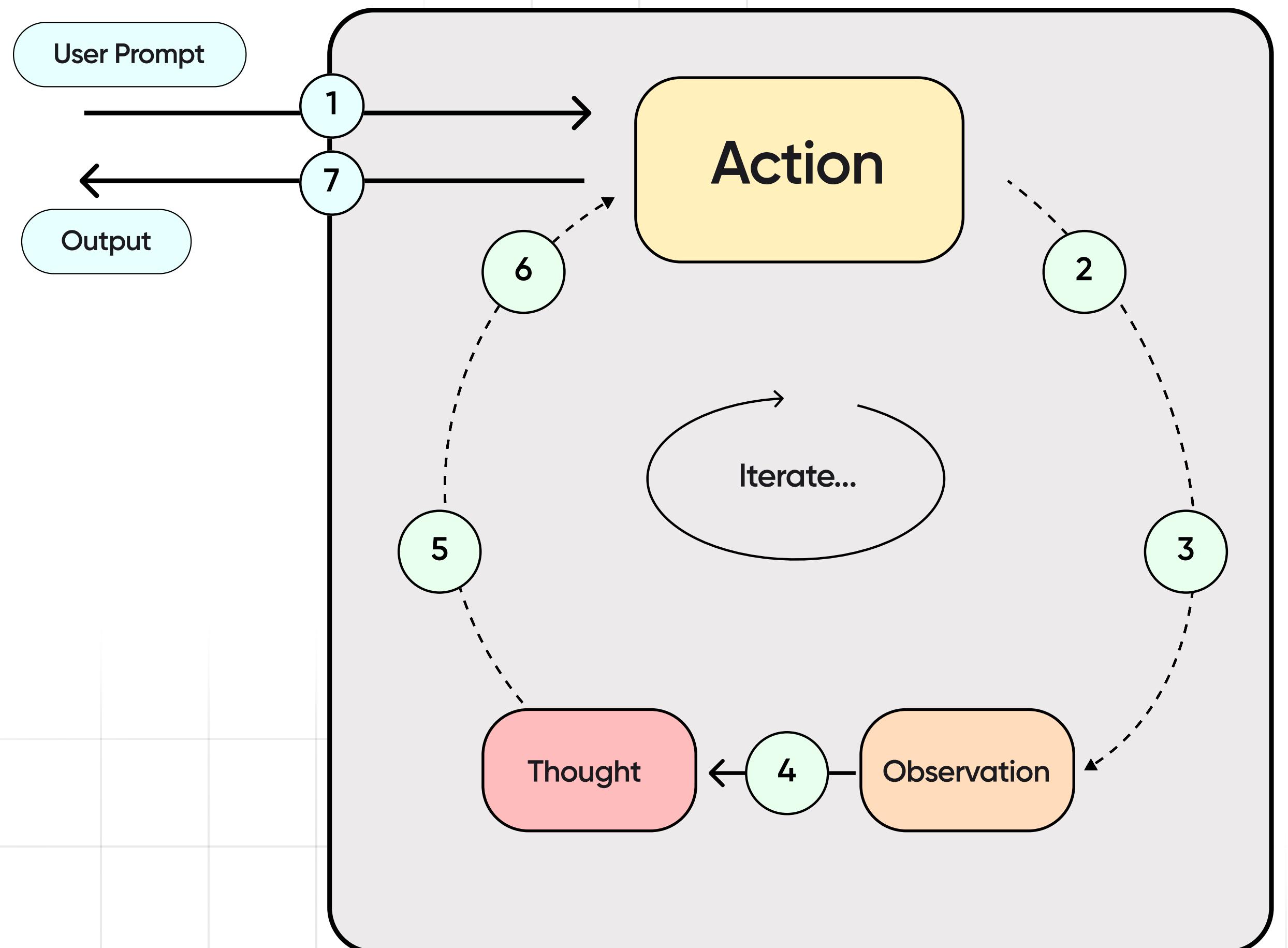
Cyclical Process



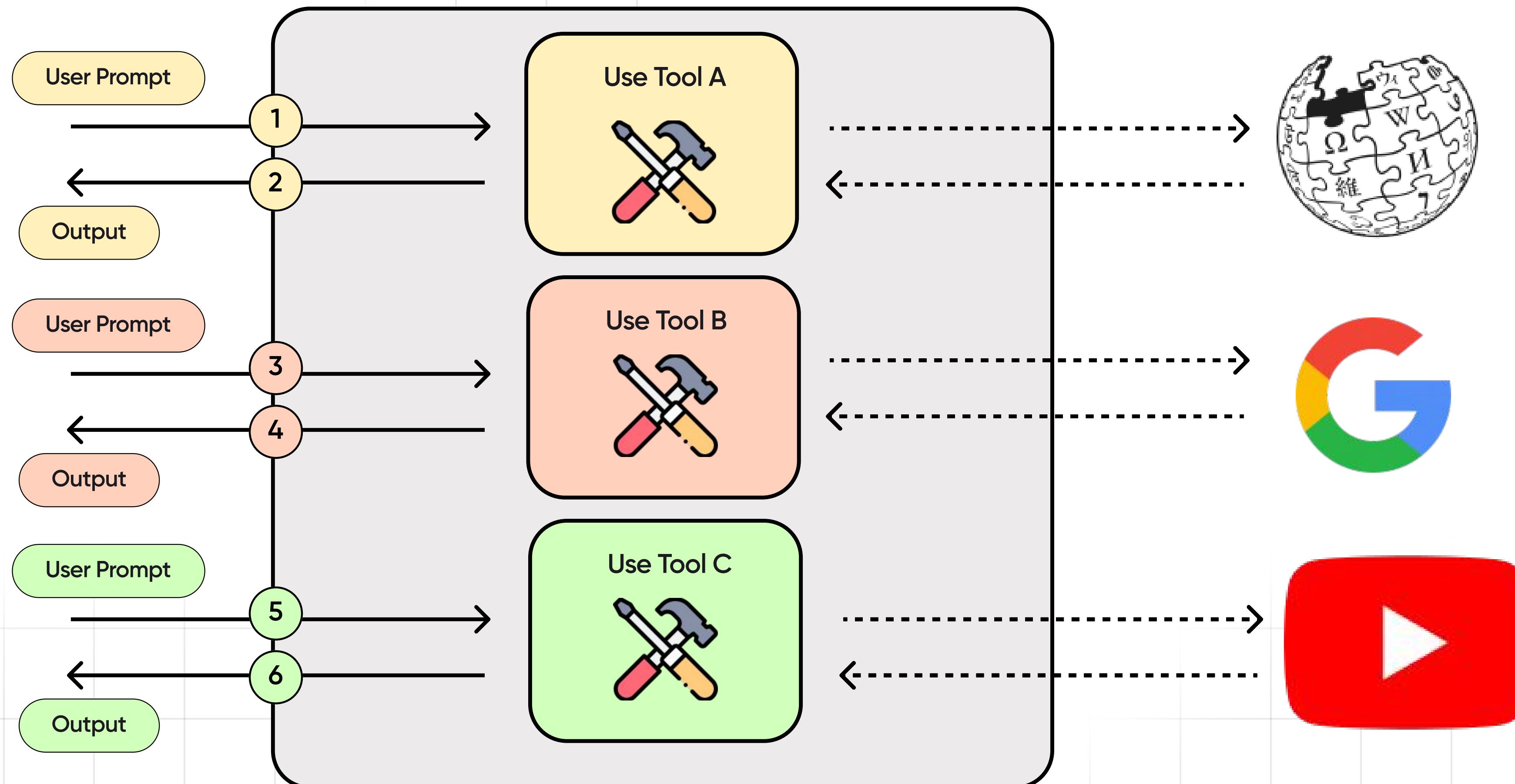
Reflection Pattern



Planning Pattern



Tools Use Pattern



MultiAgent Pattern

