

Introduction to Multi-Agent Systems

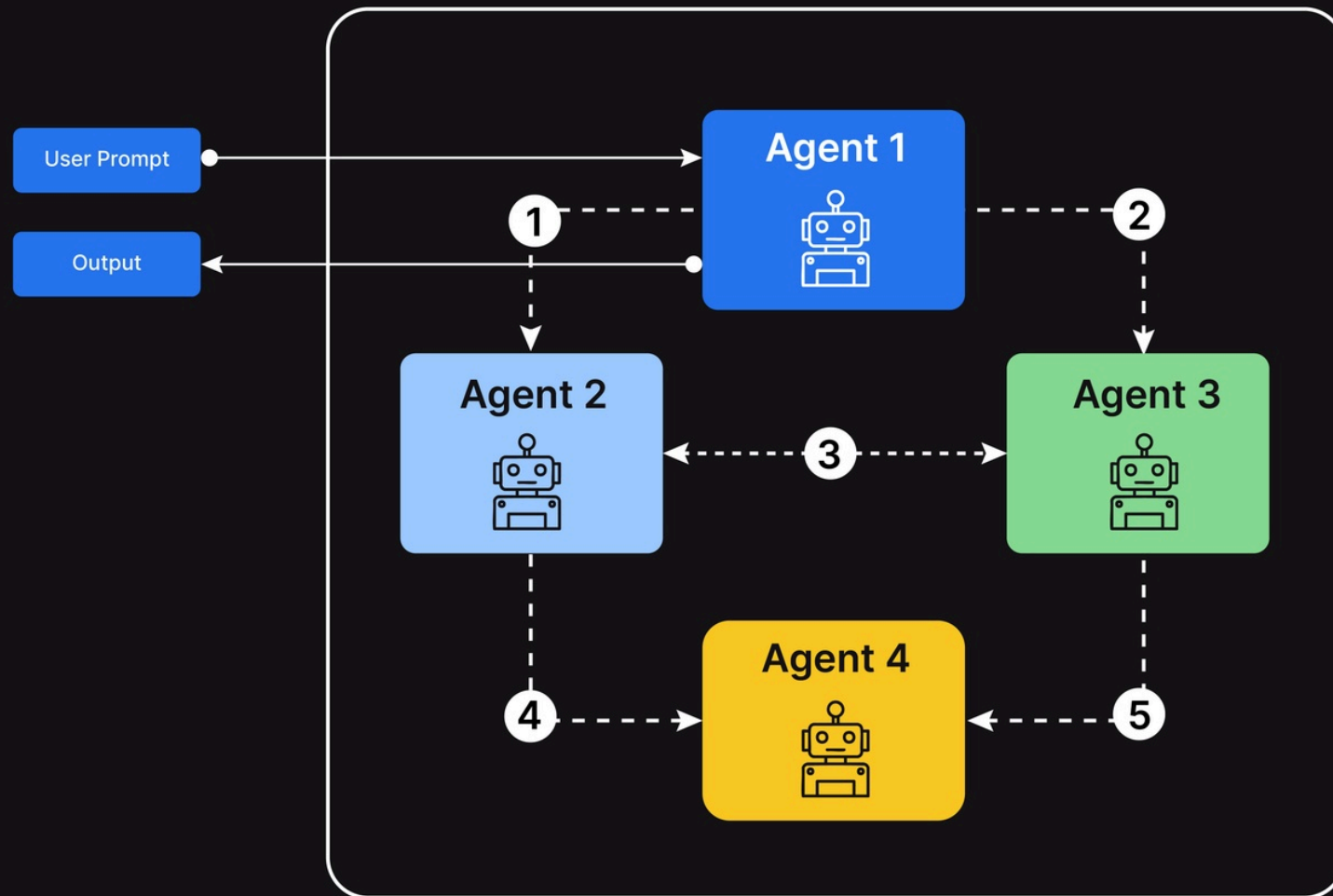
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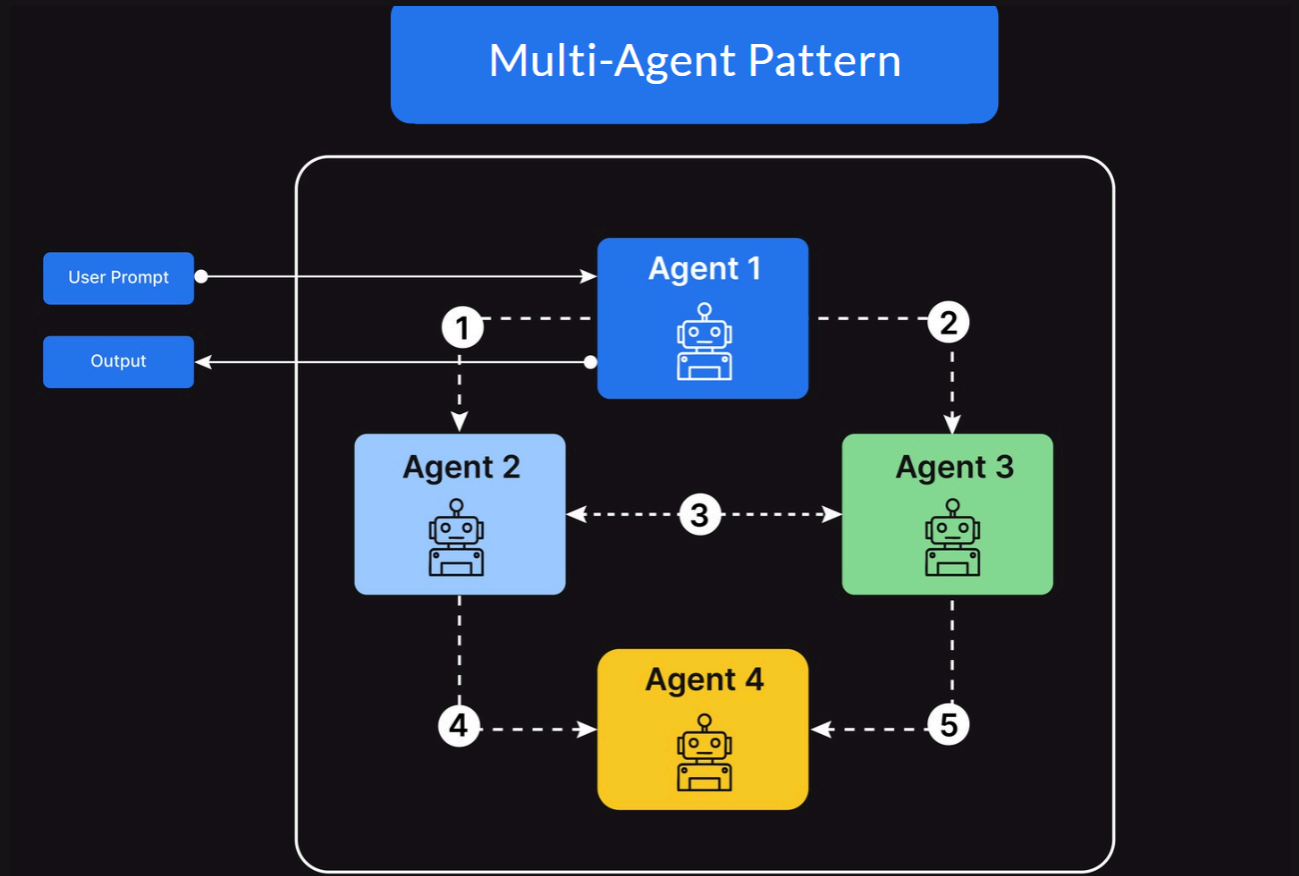
Multi-Agent Pattern



What is the Multi-Agent Pattern?

Definition:

The Multi-Agent Pattern is a framework where tasks are broken down into smaller subtasks, **each handled by specialized agents** working collaboratively to achieve a common goal.



Source: <https://theneuralmaze.substack.com/>

What is the Multi-Agent Pattern?

Examples of Frameworks:

- **CrewAI:**

Enables the creation of multi-agent applications.

- **AutoGen:**

Implements variations of the Multi-Agent Pattern for task automation.

- **LangGraph:**

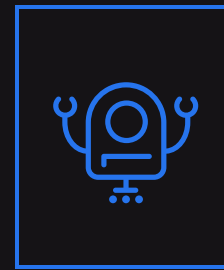
Facilitates dynamic communication and collaboration between agents using language-based graphs.



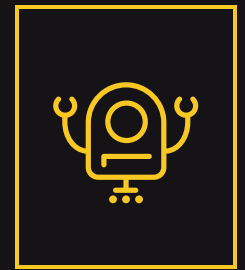
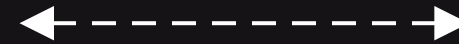
LangGraph

How Does the Multi-Agent Pattern Work?

- **Task Division:**
 - Tasks are divided into subtasks and assigned to agents with specific roles
- **Example:**
 - One agent can be a software engineer, another a project manager, etc.



Software Engineer



Project Manager

Thanks