

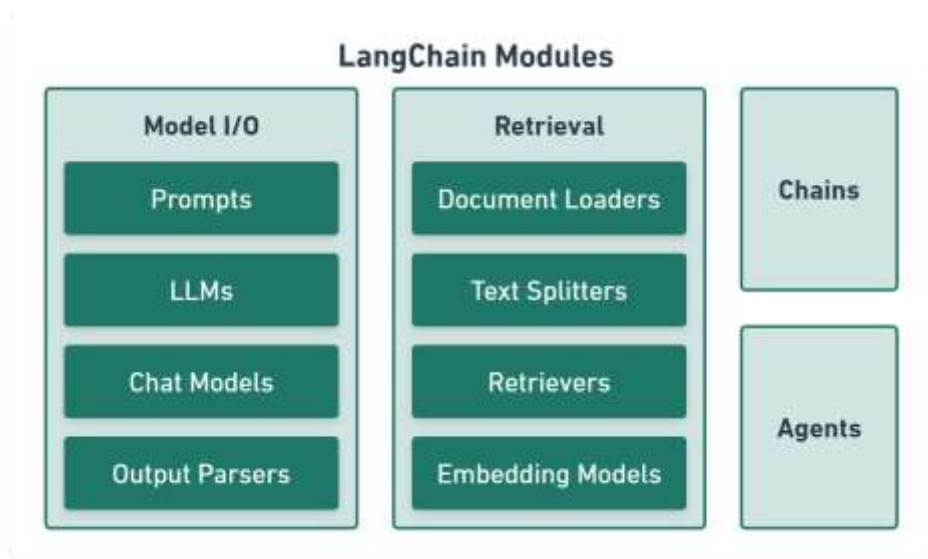
## DAY – 9

**8 August 2025**

### Lang Chain

Lang Chain is an open source framework with pre-built agent architecture and integrations for any model or tool — so you can build agents that adapt as fast as the ecosystem evolves

Lang Chain is the easiest way to start building agents and applications powered by LLMs. With under 10 lines of code, you can connect to OpenAI, Anthropic, Google, and more. LangChain provides a pre-built agent architecture and model integrations to help you get started quickly and seamlessly incorporate LLMs into your agents and applications. We recommend you use LangChain if you want to quickly build agents and autonomous applications. Use Lang Graph, our low-level agent orchestration framework and runtime, when you have more advanced needs that require a combination of deterministic and agentic workflows, heavy customization, and carefully controlled latency. LangChain agents are built on top of LangGraph in order to provide durable execution, streaming, human-in-the-loop, persistence, and more. You do not need to know LangGraph for basic LangChain agent usage.



## How does LangChain work?

With LangChain, developers can adapt a language model flexibly to specific business contexts by designating steps required to produce the desired outcome.

### Chains

*Chains* are the fundamental principle that holds various AI components in LangChain to provide context-aware responses. A chain is a series of automated actions from the user's query to the model's output. For example, developers can use a chain for:

- Connecting to different data sources.
- Generating unique content.
- Translating multiple languages.
- Answering user queries.

### Links

Chains are made of *links*. Each action that developers string together to form a chained sequence is called a link. With links, developers can divide complex tasks into multiple, smaller tasks. Examples of links include:

- Formatting user input.
- Sending a query to an LLM.
- Retrieving data from cloud storage.
- Translating from one language to another.

In the LangChain framework, a link accepts input from the user and passes it to the LangChain libraries for processing. LangChain also allows link reordering to create different AI workflows.

## Overview

To use LangChain, developers install the framework in Python with the following command:

```
pip install langchain
```

Developers then use the chain building blocks or LangChain Expression Language (LCEL) to compose chains with simple programming commands. The *chain()* function passes a link's arguments to the libraries. The *execute()* command retrieves the results. Developers can pass the current link result to the following link or return it as the final output.

Below is an example of a chatbot chain function that returns product details in multiple languages.

```
chain([  
  
retrieve_data_from_product_database().  
  
send_data_to_language_model().  
  
format_output_in_a_list().  
  
translate_output_in_target_language()  
  
])
```