

Summary and Highlights: Introduction to Chaining and LCEL Basics

Congratulations! You have completed this lesson. At this point in the course, you know:

- Large language models (LLMs) specify task parameters and suggest tools.
- Agents automatically invoke tools based on direction from the LLM.
- During manual invocation, developers verify inputs and outputs and adjust actions as needed.
- Manual invocation provides organizations with the opportunity for greater control, which enhances safety, manages costs, and can support enhanced accurate results.
- Mapping a dictionary connects tool names, such as **add**, to functions, enabling the large language model (LLM) to call the correct function by name and pass inputs as key-value pairs.
- You can manually control and validate tool inputs that the LLM can access by defining each tool using the **@tool** decorator.
- Before using **.invoke()**, bind the tools to the LLM so the LLM can identify and apply the correct tool based on the prompt.
- Use **.invoke(input_)** to pass a dictionary of key-value pairs that match the tool's parameter names.

[Mark as completed](#)