

# Agents

An "agent" is an automated reasoning and decision engine. It takes in a user input/query and can make internal decisions for executing that query in order to return the correct result. The key agent components can include, but are not limited to:

- Breaking down a complex question into smaller ones
- Choosing an external Tool to use + coming up with parameters for calling the Tool
- Planning out a set of tasks
- Storing previously completed tasks in a memory module

LlamaIndex provides a comprehensive framework for building agentic systems with varying degrees of complexity:

- **If you want to build agents quickly:** Use our prebuilt [agent](#) and [tool](#) architectures to rapidly setup agentic systems.
- **If you want full control over your agentic system:** Build and deploy custom agentic workflows from scratch using our [Workflows](#).

## Use Cases

The scope of possible use cases for agents is vast and ever-expanding. That said, here are some practical use cases that can deliver immediate value.

- **Agentic RAG:** Build a context-augmented research assistant over your data that not only answers simple questions, but complex research tasks. Here are two resources ([resource 1](#), [resource 2](#)) to help you get started.
- **Report Generation:** Generate a multimodal report using a multi-agent researcher + writer workflow + LlamaParse. [Notebook](#).
- **Customer Support:** Check out starter template for building a [multi-agent concierge with workflows](#).
- **SQL Agent:** A "text-to-SQL assistant" that can interact with a structured database. Check out [this guide](#) to see how to build an agent from scratch.

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Others: - **Productivity Assistant**: Build an agent that can operate over common workflow tools like email, calendar. Check out our [GSuite agent tutorial](#).

- **Coding Assistant**: Build an agent that can operate over code. Check out our [code interpreter tutorial](#).

## Resources

### Prebuilt Agents and Tools

The following component guides are the central hubs for getting started in building with agents:

- [Agents](#)
- [Tools](#)

### Custom Agentic Workflows

LlamaIndex Workflows allow you to build very custom, agentic workflows through a core event-driven orchestration foundation.

- [Workflows Tutorial Sequence](#)
- [Workflows Component Guide](#)
- [Building a ReAct agent workflow](#)
- [Deploying Workflows](#)

### Building with Agentic Ingredients

If you want to leverage core agentic ingredients in your workflow, LlamaIndex has robust abstractions for every agent sub-ingredient.

- **Query Planning**: [Routing](#), [Sub-Questions](#), [Query Transformations](#).
- **Function Calling and Tool Use**: Check out our [OpenAI](#), [Mistral](#) guides as examples.
- **Memory**: [Example guide for adding memory to RAG](#).

## Ecosystem

- **Deploy Agents as Microservices**: Deploy your agentic workflows [llama\\_deploy \(repo\)](#)



- **Community-Built Agents:** We offer a collection of 40+ agent tools for use with your agent in [LlamaHub](#) 🦙.

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