

Title: Agents - Agency Swarm

URL Source: <https://vrсен.github.io/agency-swarm/advanced-usage/agents/>

Markdown Content:

Agents are essentially wrappers for [Assistants in OpenAI Assistants API](<https://platform.openai.com/docs/assistants/how-it-works/creating-assistants>).

The `Agent` class

The `Agent` class contains a lot of convenience methods to help you manage the state of your assistant, upload files, attach tools, and more.

When it comes to creating your agent, you have 3 options:

1. **Define the agent directly in the code.**
2. **Create agent template locally using CLI.**
3. **Import from existing agents.**

Defining the agent directly in the code

To define your agent in the code, you can simply instantiate the `Agent` class and pass the required parameters.

```
`[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-0-1)from
```

```
agency_swarm
```

```
import
```

```
Agent
```

```

[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-0-2)[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-0-3)agent    =    Agent(name="My Agent",

[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-0-4)
description="This is a description of my agent.",

[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-0-5)
instructions="These are the instructions for my agent.",

[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-0-6)
tools=[ToolClass1,    ToolClass2],

[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-0-7)
temperature=0.3,

[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-0-8)
max_prompt_tokens=25000

[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-0-9)    )`

```

Create agent template locally using CLI

This CLI command simplifies the process of creating a structured environment for each agent.

Command Syntax:

```

`[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-1-1)agency-swarm
create-agent-template  --name  "AgentName"  --description  "Agent  Description"  [--path
"/path/to/directory"] [--use_txt]`

```

Folder Structure

When you run the `create-agent-template` command, it creates the following folder structure for your agent:

```
`[(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-2-1)/your-specified-
path/          [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-2-2)?
[(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-2-3)???
agency_manifesto.md or .txt # Agency's guiding principles (created if not exists)
[(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-2-4)???
AgentName/      # Directory for the specific agent
[(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-2-5) ??? files/
                # Directory for files that will be uploaded to openai
[(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-2-6) ??? schemas/
                # Directory for OpenAPI schemas to be converted into tools
[(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-2-7) ??? tools/
                # Directory for tools to be imported by default.
[(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-2-8)          ???
AgentName.py    # The main agent class file
[(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-2-9)          ???
__init__.py     # Initializes the agent folder as a Python package
[(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-2-10)        ???
instructions.md or .txt # Instruction document for the agent`
```

* `files`: This folder is used to store files that will be uploaded to OpenAI. You can use any of the [acceptable file formats](https://platform.openai.com/docs/assistants/tools/supported-files). After file is uploaded, an id will be attached to the file name to avoid re-uploading the same file twice.

* `schemas`: This folder is used to store OpenAPI schemas that will be converted into tools automatically. All you have to do is put the schema in this folder, and specify it when initializing your

agent.

* ``tools``: This folder is used to store tools in the form of Python files. Each file must have the same name as the tool class for it to be imported by default. For example, ``ExampleTool.py`` must contain a class called ``ExampleTool``.

Agent Template

The ``AgentName.py`` file will contain the following code:

```
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-1)from
agency_swarm.agents                                import                                Agent
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-2)[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-3)class AgentName(Agent):
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-4)                                def
__init__(self):
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-5)
super().__init__(
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-6)
name="agent_name",
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-7)
description="agent_description",
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-8)
instructions="./instructions.md",
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-9)
files_folder="./files",
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-10)
schemas_folder="./schemas",
```

```

[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-11)
tools_folder="./tools",
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-12)
temperature=0.3,
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-13)
max_prompt_tokens=25000,
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-14)
examples=[]
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-15)          )
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-16)
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-17)          def
response_validator(self,      message:      str)      ->      str:
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-18)          """This
function is used to validate the response before sending it to the user or another agent."""
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-19)          if "bad
word"      in      message:
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-20)          raise
ValueError("Please      don't      use      bad      words.")
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-21)
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-3-22)          return
message`

```

To initialize the agent, you can simply import the agent and instantiate it:

```

`[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-4-1)from
AgentName                                import                                AgentName
[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-4-2)[](https://vrсен.github.io/agency-swarm/advanced-usage/agents/#\_\_codelineno-4-2)

```

thub.io/agency-swarm/advanced-usage/agents/#__codelineno-4-3)agent = AgentName()``

Few-Shot Examples

You can now also provide **few-shot** examples for each agent. These examples help the agent to understand how to respond. The format for examples follows [message object format on OpenAI](https://platform.openai.com/docs/api-reference/messages/createMessage):

```
`[(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-1)examples=[
  [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-2)    {
    [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-3)    "role":
"user",    [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-4)
"content":    "Hi!",
    [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-5)
"attachments":    [],
    [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-6)    "metadata":
 {},    [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-7)    },
    [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-8)    {
    [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-9)    "role":
"assistant",
    [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-10)    "content":
"Hi! I am the CEO. I am here to help you with your tasks. Please tell me what you need help with.",
    [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-11)
"attachments":    [],
    [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-12)
"metadata":    {},
    [(https://vrсен.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-13)    }
```

```
[(https://vrse.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-14)]
```

```
[(https://vrse.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-15)][(https://vrse.github.io/agency-swarm/advanced-usage/agents/#__codelineno-5-16)]agent.examples = examples`
```

or you can also provide them when initializing the agent in init method:

```
`[(https://vrse.github.io/agency-swarm/advanced-usage/agents/#__codelineno-6-1)]agent = Agent(examples=examples)`
```

Importing existing agents

For the most complex and requested use cases, we will be creating premade agents that you can import and reuse in your own projects. To import an existing agent, you can run the following CLI command:

```
`[(https://vrse.github.io/agency-swarm/advanced-usage/agents/#__codelineno-7-1)]agency-swarm import-agent --name "AgentName" --destination "/path/to/directory"`
```

This will copy all your agent source files locally. You can then import the agent as shown above. To check available agents, simply run this command without any arguments.