

# Exercise 1-1: Temperature Experiment

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## Objective

Explore how the temperature setting affects LLM output consistency and creativity.

## Prerequisites

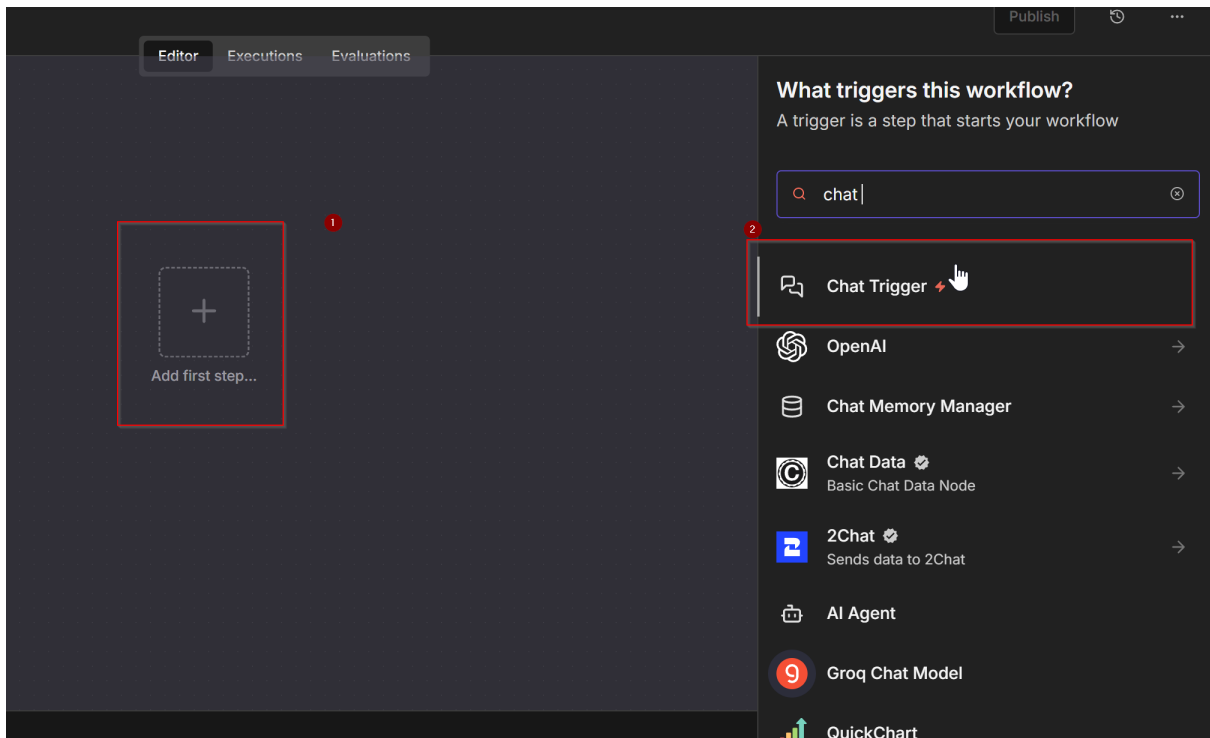
None – this is the first exercise.

## n8n Nodes

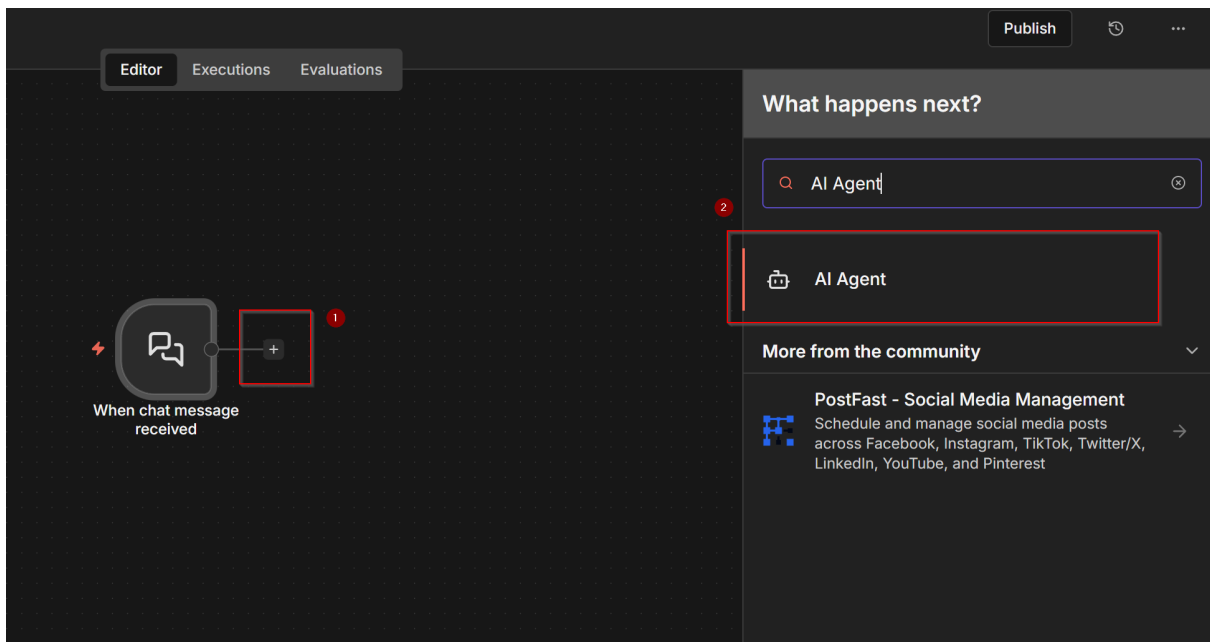
- **Chat Trigger** – receives user messages
- **AI Agent** – orchestrates the conversation
- **OpenAI Chat Model** (gpt-4.1-mini) – the language model

## Setup

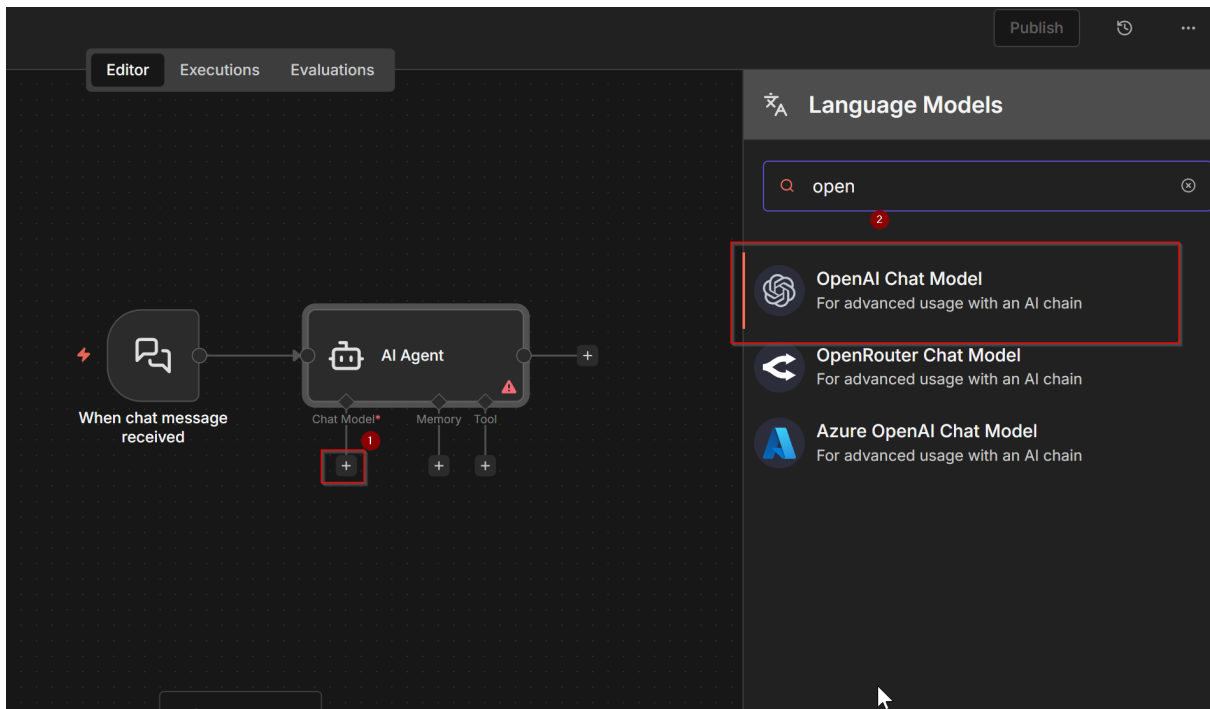
1. Open your n8n workflow editor
2. Add a **Chat Trigger** node



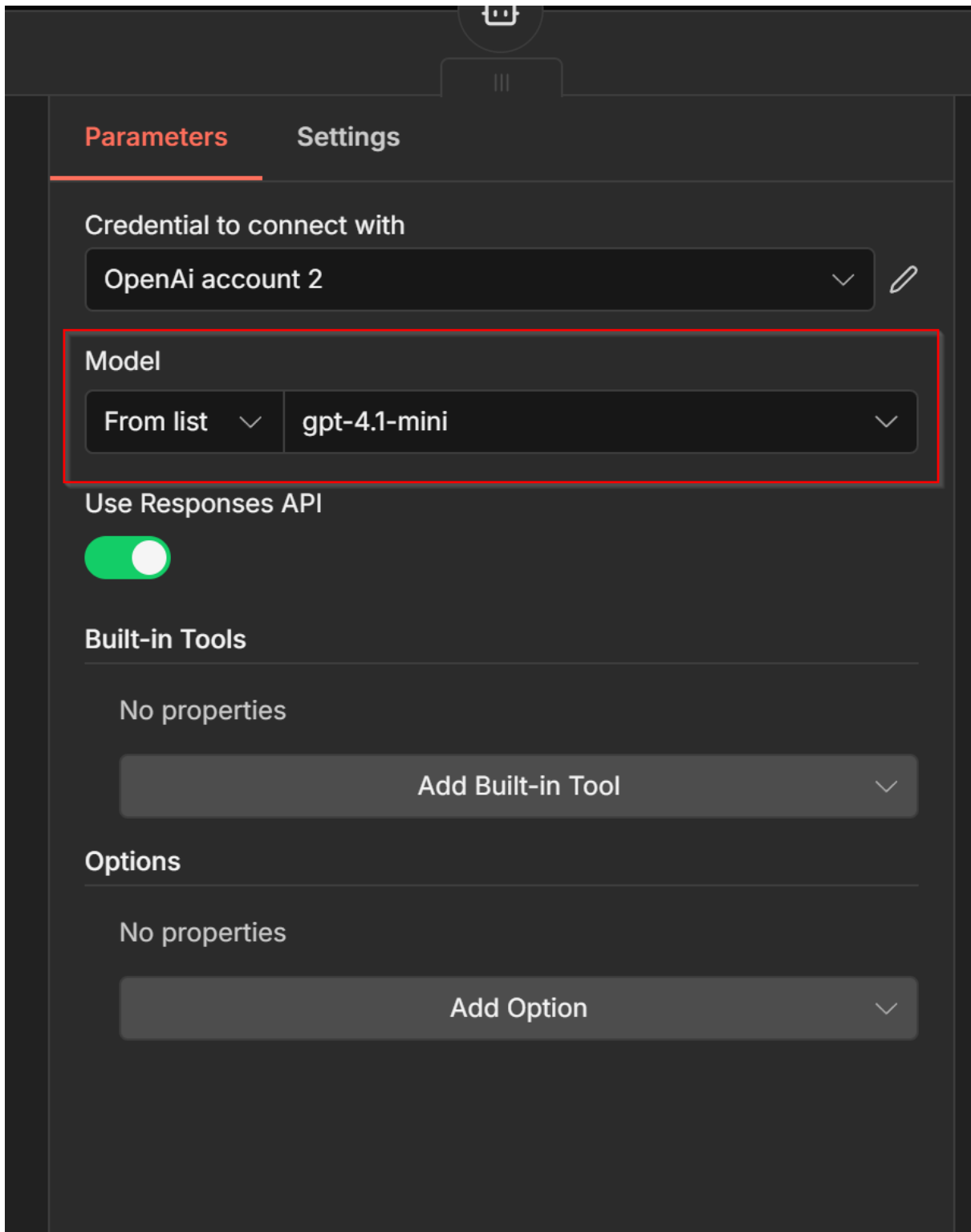
1. Add an **AI Agent** node and connect it to the Chat Trigger



1. Add an **OpenAI Chat Model** node and connect it to the AI Agent (as the model)



1. In the OpenAI Chat Model node, set **Model** to `gpt-4.1-mini`



## Demo Prompts

Try these prompts to see basic LLM behavior:

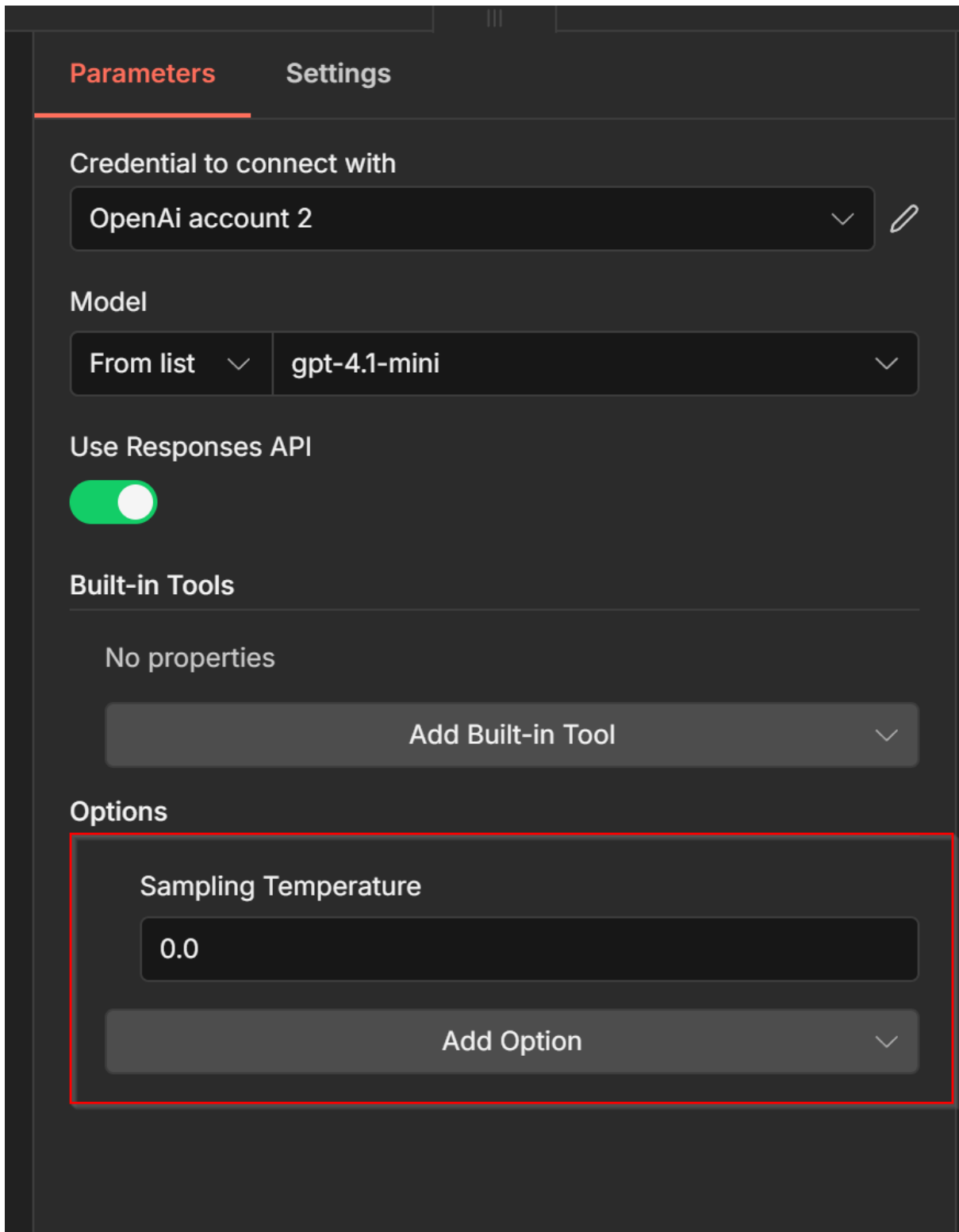
- “What is Changi Airport Group?”
- “What is Changi Airports International?”

- “Is Changi the only airport with a butterfly garden?”

## Your Task

### Part 1: Low Temperature (Deterministic)

1. In the **OpenAI Chat Model** node, set **Temperature** to 0



1. Ask: **“What is Terminal 5 and what progress was made?”**
2. Run this **3 times** and record each response

## Part 2: Higher Temperature (Creative)

1. Change **Temperature** to `0.7`

2. Ask the same question: **“What is Terminal 5 and what progress was made?”**
3. Run this **3 times** and record each response

## **Observe**

- At temperature 0: Are the responses identical?
- At temperature 0.7: What changes between runs? Look for:
  - Word choice changes
  - Sentence structure variation
  - Different emphasis or framing

## **What to Submit**

1. Your 3 responses at temperature 0
2. Your 3 responses at temperature 0.7
3. A brief note on the differences you observed