

Lab8_0: Chatbot

In this lab, you will build a **basic chatbot** using n8n and **Google Gemini**. The goal is to understand the core building blocks of an LLM workflow in n8n, **chat trigger**, **AI agent**, and optional **memory**, before moving on to more advanced patterns in later labs.

Prerequisites

Google Gemini API Key

A) Create a Google Gemini API key (Google AI Studio)

What you need

- A Google account
- Access to Google AI Studio (you may need to accept Terms of Service on first use)

Steps

1. Open the **Google AI Studio API Keys** page and sign in.
2. Click **Create API key** (or **Create or view a Gemini API Key**).
3. Copy the key and store it securely (do not share it or paste it into chat messages).

Where you will use it in this lab

- In n8n, create a credential for **Google Gemini API account** and paste the key into the credential (so nodes can call the model securely).

Google AI Studio – API Keys: <https://aistudio.google.com/app/apikey>

Gemini API keys guide (official): <https://ai.google.dev/gemini-api/docs/api-key>

B) Activate n8n Cloud free trial (managed n8n)

What you need

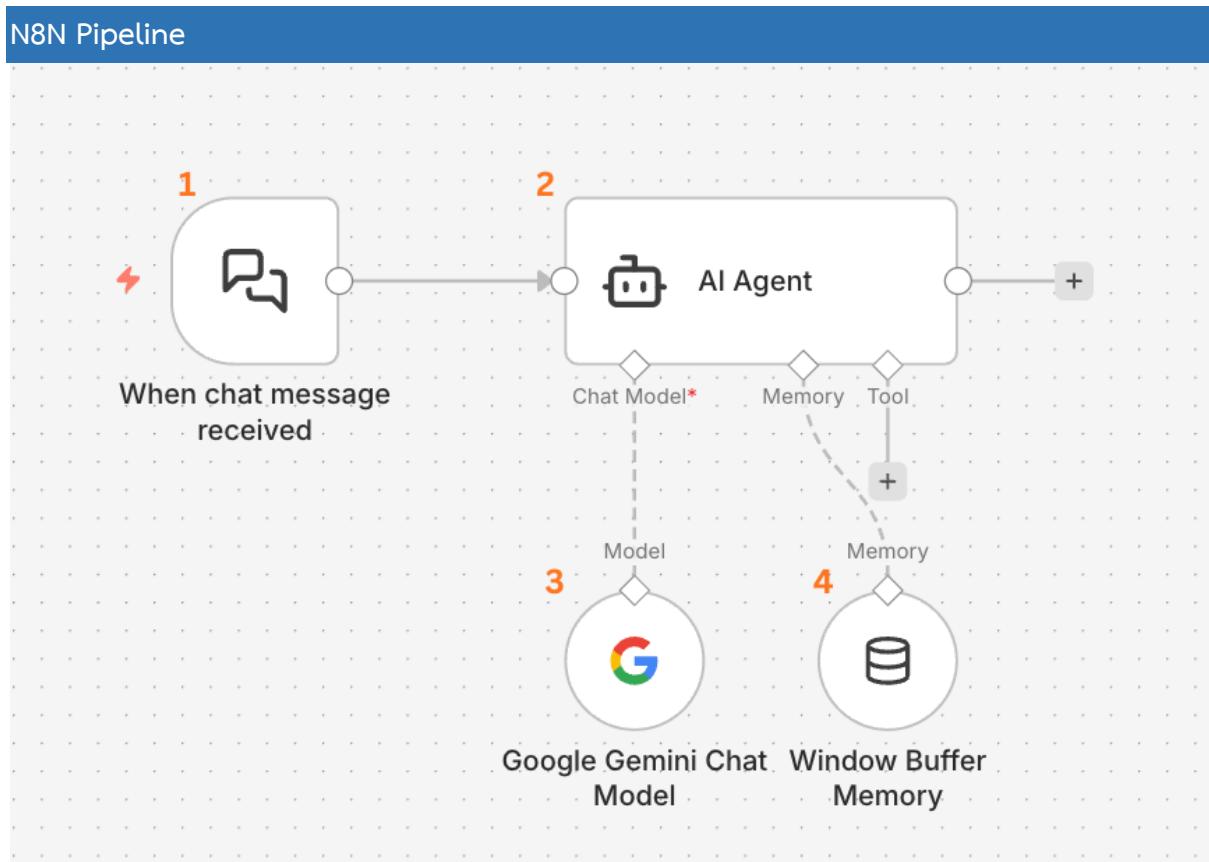
- An email address for registration

Steps

1. Go to the n8n Cloud registration page and create a new workspace.
2. Your Cloud free trial includes **14 days** of Pro-plan features, with a limit of **1000 executions** (and Starter-level compute).

n8n Cloud trial registration: <https://app.n8n.cloud/register>

n8n Cloud free trial docs (official): <https://docs.n8n.io/manage-cloud/cloud-free-trial/>



1) Chat Trigger Node — This node creates a **hosted chat page** and triggers the workflow whenever a user sends a message. It is the entry point of the chatbot.

Configurations:

- Make Chat Publicly Available: On
- Mode: Hosted Chat
- Options → Allow File Uploads: On

2) AI Agent

This node is the chatbot “brain.” It receives the user’s message from the chat trigger and generates a response. You can optionally add a **System Message** here to define behavior

(e.g., “You are a helpful assistant for students.”).

Source for Prompt (User Message)

Define below

Prompt (User Message)

fx

```
 {{ $( 'When chat message received' ).item.json.chat  
Input }}
```



Hello!

Require Specific Output Format



Enable Fallback Model



Options

System Message

You are a helpful AI assistant powered by Google Gemini.
Provide clear, accurate, and friendly responses to user
questions.

Chat Model *



Memory



Tool



3) Google Gemini Chat Model (connected to the AI Agent)

This is the language model used by the AI Agent to produce replies. The Gemini model is attached as the AI Agent's **Chat Model** connection.

Credential to connect with

Google Gemini(PaLM) Api account



Copy and paste a **Gemini API Key** to this node.

4) Memory (Window Buffer Memory) (connected to the AI Agent)

This node stores recent messages so the chatbot can handle follow-up questions with context (e.g., “Explain again but shorter”). The Window Buffer Memory keeps only the latest part of the conversation, which is usually enough for a basic chatbot.

Session ID

Connected Chat Trigger Node



Session Key From Previous Node

fx

`{{ $json.sessionId }}`



727f76fa24244b75acd3314c334b4cb3

Context Window Length

10

How many past interactions the model receives as context