



RESOURCE 02

n8n Build-Along Lab Manual

The exact course workflow, setup checklist, system message, test prompts, and troubleshooting steps.

AI Agents for Beginners: Build with n8n in 60 Minutes

Student Reading Material

Read this when	You want a concise reference that adds value beyond the video lessons.
Brand	GraphicBidu graphicbidu.com
Version note	Course companion edition - August 2026



graphicbidu.com
Course resources, learning, and support.

1. Lab objective

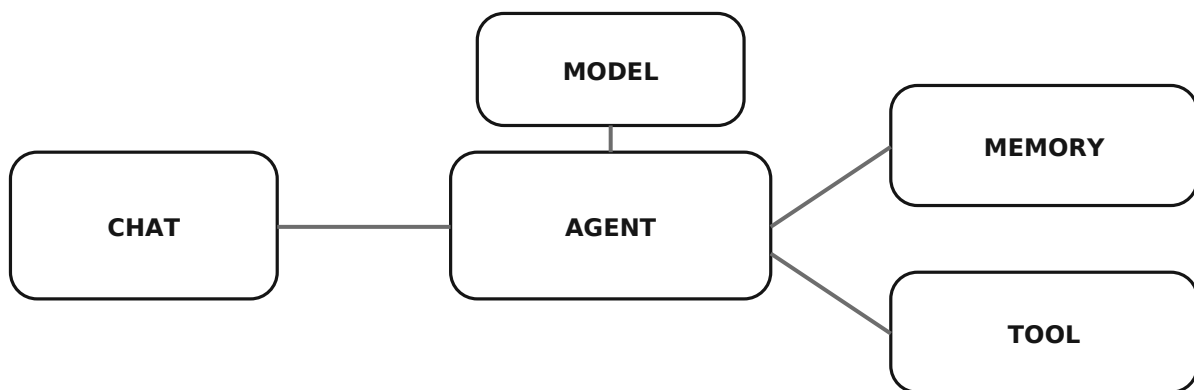
Build a working conversational agent in n8n with Chat Trigger, AI Agent, a compatible Chat Model, Simple Memory, and Calculator. The finished workflow should answer normal requests, remember conversation context, use the calculator for arithmetic, and state its limitations when a requested action is unavailable.

What you need

- An n8n account or n8n environment.
- Access to a compatible chat-model provider. The course demonstration uses OpenAI.
- A browser and internet connection.
- A small amount of API credit may be required depending on your model provider.

Credential safety: Never paste an API key into a public video, screenshot, client-side app, shared document, or chat message. Keep credentials inside the provider/n8n credential system and rotate a key if you believe it was exposed.

2. Final workflow



Input -> Agent -> Model / Memory / Tools -> Response

Node responsibilities

- Chat Trigger - receives the user message and starts the conversational workflow.
- AI Agent - interprets the request and coordinates model/tool use.
- Chat Model - provides language intelligence.
- Simple Memory - persists recent chat history for the current session.
- Calculator - performs exact arithmetic when the agent decides it is needed.

3. Build the workflow step by step

Step 1 - Create the workflow

Create a new workflow and name it "Nova - My First AI Agent". Save early so accidental browser refreshes do not remove your work.

Step 2 - Add Chat Trigger

Add the Chat Trigger node. Keep the workflow in test mode while learning. The Chat Trigger is the conversational entry point.

Step 3 - Add AI Agent

Connect Chat Trigger to AI Agent. If the Agent asks for its prompt source, use the connected Chat Trigger input so the user message becomes the agent request.

Step 4 - Add the system message

Open the Agent options and add a System Message. Paste the Nova instructions below.

You are Nova, a concise AI business assistant for freelancers and small-business owners.

Rules:

1. Be clear, practical, and professional.
2. Whenever arithmetic is required, always use the Calculator tool before answering.
3. Use remembered conversation context when relevant.
4. Never invent missing facts.
5. Show final numbers clearly and state any assumptions.
6. For business drafts, provide a ready-to-copy version.
7. If a request requires a capability you do not have, explain the limitation clearly.
8. Never claim an external action has been completed unless a connected tool actually performed that action.

Step 5 - Add the Chat Model

Attach a compatible Chat Model to the AI Agent. Select a saved credential and a currently available general-purpose model. Do not expose your secret API key while screen recording or sharing screenshots.

Step 6 - Add Simple Memory

Attach Simple Memory. Set the session identifier so it uses the connected Chat Trigger session. If your Chat Trigger is configured to load previous sessions from memory, n8n currently recommends connecting the same memory node to both Chat Trigger and the Agent so they share one source of truth.

Step 7 - Add Calculator

Attach Calculator as an Agent Tool. No extra API credential is required for the Calculator node.

Step 8 - Arrange and save

Place Chat Trigger on the left, Agent in the center, Chat Model above, Memory below-left, and Calculator below-right. Save the workflow.

4. Test sequence - use these exact prompts

Test A - normal conversation

Hello. What can you help me with?

Expected: a concise description of Nova's role. No calculator should be needed.

Test B - write information to memory

My name is Maya. I run a design studio called PixelWave. Remember that.

Test C - retrieve memory

What is my name and what business do I run?

Expected: Maya and PixelWave, assuming you are still in the same chat session.

Test D - calculator

Create a quote for 18 hours of work at \$45 per hour and apply a 10% discount.

Expected math: $18 \times 45 = \$810$; 10% of $\$810 = \$81$; final amount = $\$729$.

Test E - combine memory and model output

Now draft a short professional quote message from PixelWave using that final amount.

Expected: a professional draft that uses PixelWave and \$729 without requiring you to repeat them.

5. Lab completion checklist

- Chat Trigger successfully sends a message into the workflow.
- AI Agent has a working Chat Model attached.
- System Message contains clear behavior and boundary rules.
- Simple Memory recalls Maya and PixelWave within the same session.
- Calculator produces \$729 for the quote test.
- Combined test reuses both the business context and final amount.
- Agent does not claim to send an email when no email tool is connected.

6. Common setup problems

Symptom	Check first
Agent will not run	Confirm a Chat Model is connected and credentials are valid.
Agent receives no user text	Confirm Chat Trigger is connected to AI Agent and the prompt source uses chat input.
Agent forgets context	Check Simple Memory and session configuration.
Calculator is ignored	Strengthen the System Message rule and confirm Calculator is connected as a tool.
Agent claims an email was sent	Add an explicit rule: never claim an external action happened unless a connected tool performed it.

Version note

n8n changes quickly. This manual follows the 2026 Chat Trigger, AI Agent, Simple Memory, and tool-based architecture. If labels move, preserve the architecture rather than memorizing button positions.

Official references

Current references: n8n Chat Trigger, n8n AI Agent, n8n Simple Memory, and OpenAI API key safety guidance. Always check official documentation if the interface differs from the screenshots or course recording.