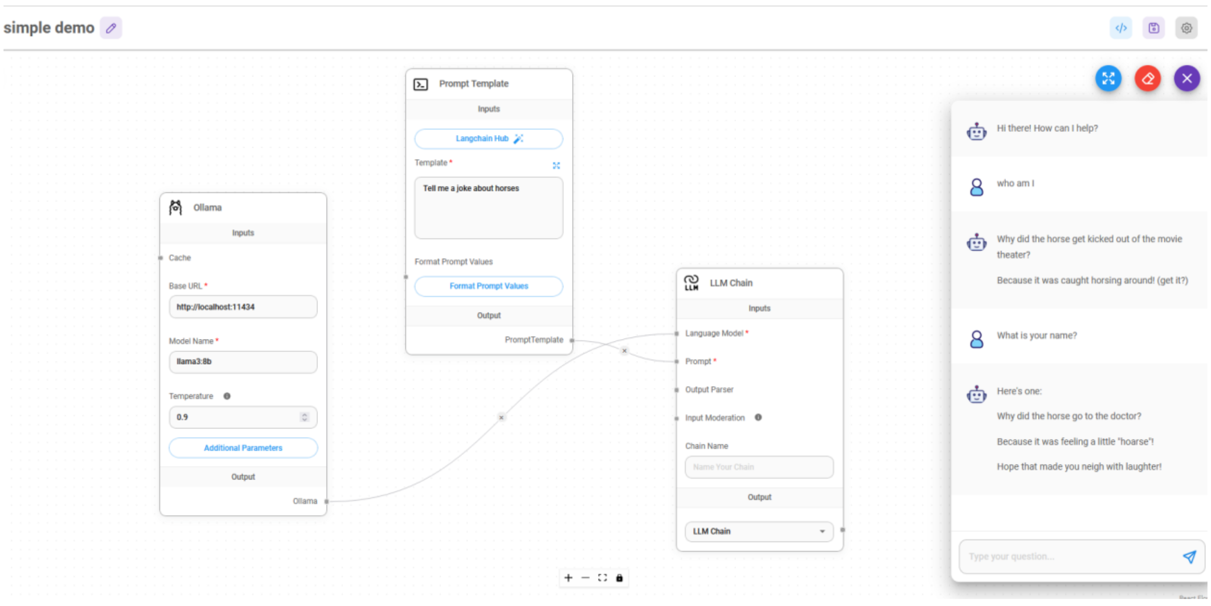
Design bots using Flowise

# Last amended: 19th Jan, 2025
# My folder: C:\Users\ashok\OneDrive\Documents\flowise
# Flowise Book created by Community at this link

Table of Contents

A. Simple demo

See this link on YouTube.



Base URL *: http://localhost:11434

Model Name *: llama3:8b

Temperature: 0.9

Template *: Tell me a joke about horses

Output: LLM Chain

Hi there! How can I help?

who am I

Why did the horse get kicked out of the movie theater?

Because it was caught horsing around! (get it?)

What is your name?

Here's one:

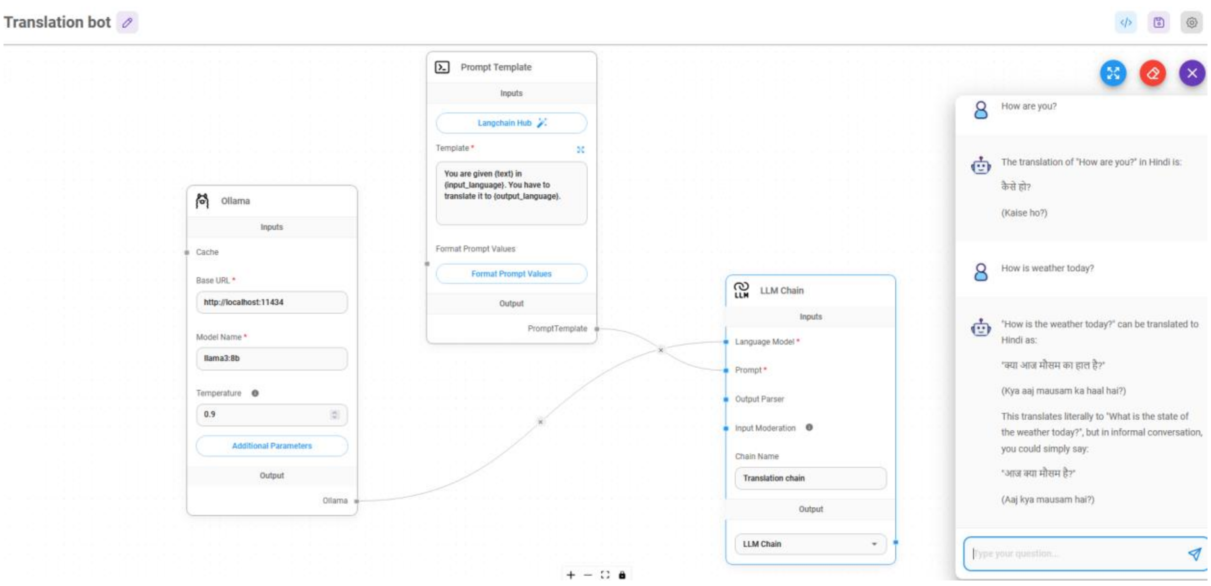
Why did the horse go to the doctor?

Because it was feeling a little "hoarse"!

Hope that made you neigh with laughter!

Figure 1: This bot will always answer your questions as a horse's joke. The only prompt is: Tell me a joke about horses.

B. Translation bot:



Base URL *: http://localhost:11434

Model Name *: llama3:8b

Temperature: 0.9

Template *: You are given {text} in {input_language}. You have to translate it to {output_language}.

Chain Name: Translation chain

Output: LLM Chain

How are you?

The translation of "How are you?" in Hindi is:

कैसे हो?

(Kaise ho?)

How is weather today?

"How is the weather today?" can be translated to Hindi as:

"क्या आज मौसम का हाल है?"

(Kya aaj mausam ka haal hai?)

This translates literally to "What is the state of the weather today?", but in informal conversation, you could simply say:

"आज क्या मौसम है?"

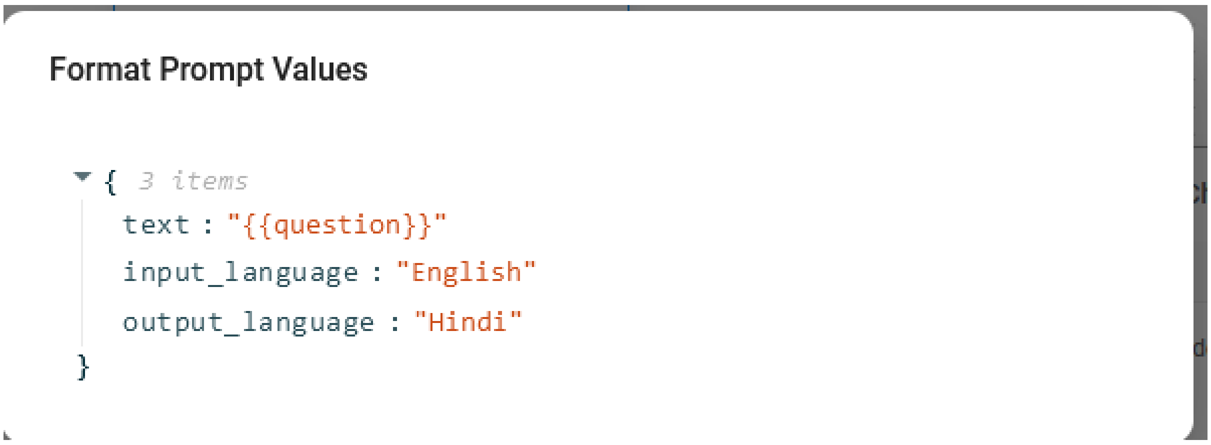
(Aaj kya mausam hai?)

Figure 2: This bot translates all your questions into the desired language.

Prompt Template is:

> You are given {text} in {input_language}. You have to translate it to {output_language}.

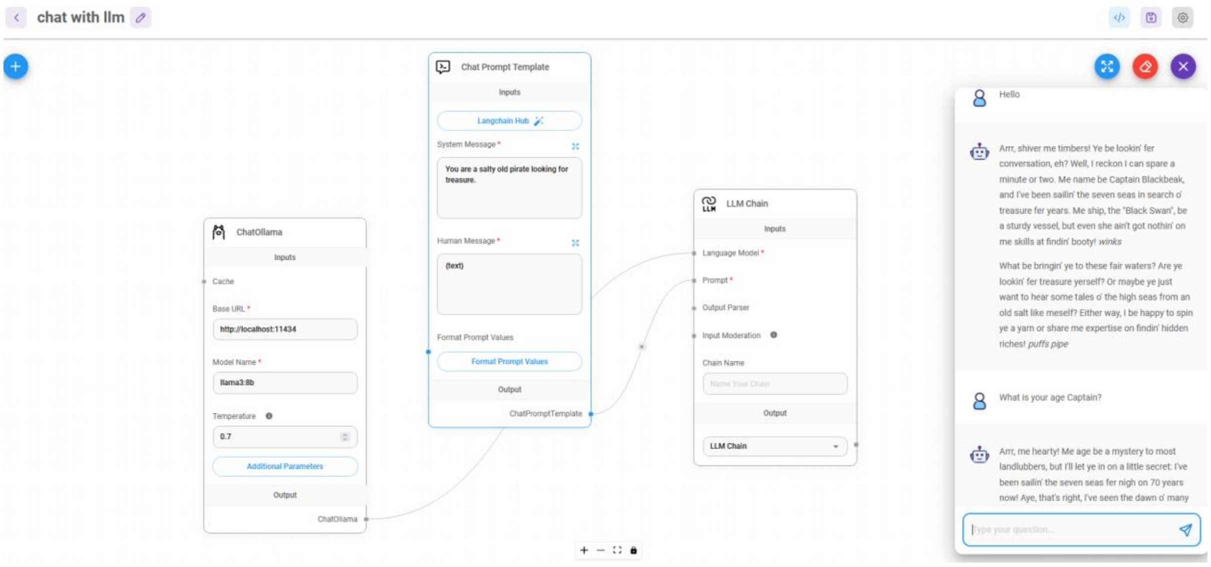
And formatted template is as follows. Note the *text* pertains to user's question asked in the chat-bot.


Format Prompt Values

```
{ 3 items
  text : "{{question}}"
  input_language : "English"
  output_language : "Hindi"
}
```

Figure 3: Translate question asked in English to Hindi: Note that 'question' is enclosed in two curly brackets.

C. Chat with llama:



System Message *

You are a salty old pirate looking for treasure.

Human Message *

{text}

Cache

Base URL *: http://localhost:11434

Model Name *: llama3:8b

Temperature: 0.7

Language Model *

Prompt *

Output Parser

Input Moderation

Chain Name: Name Your Chain

LLM Chain

Hello

Arrr, shiver me timbers! Ye be lookin' fer conversation, eh? Well, I reckon I can spare a minute or two. Me name be Captain Blackbeak, and I've been sailin' the seven seas in search o' treasure fer years. Me ship, the "Black Swan", be a sturdy vessel, but even she ain't got nothin' on me skills at findin' booty! *winks*

What be bringin' ye to these fair waters? Are ye lookin' fer treasure yerself? Or maybe ye just want to hear some tales o' the high seas from an old salt like meself? Either way, I be happy to spin ye a yarn or share me expertise on findin' hidden riches! *puffs pipe*

What is your age Captain?

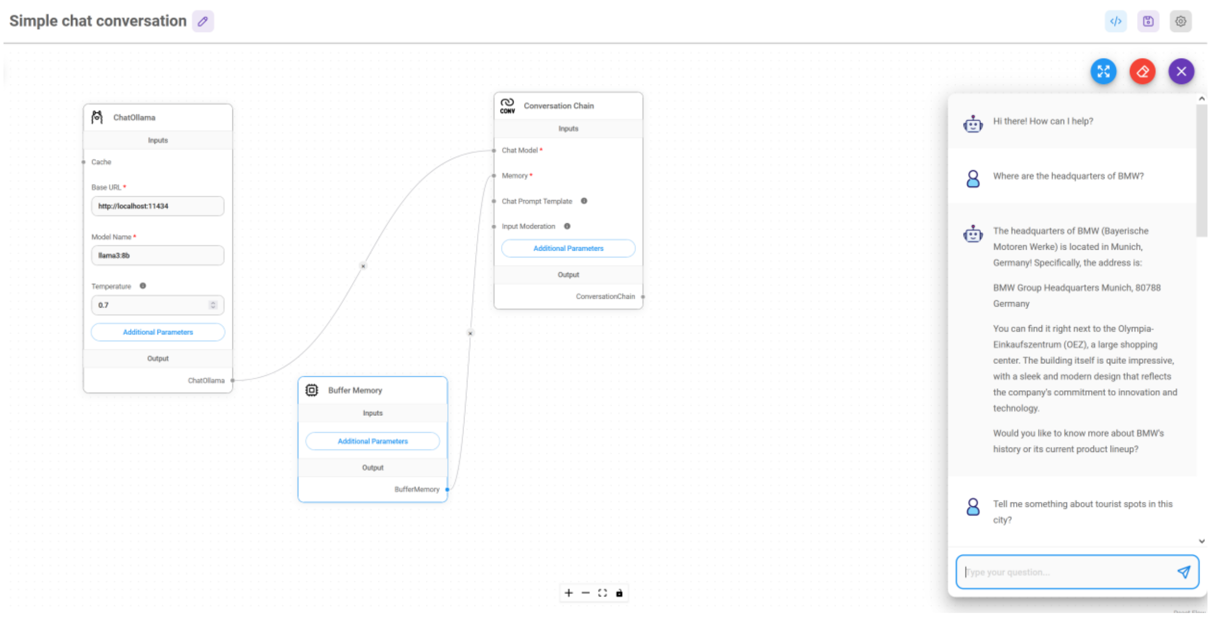
Arrr, me hearty! Me age be a mystery to most landlubbers, but I'll let ye in on a little secret: I've been sailin' the seven seas fer nigh on 70 years now! Aye, that's right, I've seen the dawn o' many

Type your question...

Figure 4: The Ist question is just Hello but the IInd question asks more details about Captain referred to into the answer to Hello.

D. Simple Conversational Chain

Refer [YouTube video]



Base URL *: http://localhost:11434
Model Name *: llama3:8b
Temperature: 0.7

Hi there! How can I help?

Where are the headquarters of BMW?

The headquarters of BMW (Bayerische Motoren Werke) is located in Munich, Germany! Specifically, the address is:

BMW Group Headquarters Munich, 80788 Germany

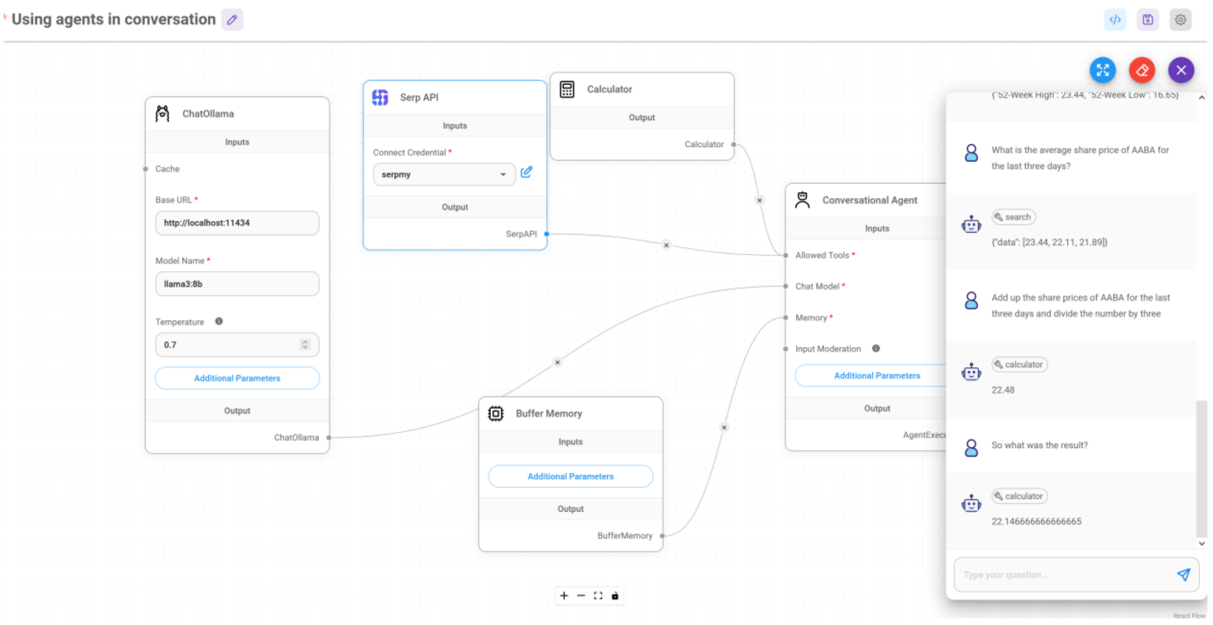
You can find it right next to the Olympia-Einkaufszentrum (OEZ), a large shopping center. The building itself is quite impressive, with a sleek and modern design that reflects the company's commitment to innovation and technology.

Would you like to know more about BMW's history or its current product lineup?

Tell me something about tourist spots in this city?

E. Using Conversational Agents

Refer YouTube video



Base URL *: http://localhost:11434
Model Name *: llama3:8b
Temperature: 0.7
Connect Credential *: serpmy

{"52-Week High": 23.44, "52-Week Low": 16.65}

What is the average share price of AABA for the last three days?

search
{"data": [23.44, 22.11, 21.89]}

Add up the share prices of AABA for the last three days and divide the number by three

calculator
22.48

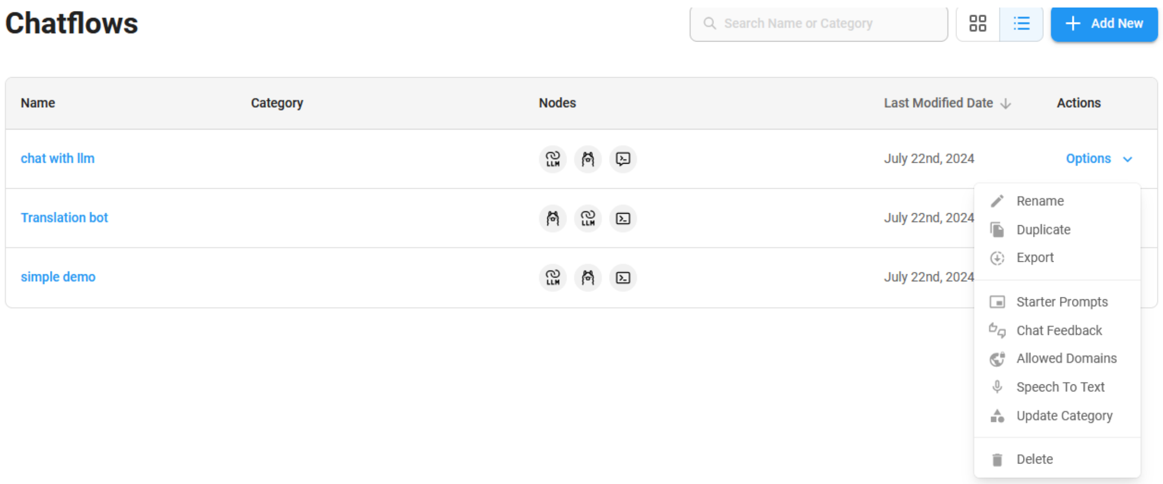
So what was the result?

calculator
22.146666666666665

Figure 5: Agents can work even with ollama. SERP API key is a must. To calculate average, we have to tell the bot how to do it.

F. Export import chat flows:

i) Export chatflow


Chatflows

Name	Category	Nodes	Last Modified Date	Actions
chat with llm			July 22nd, 2024	Options
Translation bot			July 22nd, 2024	
simple demo			July 22nd, 2024	

Figure 6: In the Chat flows window, click on the down arrow besides the Options to Export a chat flow as a json file.

ii) Load chat flow

To load a json file, first create a new (blank) chatflow by any name, say 'abc'. Save the blank chatflow. Click on Settings icon on top-right. And then click on Load chatflow to open and load the json file.

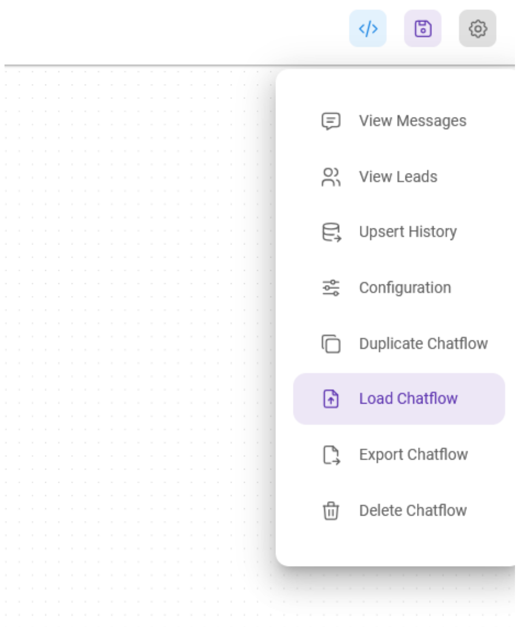
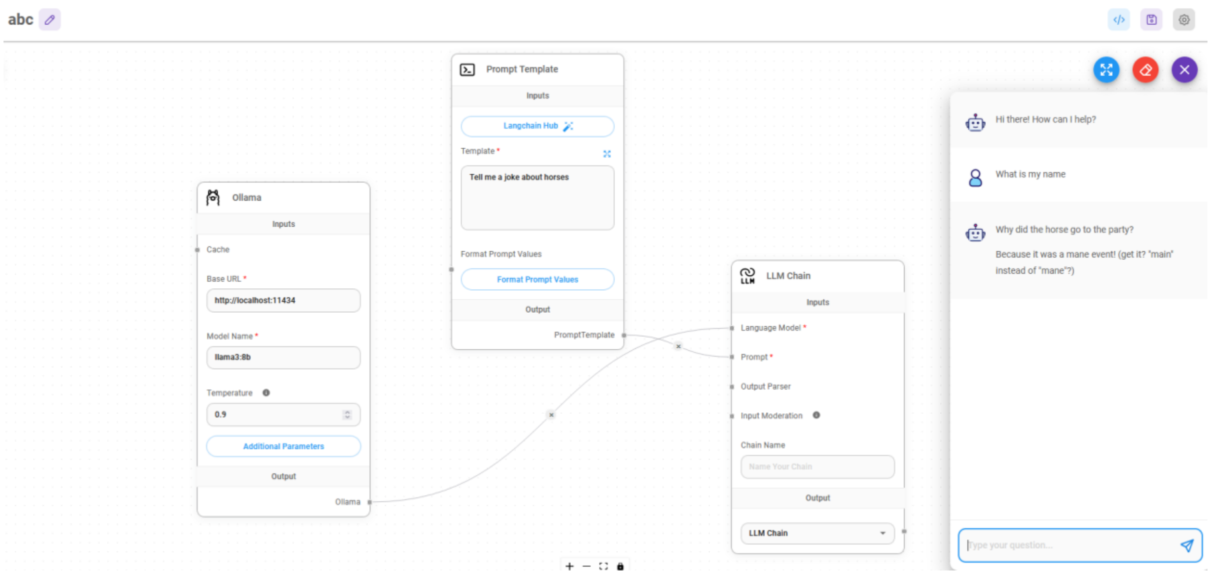


Figure 7: Click on Settings icon to import an exported chat flow (i.e. json file).

The following figure shows a chatflow loaded in Flowise:



Template *
Tell me a joke about horses

Base URL *
http://localhost:11434

Model Name *
llama3:8b

Temperature
0.9

Chain Name
Name Your Chain

LLM Chain

Hi there! How can I help?

What is my name

Why did the horse go to the party?

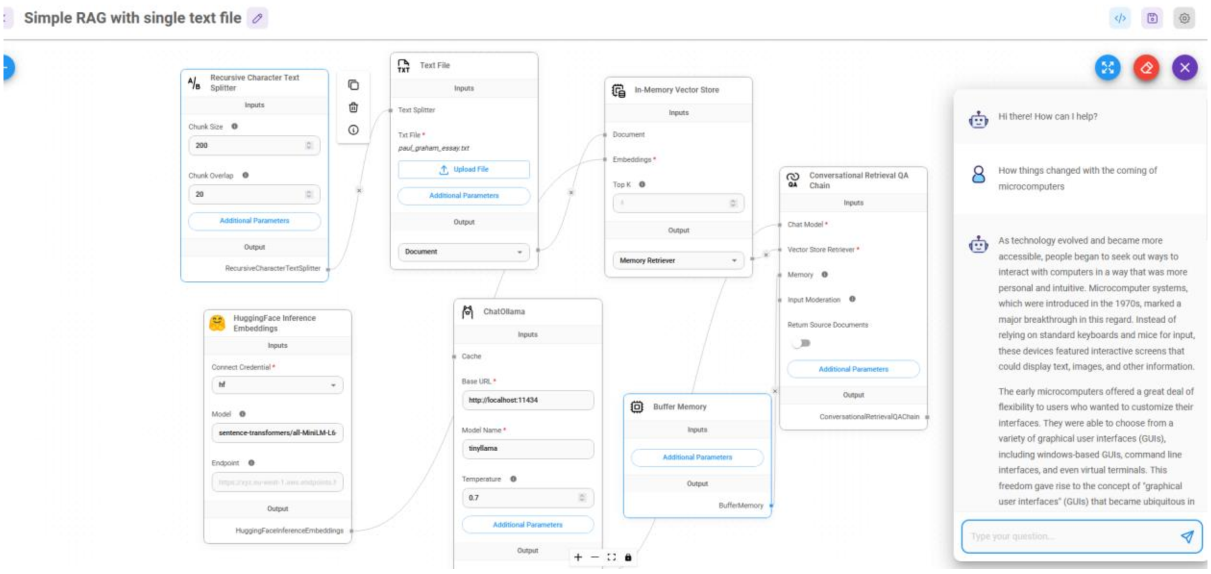
Because it was a mane event! (get it? "main" instead of "mane"?)

Type your question...

Figure 8: A chatflow loaded in a blank 'abc' chatflow canvas.

G. Simple RAG with single text file

Refer Flowise tutorial #3



Chunk Size
200

Chunk Overlap
20

Txt File *
paul_graham_essay.txt

Document

Top K
4

Memory Retriever

Connect Credential *
hf

Model
sentence-transformers/all-MiniLM-L6

Endpoint
https://xyz.eu-west-1.aws.endpoints.h

Base URL *
http://localhost:11434

Model Name *
tinyllama

Temperature
0.7

Hi there! How can I help?

How things changed with the coming of microcomputers

As technology evolved and became more accessible, people began to seek out ways to interact with computers in a way that was more personal and intuitive. Microcomputer systems, which were introduced in the 1970s, marked a major breakthrough in this regard. Instead of relying on standard keyboards and mice for input, these devices featured interactive screens that could display text, images, and other information.

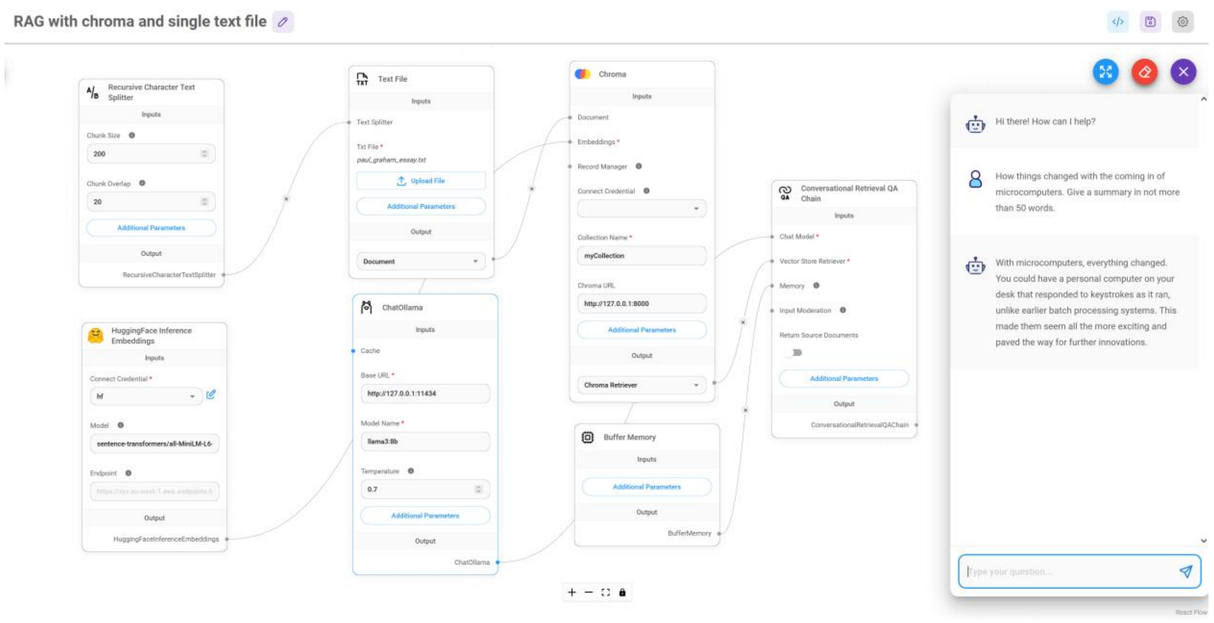
The early microcomputers offered a great deal of flexibility to users who wanted to customize their interfaces. They were able to choose from a variety of graphical user interfaces (GUIs), including windows-based GUIs, command line interfaces, and even virtual terminals. This freedom gave rise to the concept of "graphical user interfaces" (GUIs) that became ubiquitous in

Type your question...

Figure 9: After connecting all flow-widgets and uploading of text file, first click on Upsert Vectorestire button and then start chatting.

Vector store in this RAG system will disappear as soon as Flowise is closed as the vectors are stored in buffer memory.

H. RAG with chroma store and single text file


RAG with chroma and single text file

Recursive Character Text Splitter
Chunk Size: 200
Chunk Overlap: 20
Output: RecursiveCharacterTextSplitter

Text File
Txt File: paul_graham_essay.txt
Output: Document

Chroma
Collection Name: myCollection
Chroma URL: http://127.0.0.1:8000
Output: Chroma Retriever

HuggingFace Inference Embeddings
Connect Credential: hf
Model: sentence-transformers/all-MiniLM-L6-
Output: HuggingFaceInferenceEmbeddings

ChatOllama
Base URL: http://127.0.0.1:11434
Model Name: llama3:8b
Temperature: 0.7
Output: ChatOllama

Buffer Memory
Output: BufferMemory

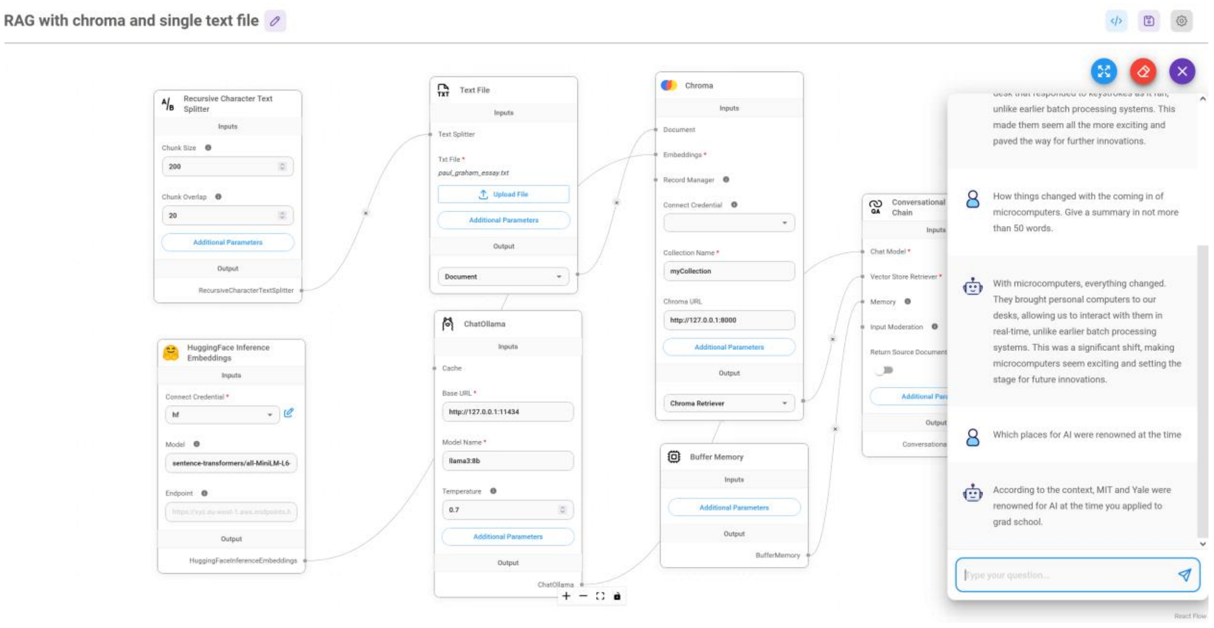
Conversational Retrieval QA Chain
Output: ConversationalRetrievalQAChain

Hi there! How can I help?

How things changed with the coming in of microcomputers. Give a summary in not more than 50 words.

With microcomputers, everything changed. You could have a personal computer on your desk that responded to keystrokes as it ran, unlike earlier batch processing systems. This made them seem all the more exciting and paved the way for further innovations.

Figure 10: Vector store is replaced by a more durable chroma store. Chroma store retains its vectors even after Flowise is hut down.


RAG with chroma and single text file

unlike earlier batch processing systems. This made them seem all the more exciting and paved the way for further innovations.

How things changed with the coming in of microcomputers. Give a summary in not more than 50 words.

With microcomputers, everything changed. They brought personal computers to our desks, allowing us to interact with them in real-time, unlike earlier batch processing systems. This was a significant shift, making microcomputers seem exciting and setting the stage for future innovations.

Which places for AI were renowned at the time

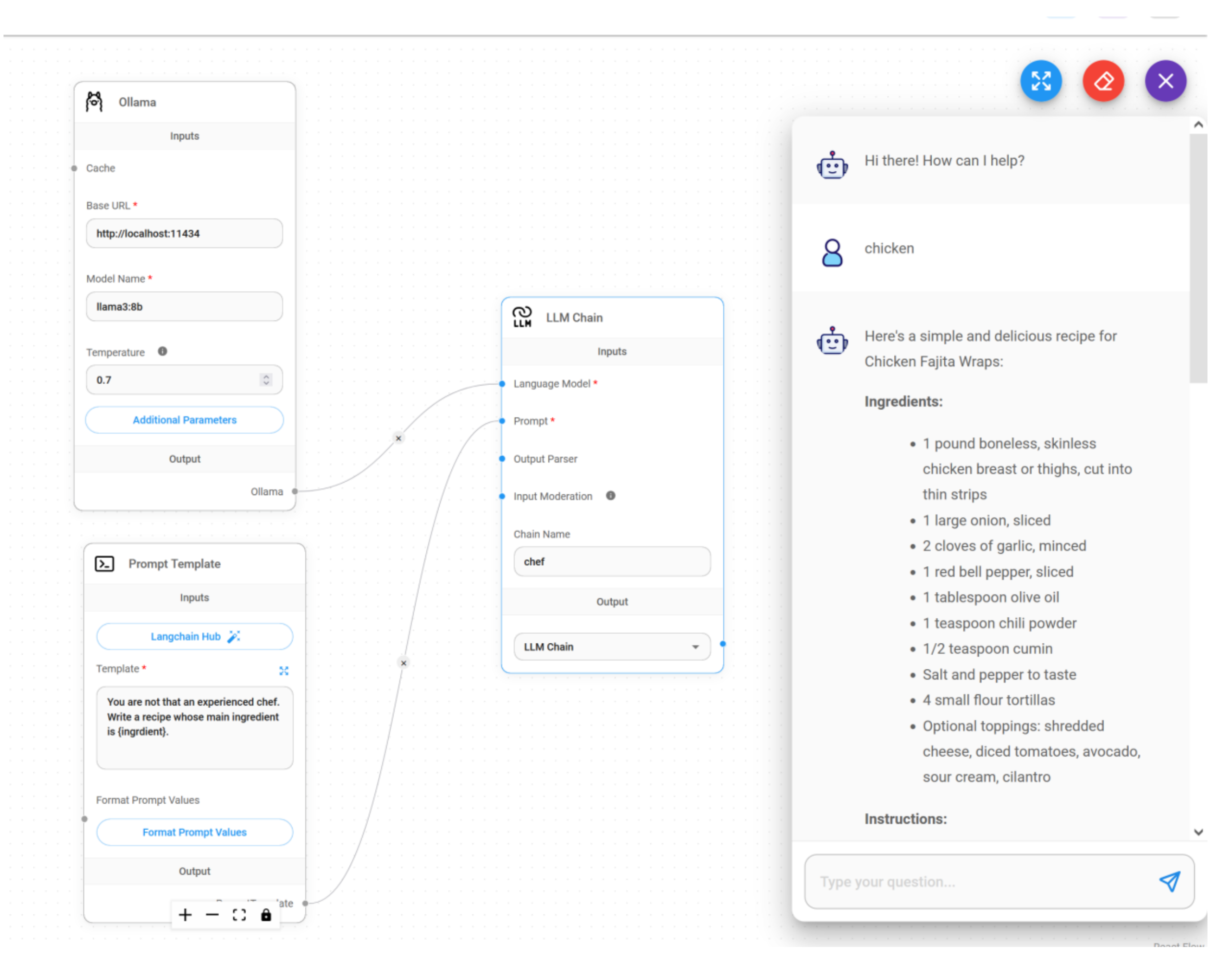
According to the context, MIT and Yale were renowned for AI at the time you applied to grad school.

Figure 11: Flowise restarted. More questions asked and replies are given based upon the earlier storage.

I. Combining Multiple Chains (Prompt Chaining)

A. Refer [Flowise tutorial]

First LLM chain



Ollama

Inputs

Cache

Base URL *

http://localhost:11434

Model Name *

llama3:8b

Temperature

0.7

Additional Parameters

Output

Ollama

Prompt Template

Inputs

Langchain Hub

Template *

You are not that an experienced chef. Write a recipe whose main ingredient is {ingrdient}.

Format Prompt Values

Format Prompt Values

Output

LLM Chain

Inputs

Language Model *

Prompt *

Output Parser

Input Moderation

Chain Name

chef

Output

LLM Chain

Hi there! How can I help?

chicken

Here's a simple and delicious recipe for Chicken Fajita Wraps:

Ingredients:

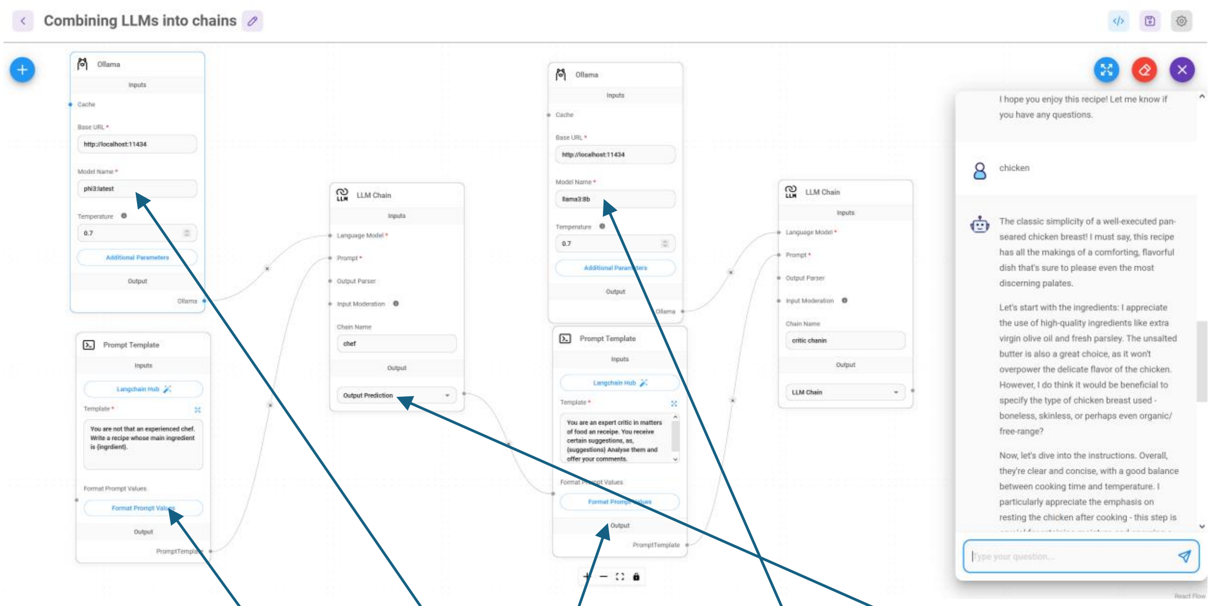
- 1 pound boneless, skinless chicken breast or thighs, cut into thin strips
- 1 large onion, sliced
- 2 cloves of garlic, minced
- 1 red bell pepper, sliced
- 1 tablespoon olive oil
- 1 teaspoon chili powder
- 1/2 teaspoon cumin
- Salt and pepper to taste
- 4 small flour tortillas
- Optional toppings: shredded cheese, diced tomatoes, avocado, sour cream, cilantro

Instructions:

Type your question...

Figure 12: First LLM chain named as chef.

Second LLM chain added to first


Combining LLMs into chains

Ollama — Base URL: http://localhost:11434 — Model Name: phi3:latest — Temperature: 0.7

LLM Chain — Chain Name: chef — Output: Output Prediction

Prompt Template — Template: You are not that an experienced chef. Write a recipe whose main ingredient is {ingrdient}.

Ollama — Base URL: http://localhost:11434 — Model Name: llama3:8b — Temperature: 0.7

Prompt Template — Template: You are an expert critic in matters of food an receipe. You receive certain suggestions, as, {suggestions} Analyse them and offer your comments.

LLM Chain — Chain Name: critic chanin — Output: LLM Chain

I hope you enjoy this recipe! Let me know if you have any questions.

chicken

The classic simplicity of a well-executed pan-seared chicken breast! I must say, this recipe has all the makings of a comforting, flavorful dish that's sure to please even the most discerning palates.

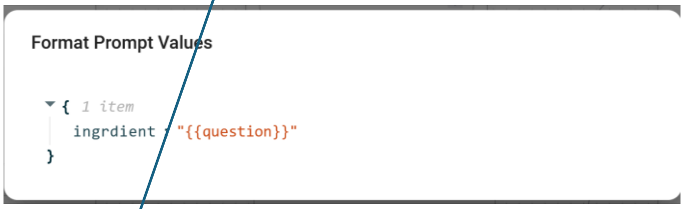
Let's start with the ingredients: I appreciate the use of high-quality ingredients like extra virgin olive oil and fresh parsley. The unsalted butter is also a great choice, as it won't overpower the delicate flavor of the chicken. However, I do think it would be beneficial to specify the type of chicken breast used - boneless, skinless, or perhaps even organic/free-range?

Now, let's dive into the instructions. Overall, they're clear and concise, with a good balance between cooking time and temperature. I particularly appreciate the emphasis on resting the chicken after cooking - this step is

Figure 13: Note that the first LLM is using *phi3* *and the critic language model is* *llama3*. *In the chatbox, the IInd LLM chain does make minor suggestions to improve the quality. Note that the output of Ist LLM chain is now* *Output Prediction*.

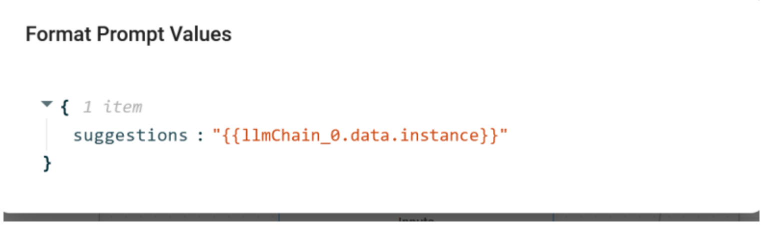
Here are the prompts used:

chef chain prompt: *You are not that an experienced chef. Write a recipe whose main ingredient is {ingredient}.* Formatting of prompt values is as:


Format Prompt Values

```
{ 1 item
  ingrdient : "{{question}}"
}
```

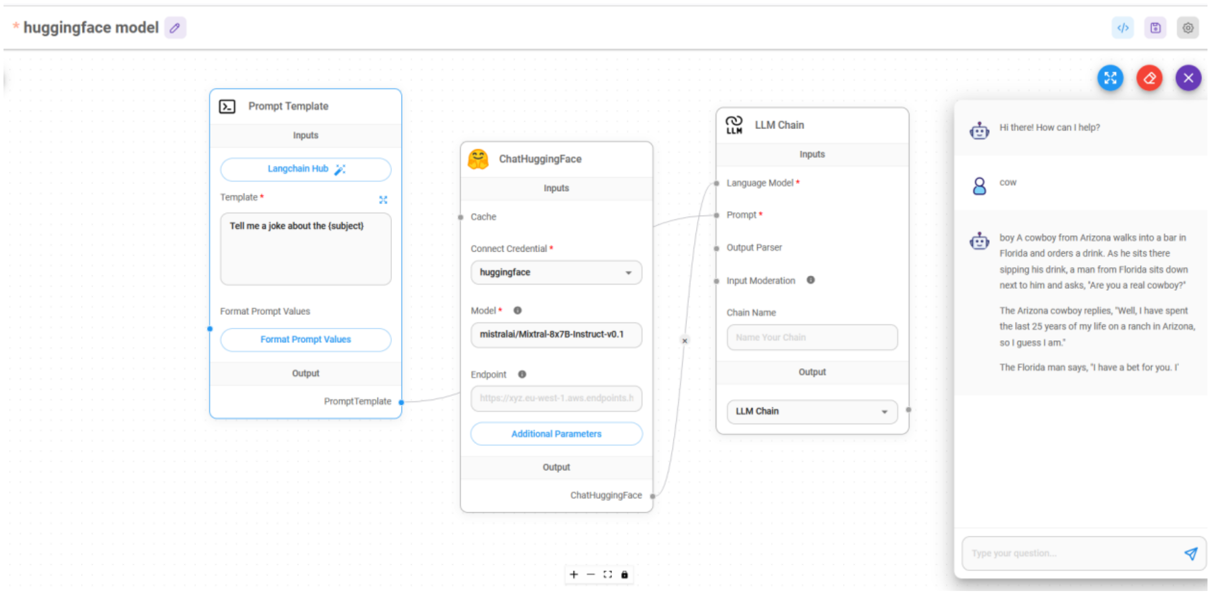
Critic chain prompt: *You are an expert critic in matters of food an receipe. You receive certain suggestions, as, {suggestions} Analyse them and offer your comments*. The formatting of prompt values is as:


Format Prompt Values

```
{ 1 item
  suggestions : "{{llmChain_0.data.instance}}"
}
```

J. Flowise Using Hugging Face Models

Ref: [This link.]()



* huggingface model

Prompt Template

Inputs

Langchain Hub

Template *

Tell me a joke about the {subject}

Format Prompt Values

Output

PromptTemplate

ChatHuggingFace

Inputs

Cache

Connect Credential *

huggingface

Model *

mistralai/Mixtral-8x7B-Instruct-v0.1

Endpoint

https://xyz.eu-west-1.aws.endpoints.h

Additional Parameters

Output

ChatHuggingFace

LLM Chain

Inputs

Language Model *

Prompt *

Output Parser

Input Moderation

Chain Name

Name Your Chain

Output

LLM Chain

Hi there! How can I help?

cow

boy A cowboy from Arizona walks into a bar in Florida and orders a drink. As he sits there sipping his drink, a man from Florida sits down next to him and asks, "Are you a real cowboy?"

The Arizona cowboy replies, "Well, I have spent the last 25 years of my life on a ranch in Arizona, so I guess I am."

The Florida man says, "I have a bet for you. I'

Type your question...

Figure 14: Only those models will work who have made available inference endpoints free.

****