



RAGBuddy

An Educational Chatbot

Leo Danuarta

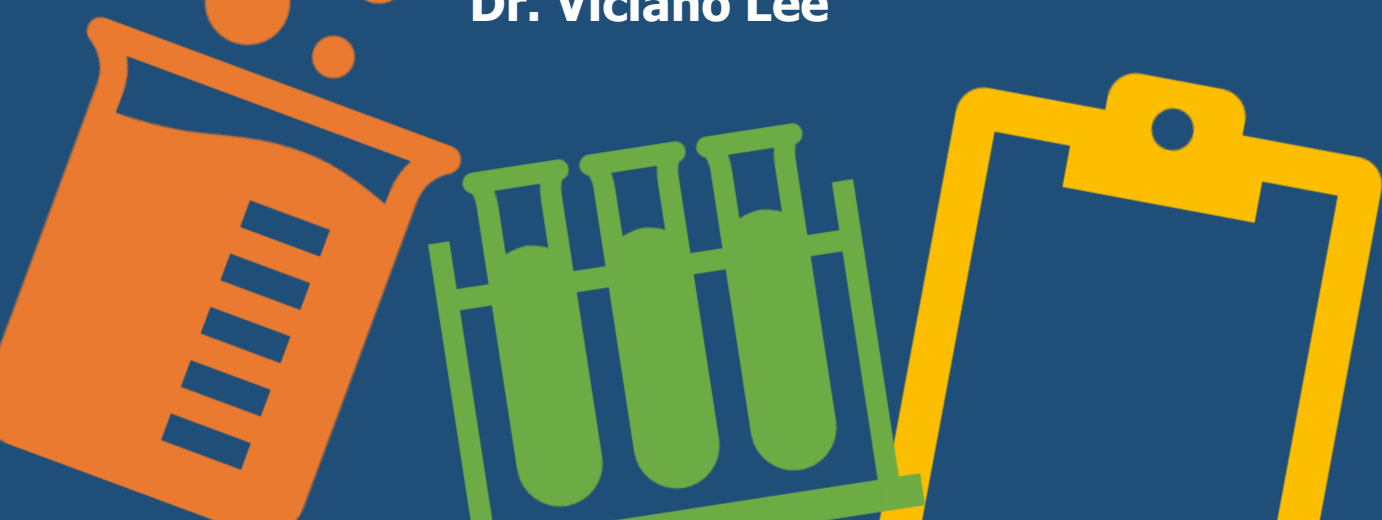
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INSTALLATION GUIDE

Github

Clone kedua source dari github Labirariset dari link berikut.

- Front end : <https://github.com/LabiraRiset/RAG-PJOK-Ollama-UI.git>
- Back end : <https://github.com/LabiraRiset/RAG-PJOK-Ollama-BE.git>



Environment Requirements

Front end :

- Menginstall node js versi terbaru dari link:
<https://nodejs.org/en/download/package-manager>

Back end :

- Menginstall Ollama dari link berikut :
<https://ollama.com/download/windows>
- Mendownload model LLM Ollama dari terminal atau command prompt dengan perintah `ollama pull llama3`
- Menginstall python versi 3.10 dari link berikut :
<https://www.python.org/downloads/release/python-3100/>



Setup Front End

1. Buka project front end yang telah di clone
2. Buat file .env di root project dan tambahkan alamat host dari backend beserta dengan port yang di host, contoh : <http://localhost:5002>
3. Lakukan instalasi package front end dari terminal dengan perintah `npm install`
4. Setelah semua Langkah diatas dilakukan, jalankan program dengan perintah `npm run dev`



Setup Back End

1. Buka project back end yang telah di clone
2. Buat virtual envirotnment python pada project tersebut, dengan perintah : `python3 -m venv venv`
3. Masuk kedalam virtual env melalui command prompt windows, dengan perintah: `cd venv/Scripts/activate.bat`
4. Menginstall package python dari file requirements.txt dengan perintah : `pip install -r requirements.txt`
5. Buat file .env pada root project
6. Buat account database Pinecone pada <https://www.pinecone.io/>



Setup Back End

7. Generate API key pada Pinecone dan simpan API key di file .env



8. Jalan program dengan perintah: `python3 main.py`





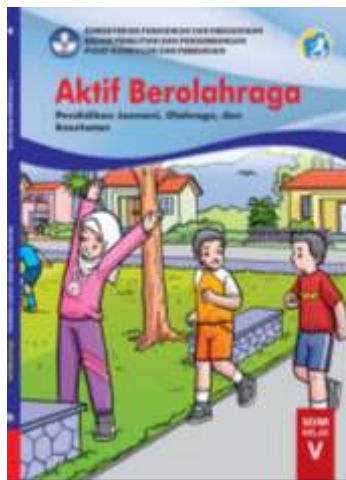
PROGRAM DESCRIPTION

RAGBuddy V1 & RAGBuddy V2

- RAGBuddy V1 merupakan chatbot yang dikembangkan dengan model embedding dan generator (LLM) dari OpenAI (model komersil).
- RAGBuddy V2 dikembangkan dengan model embedding dan generator (LLM) dari Ollama (model opensource).
- RAGBuddy V1 dan V2 menggunakan dataset yang sama yaitu pelajaran Sekolah Dasar PJOK kurikulum 2013



Dataset RAGBuddy



Pinecone Vector Database

The screenshot displays the Pinecone Vector Database interface. The top navigation bar includes the Pinecone logo, a breadcrumb trail (N/A / RAG-Labira / Database), and links for Docs, Settings, Feedback, Get help, and a user profile (LIR). The left sidebar contains a 'Get started' section and a 'Database' section with sub-items: Indexes (5), Backups, Assistant, Inference, API keys, and Manage. The main content area is titled 'Indexes' and features a 'Create index' button. Below the title is a search bar labeled 'Search indexes', a 'Sort by last viewed' dropdown, and a 'Filter by' dropdown. The text 'Showing 5 indexes' is displayed. Two index entries are visible:

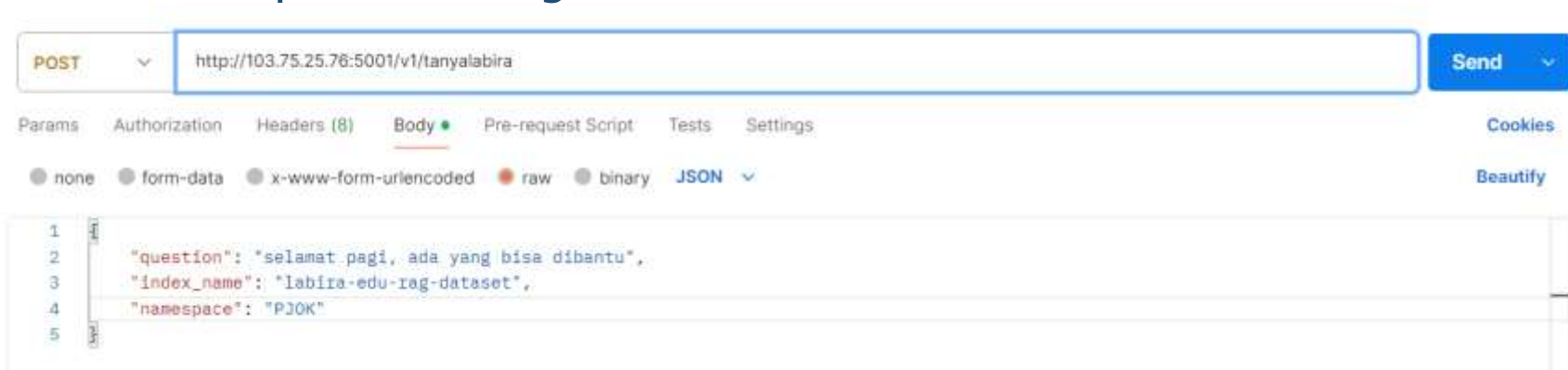
- labira-edu-rag-dataset** (with a green dot icon)
 - Host: <https://labira-edu-rag-dataset-u795tr0.svc.aped-4627-b74a.pinecone.io>
 - Cloud: AWS • Region: us-east-1 • Type: Serverless • Dimension: 1536
 - Connect button
- ollama-labira-rag** (with a green dot icon)
 - Host: <https://ollama-labira-rag-u795tr0.svc.aped-4627-b74a.pinecone.io>
 - Cloud: AWS • Region: us-east-1 • Type: Serverless • Dimension: 3072
 - Connect button

At the bottom left, a 'STARTER USAGE' section shows 'Storage' at 0 / 2GB and 'WUs' at 0 / 2M.



RAGBuddy V1

- Backend API untuk chatting dengan RAGBuddy V1
[POST] <http://103.75.25.76:5001/v1/tanyalabira>
- Request Body JSON :
 - "question" : string
 - "index_name" : string
 - "namespace" : string



- Response API :

```
1 {  
2   "text": "Selamat pagi! Tentu, bagaimana saya bisa membantu Anda hari ini?"  
3 }
```

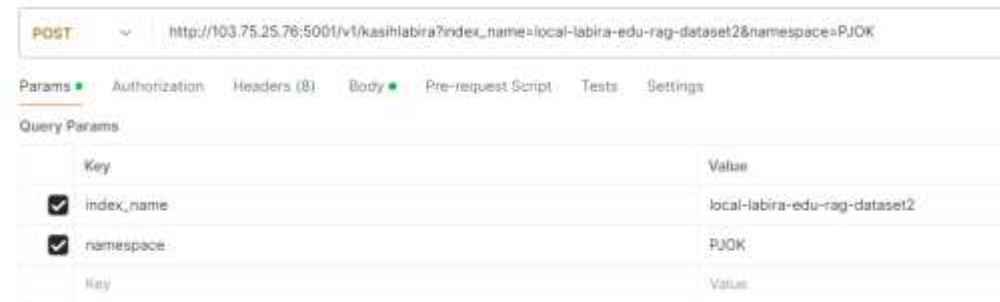


RAGBuddy V1

- Backend API untuk insert knowledge ke RAGBuddy V1
[POST] <http://103.75.25.76:5001/v1/tanyalabira>

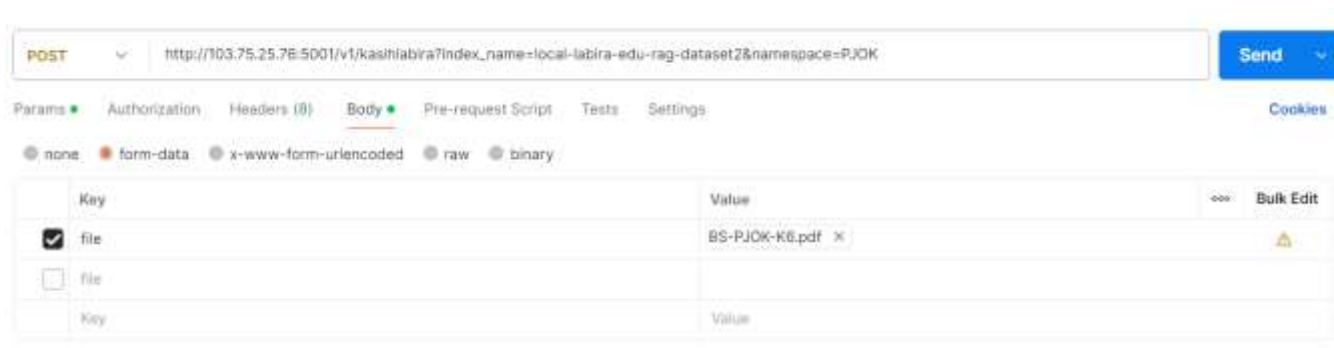
- Parameter:

- "index_name" : string
- "namespace" : string



Key	Value
<input checked="" type="checkbox"/> index_name	local-labira-edu-rag-dataset2
<input checked="" type="checkbox"/> namespace	PJOK
Key	Value

- Request Body form-data :
 - "file" : [file]

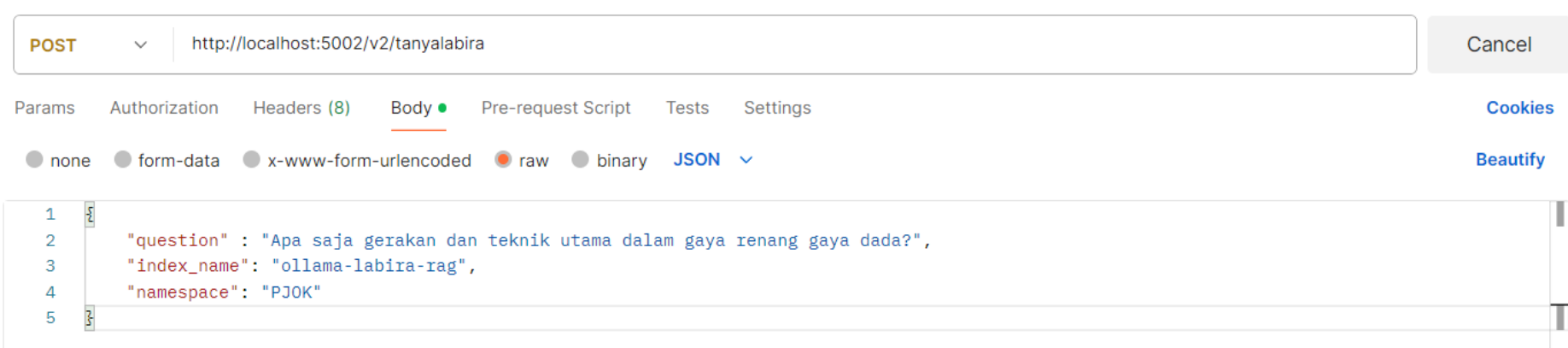


Key	Value
<input checked="" type="checkbox"/> file	BS-PJOK-K6.pdf
<input type="checkbox"/> file	
Key	Value



RAGBuddy V2

- Backend API untuk chatting dengan RAGBuddy V2
[POST] <http://103.75.25.76:5002/v2/tanyalabira>
- Request Body JSON :
 - "question" : string
 - "index_name" : string
 - "namespace" : string



The screenshot shows a REST client interface with the following details:

- Method:** POST
- URL:** http://localhost:5002/v2/tanyalabira
- Body Type:** JSON (selected from a dropdown menu that also includes none, form-data, x-www-form-urlencoded, raw, and binary)
- Body Content:**

```
1 {  
2   "question" : "Apa saja gerakan dan teknik utama dalam gaya renang gaya dada?",  
3   "index_name" : "ollama-labira-rag",  
4   "namespace" : "PJOK"  
5 }
```
- Buttons:** Cancel, Cookies, and Beautify are visible on the right side of the interface.

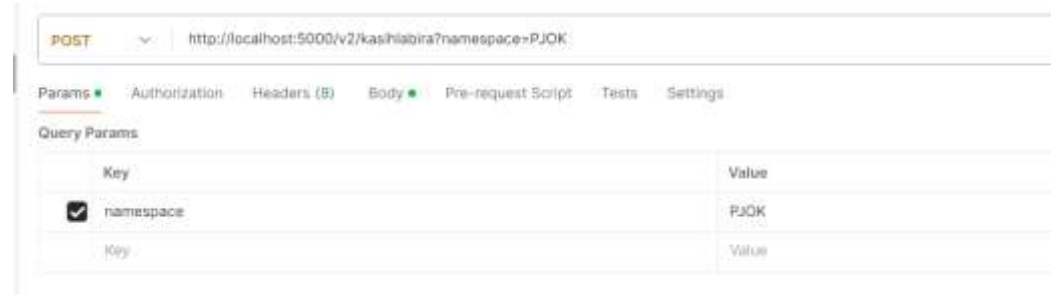


RAGBuddy V2

- Backend API untuk insert knowledge ke RAGBuddy V2
[POST] <http://103.75.25.76:5002/v2/tanyalabira>

- Parameter:

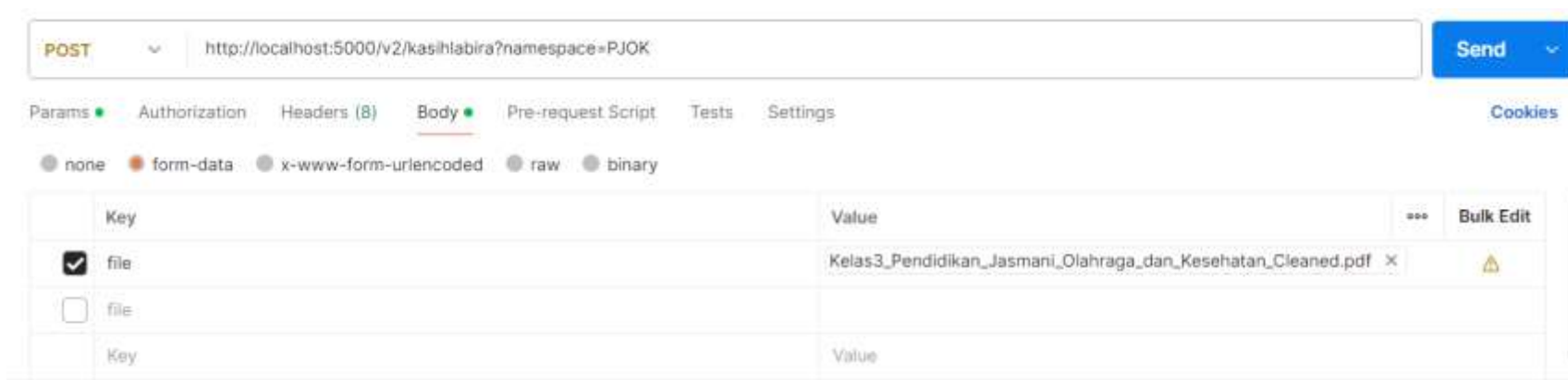
- "namespace" : string



Key	Value
<input checked="" type="checkbox"/> namespace	PJOK
Key	Value

- Request Body form-data :

- "file" : [file]



Key	Value
<input checked="" type="checkbox"/> file	Kelas3_Pendidikan_Jasmani_Olahraga_dan_Kesehatan_Cleaned.pdf X
<input type="checkbox"/> file	
Key	Value



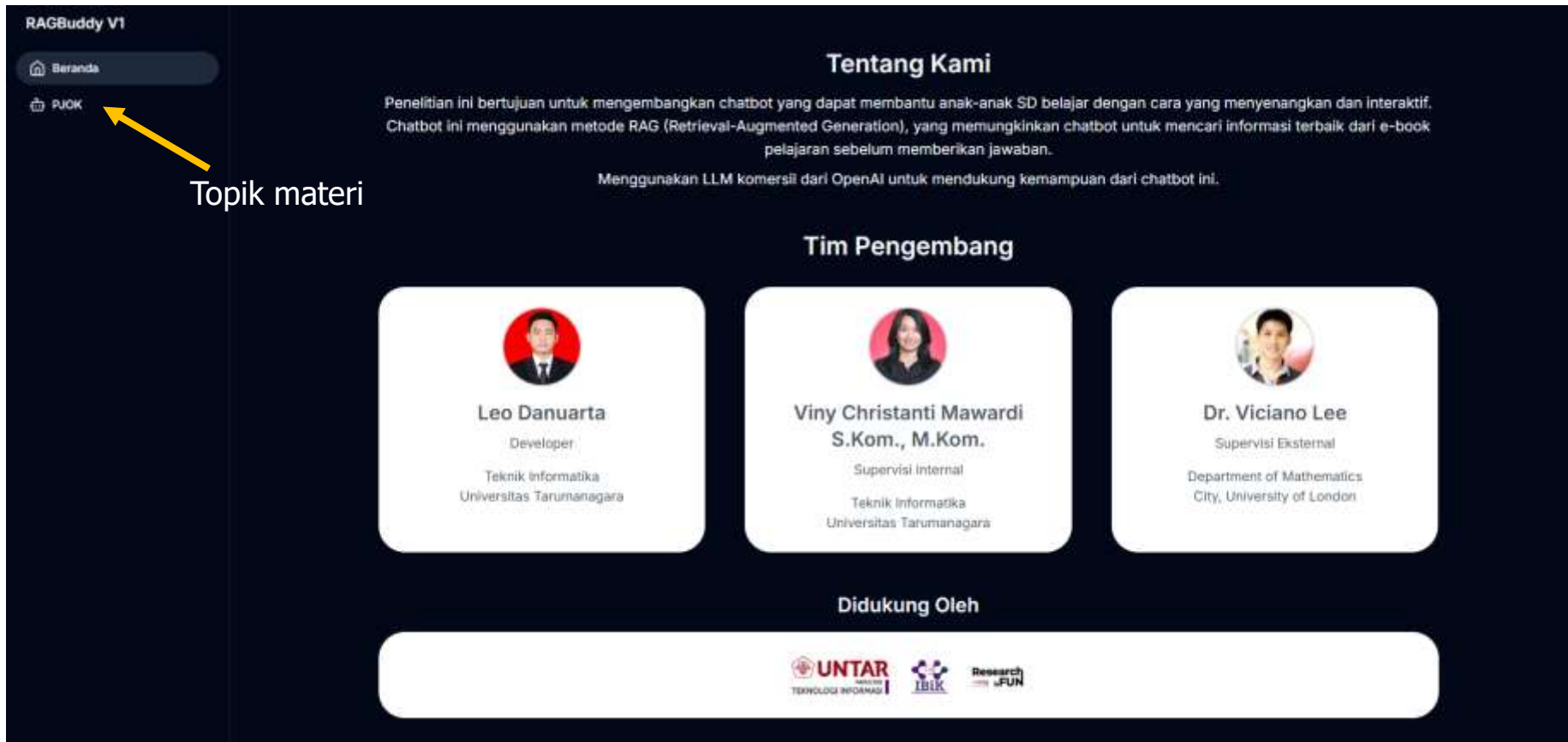


LAYAR FRONT END

- Layar front end hanya mengconsume API untuk request data dan menampilkan respon API.
- Semua prosesan data dilakukan di backend.

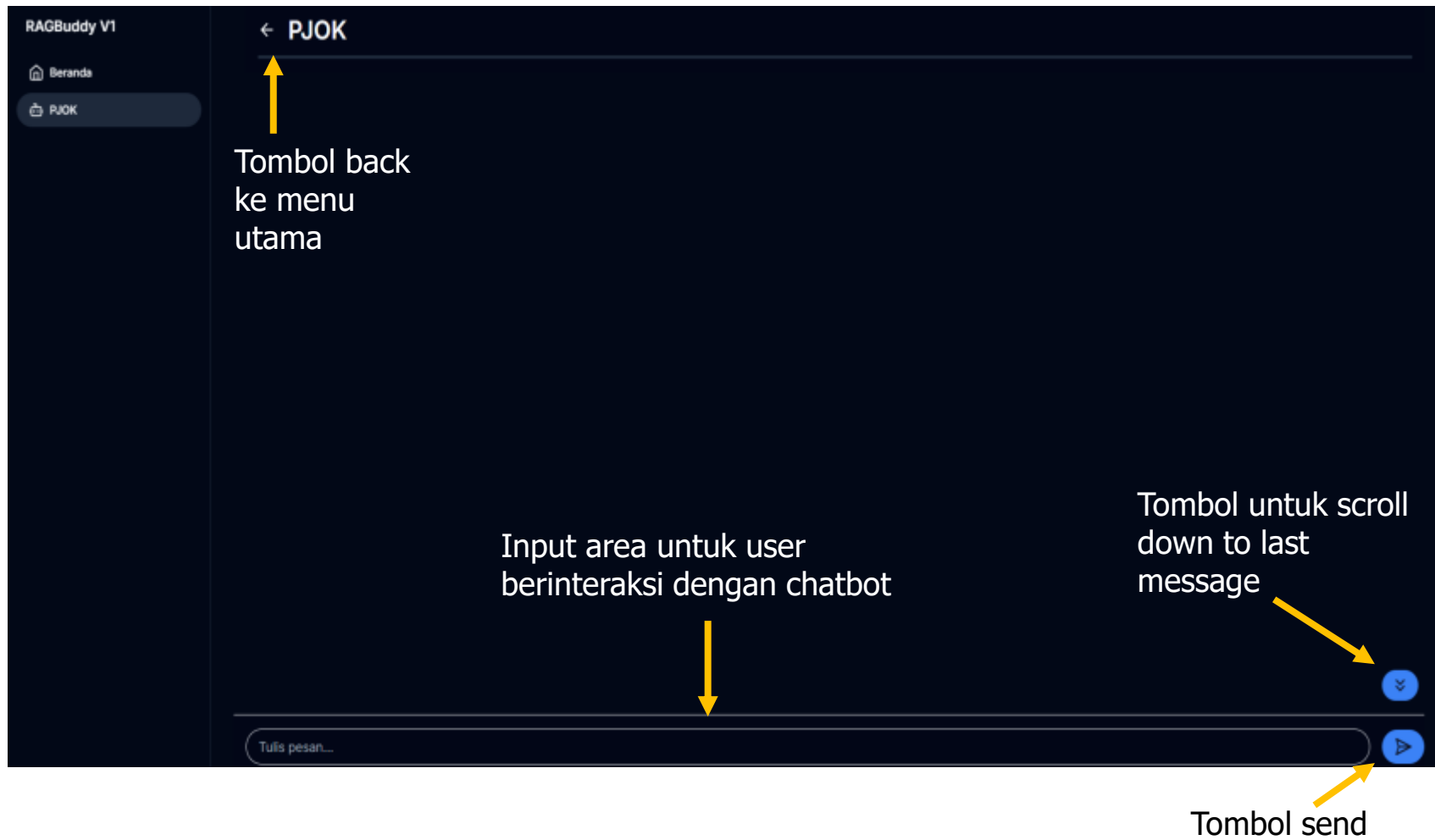
Halaman Awal

- Memuat knowledge materi PJOK sekolah dasar k-13

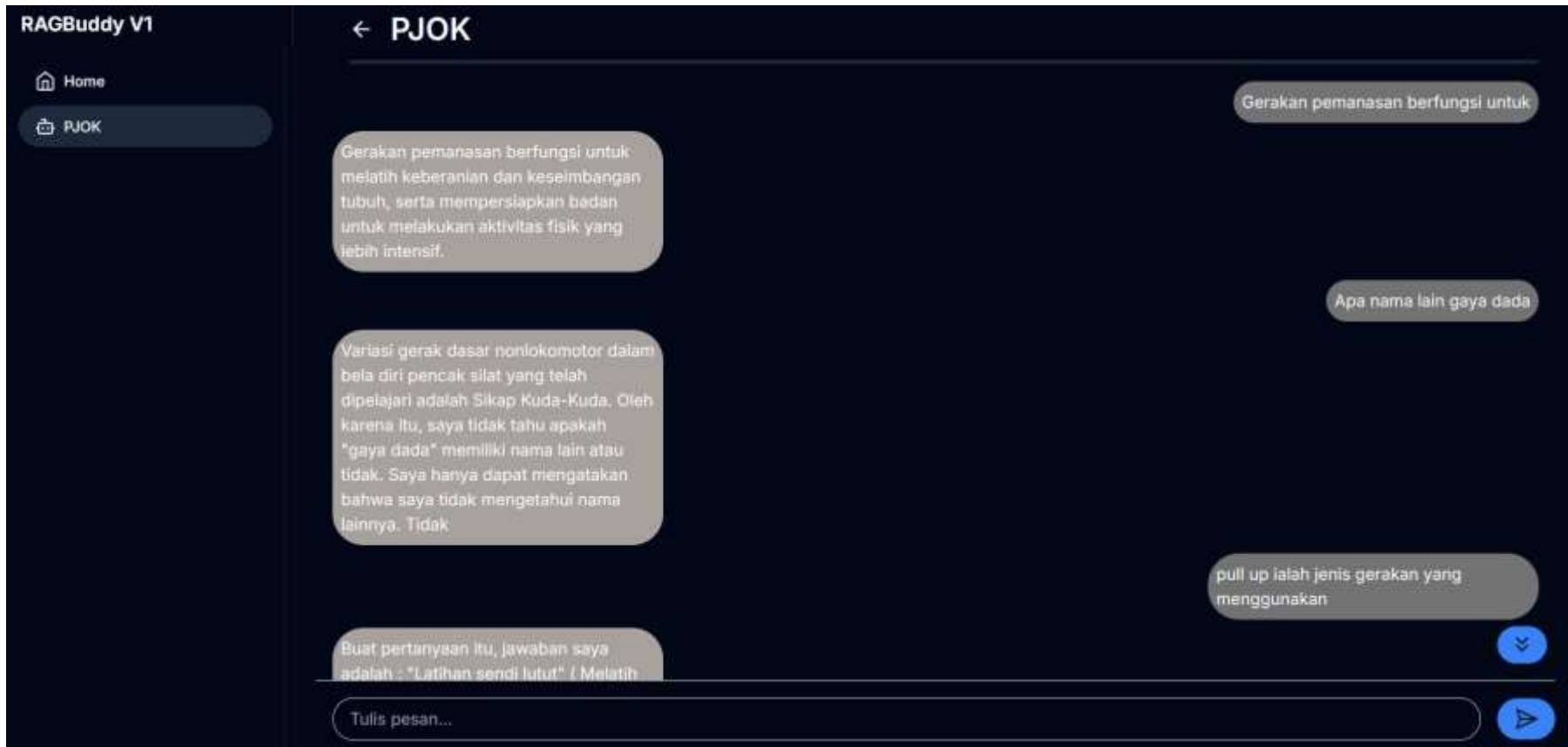


Menu PJOK

- Room chat untuk berinteraksi dengan Labira RAG Chat



Contoh interaksi dengan RAGBuddy V1



A science-themed illustration on a dark blue background. In the top left is a light blue microscope. In the top right is a yellow Erlenmeyer flask with yellow bubbles rising from it, next to a green ruler and a blue pen. In the bottom left is an orange book with blue pages. In the bottom center are three green test tubes in a rack. In the bottom right is a yellow clipboard. The text "Happy Study!" is centered in white.

Happy Study!