

Klinikü

Assistant | Pembantu Kesehatan

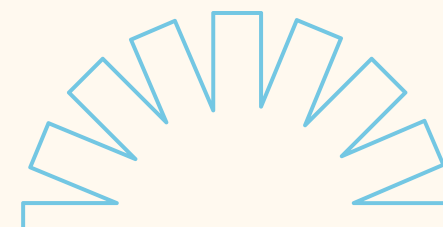
# KLINIKU

## GUIDING PATIENTS, SUPPORTING CLINICS

PEKOM  
Codefest 2025

Script Diddies

30 Nov 2025





# Health Minister: 91 Klinik Kesihatan Operating Beyond Capacity

By CodeBlue | 21 March 2025

Health Minister Dzulkefly Ahmad says 91 government health clinics in Malaysia operate beyond capacity, with some seeing over 800 patients daily—far exceeding their intended load. The government plans to upgrade, expand, and build new clinics.



The Double-Dipping Scandal: How TPAs Are Exploiting Both Corporation And Clinics — Dr James Jeremiah

MiCare Says Limited By Bank Employees' Medical Benefits

MMC Bans Medical Sick Certs Issued After Teleconsults

FPMPAM Demands MOH, MyCC, Bank Negara Probes Against TPA 'Abuses'

Hold TM Accountable For NG MERS 999 Disruptions

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**RM 309\***

**LDCT LUNG CANCER SCREENING  
AT BEACON HOSPITAL**

1 SEPT 2025 – 30 NOV 2025

\*T&Cs apply



Source: <https://codeblue.galencentre.org/2025/03/health-minister-91-klinik-kesihatan-operating-beyond-capacity/>



# The Problem



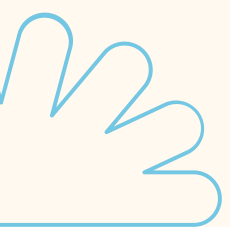
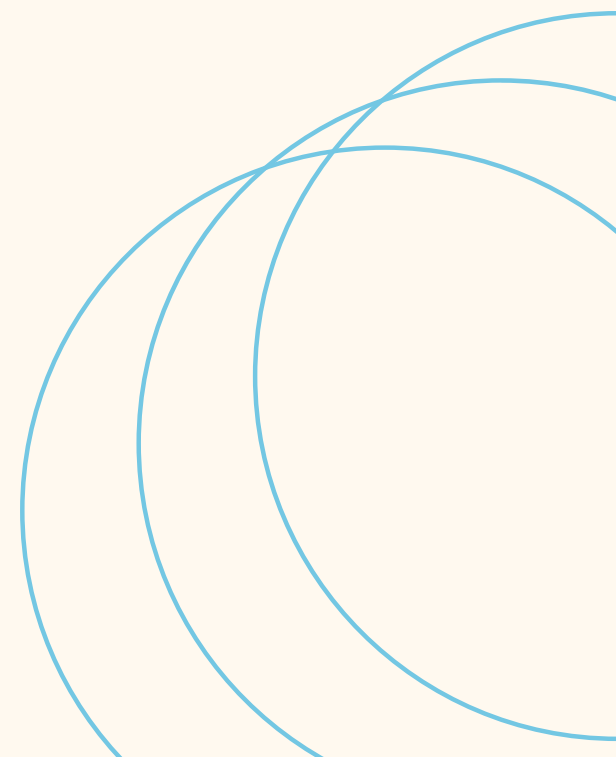
## Exhaustive Admin Work

- Conventional methods i.e. pen and paper administration.
- Causing unproductivity and inefficiency

## Unsure When to Get Medical Help

- Patients don't realise how severe their symptoms are.
- The assistant helps identify when their condition needs urgent attention.

## Inability to Book Online

- Almost all government clinics rely:
  - Manual data entry (calls, emails)
  - in-person booking
- 
- 

# Target Audience

## Medical Staff

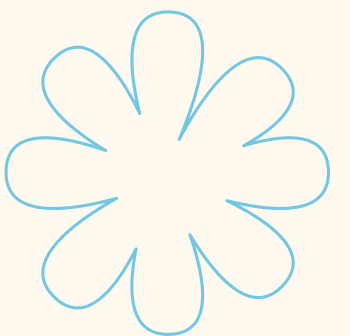


- Track appointments
- Answer patients' FAQs more conveniently

## Patients



- Book appointments
- Get medical information and suggestions
- Get answers to FAQ





# Key Features of the Website



## Health Assistant

- Instant health guidance
- Check symptoms and it's urgency
- RAG-Powered: Uses knowledge table to answer FAQs

## Appointment Booking System

- Book directly through website
- Instant booking confirmation in preferred language

## Admin Dashboard

- View all bookings in one place
- Track status of patients' appointments, or add notes

# Tech Stack



## FrontEnd

- Next.js and React
- Styles: Tailwind CSS

## API Access

Next.js API Routes, serverless handlers  
in /api/\*  
Language: TypeScript

## Backend — JamAlBase

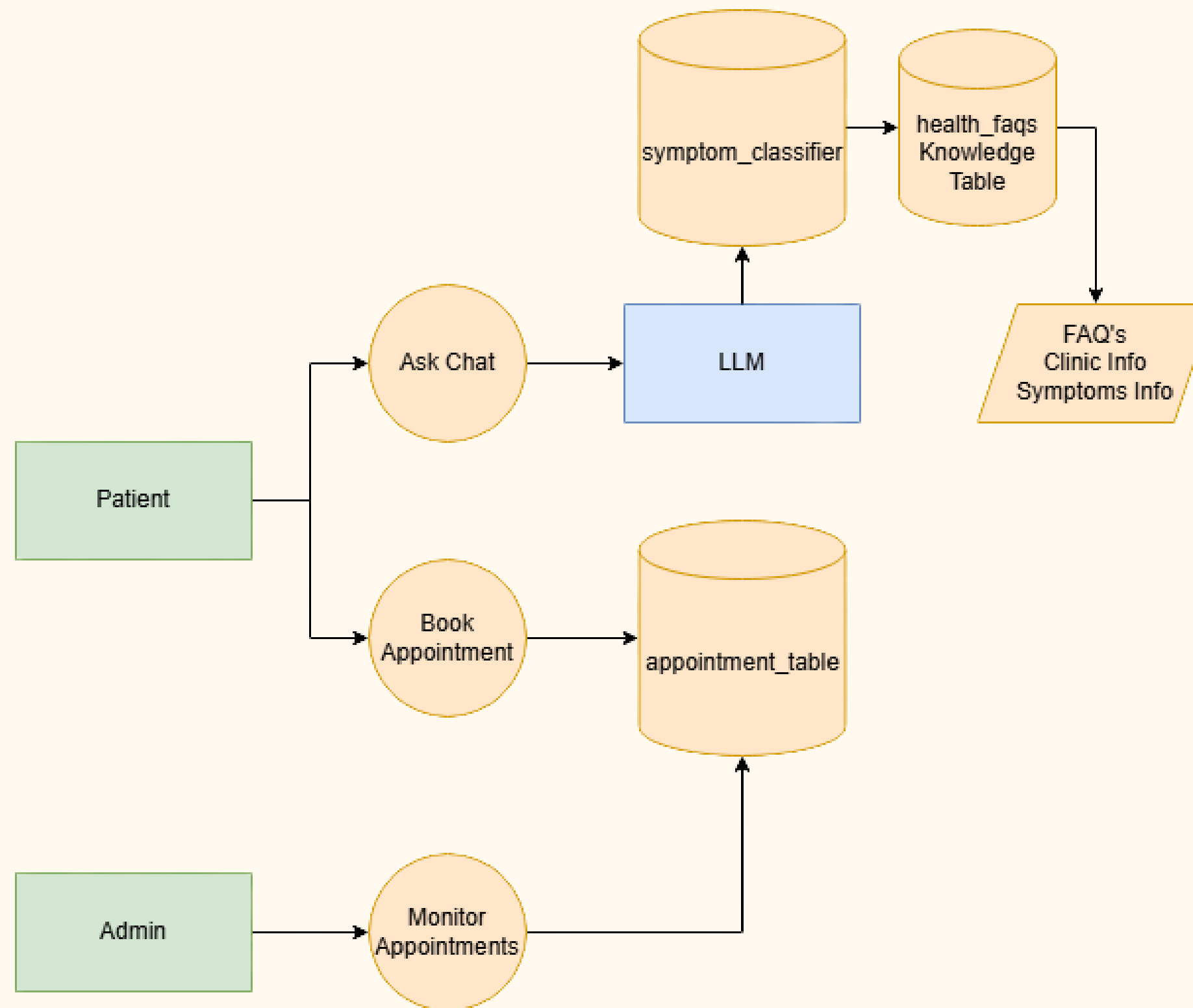
Knowledge tables: health\_faqs

Action tables:

- appointment\_bookings,
- symptom\_classifier

Chat Table: RAG-powered with health\_faqs

# Data Flow



# Kliniku Health Assistant

## 1. Health Guidance

- Patients can describe their symptoms
- Health assistant provides guidance.

## 3. Quick Action Shortcuts


- Check symptoms
- View vaccination information
- See clinic hours

## 2. Urgent Alert Indicators

High-risk symptoms are highlighted with warning icons and urgent instructions.

## 4. Language Support

- Bahasa Melayu
- English

**Kliniku Health Assistant**  
Get health guidance and book appointments at Klinik Kesihatan Petaling Jaya

[Admin](#)[BM](#)

i have a fever and constant coughing  
04:47 pm

feverhighGB EN

I understand you have a fever and are coughing constantly. These symptoms together require medical attention, especially if they've lasted more than 3 days.

**You should visit Klinik Kesihatan Petaling Jaya today if:**

- Fever has lasted more than 3 days
- Cough has lasted more than 2 weeks
- You are coughing up blood, green, or yellow phlegm
- You have shortness of breath, chest pain, or difficulty breathing
- You have a high fever (above 39°C) with cough

**For now:**

- Rest and drink plenty of water
- Take paracetamol as needed (follow dosage instructions)
- Use honey or warm drinks to soothe your throat
- Wear a mask around others to prevent spreading illness


**Call 999 immediately if:**


- You experience severe chest pain or difficulty breathing
- You feel confused or faint
- You cough up blood


**Contact:** 03-7956 2424 to book an appointment or check clinic availability.


**Persistent fever with cough could be a sign of pneumonia, tuberculosis, or other serious infection. Early assessment helps prevent complications.**

Quick Actions:


Check symptoms


Vaccination info

Clinic hours

Book Appointment

Describe your symptoms or ask a health question...



 This is not a substitute for professional medical advice. For emergencies, call 999 immediately.




# Appointment Booking System

## Enter Details

- Full Name
- Phone Number
- Preferred Date and Time

## Add Reason for Visit

- Lets users state why they're visiting so the doctor can prepare in advance.

 **Book Appointment**  
Schedule your visit to Klinik Kesihatan Petaling Jaya


BM

[← Back to Chat](#)


Full Name \*

Phone Number \*


Preferred Date \*

Preferred Time \*

Reason for Visit \*

 Contact: 03-7956 2424 | Emergency: 999



## Appointment Request Received!

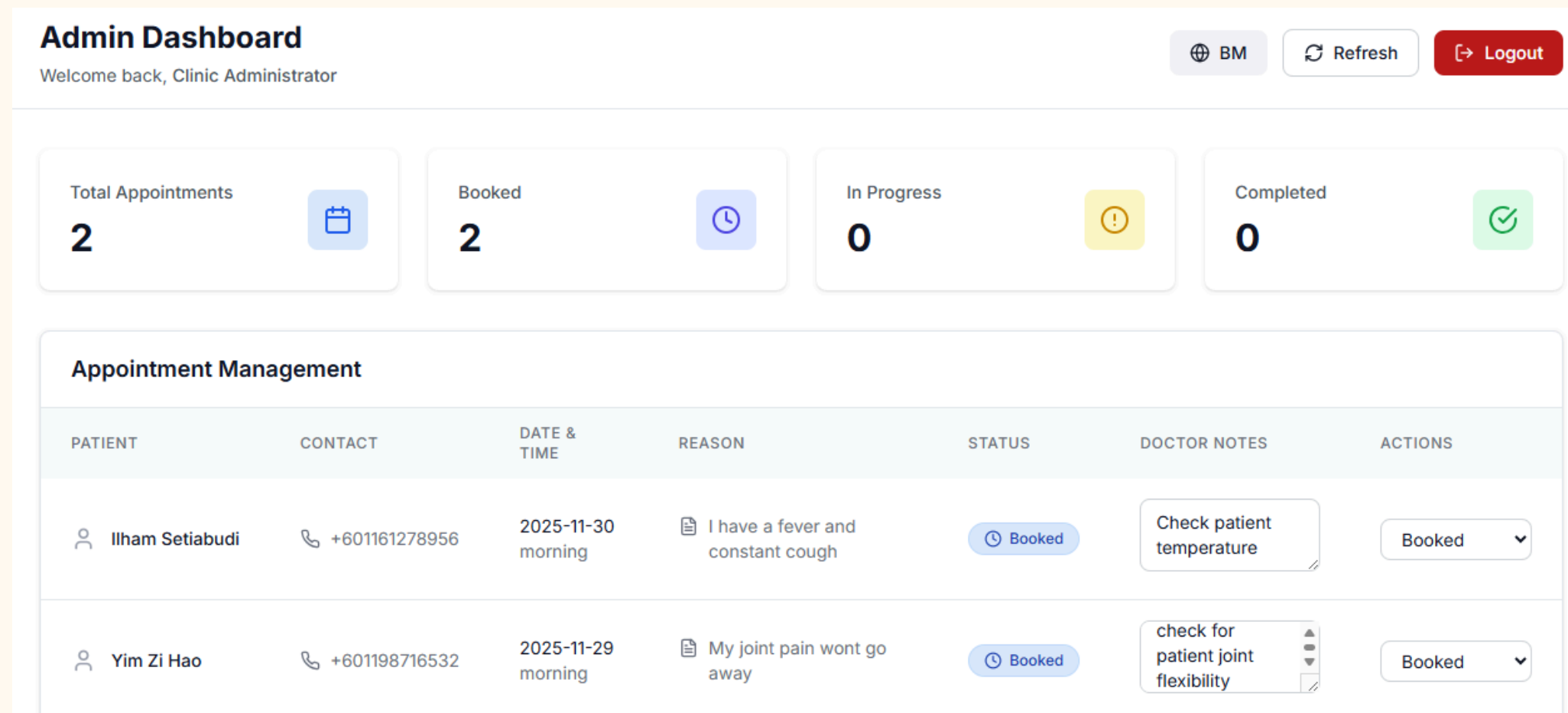
We will contact you within 24 hours to confirm.

Your appointment request has been received. We will contact you at +601161278956 within 24 hours to confirm your appointment for 2025-11-28. Reference: APT-734912. For urgent matters, call 03-7956 2424.

[Book Another Appointment](#)

[Back to Chat](#)

# Admin Dashboard



## Secure Login Access

Admins access the portal through a secure login system using a username and password.

## View Appointments

- Check patient appointments & reasons
- Doctors can add notes for each patient

## Track Appointments Status

Easily monitor and update:

- Booked, In Progress, Completed and Cancelled status.

# FAQs

<input type="checkbox"/>	ID	Updated at	<input type="checkbox"/> <input type="text" value="Input str"/> Title	<input type="checkbox"/> <input type="text" value="Output float"/> Title Embed	<input type="checkbox"/> <input type="text" value="Input str"/> Text
<input type="checkbox"/>	06926d20-d5...	2025-11-26T10:...	Klinik Kesihatan Petaling Jaya: Operating Hours, Services, Appointments, and Emergency Guidance	-0.0182,0.0097,-0.0317,0.0373,-0.0096,-0.0542,-0.0049,-0.0538,-0.0044,-0.0073,0.0118,0.0163,-0.0111,0.0022,0.0201,0.0163,0.0744,0.0598,-0.027,-0.0326,-0.0227,0.0334,-0.0513,-0.021,-0.0029,-0.0061,-0.0008,-0.0237,-0.0115,-0.0206,-0.0246,-0.0506,0.0696,-0.0106,0.0288,-0.0261,-0.0057,0.0286,-0.0575,0.0412,-0.0023,-0.0491,-0.0024,0.0274,0.0538,-0.0355,0.004	{ "category": "referral", "question_en": "If I need to see a specialist, can you refer me to a hospital?", "question_ms": "Jika saya perlu jumpa pakar, bolehkah anda rujuk saya ke hospital?", "answer_en": "Yes! We provide specialist referrals:"

<input type="checkbox"/> <input type="text" value="Output float"/> Text Embed	<input type="checkbox"/> <input type="text" value="Input str"/> File ID	<input type="checkbox"/> <input type="text" value="Input int"/> Page
-0.0493,0.0245,-0.0155,0.0063,0.0028,-0.0206,0.0188,-0.0628,0.0198,0.0163,0.0291,0.095,0.0227,0.0452,0.0166,0.0261,0.0268,-0.0287,0.04,-0.0173,-0.0035,0.0294,-0.029,-0.012,-0.0161,0.0056,-0.0187,0.0033,-0.008,-0.0358,-0.0089,-0.0632,0.0662,-0.0243,0.0026,-0.0517,-0.0175,-0.016,-0.0191,0.0611,0.033,-0.0366,0.0316,0.0162,0.0166,-0.0538,0.0064,-0.0227,-0.0	s3://devcloud-file/raw/org_dd0f17e8a20aa31541fdf5df/proj_713bfe8db08727032342c3db/019ac393-4a7f-71c2-a54d-fba3e492f3be/health_faqs.jsonl	1

## Example of FAQ

- Uploaded FAQ info (JSONL, PDF)
- JamAI recognises and arranges the data accordingly
- Connected FAQ (knowledge table) to chat table via RAG
- Health Assistant produces output accordingly based on FAQ knowledge table

# Symptom Classifier

ID	Updated at	<div>⋮ Input str</div> user_message	<div>⋮ Output str</div> symptom_category	<div>⋮ Output str</div> urgency_level	<div>⋮ Output str</div> language
New Row					
06928538-d7...	2025-11-27T13:...	Sekarang saya ada selesama, suhu badan saya ialah 30 degree celsius	fever	low	ms
0692852c-e0...	2025-11-27T13:...	I am having chest pain and it is hard to breathe.	emergency	emergency	en
0692852a-05c...	2025-11-27T13:...	I am having a severe headache with body temperature of 40 degrees celsius	fever	high	en

## Input: User Message

- Read message from user

## Output: Language Detected

- Identifies the language
- Malay or English

## Output: Symptom Category

- Classifies the user's message into a medical category such as fever, emergency, cough, pain, etc.

## Output: Urgency Level

- Determines how urgent the situation is.
- low, high, or emergency.



# Health Assistant

ID	Updated at	Input str User	Output str AI
New Row			
069285c2-ce8...	2025-11-27T14:...	Saya demam sejak semalam dan badan rasa sangat lemah.	<ul style="list-style-type: none"><li>- Disertai sesak nafas, sakit dada, atau kekeliruan</li><li>- Keadaan terus memburuk walaupun sudah berehat</li></ul> <p>📞 Hubungi: 03-7956 2424 untuk temujanji atau nasihat.</p> <p>💡 Jika suhu melebihi 39°C, atau anda mengalami kesukaran bernafas, sakit dada, atau kehilangan kesedaran, sila hubungi 999 segera.</p>
069285b9-a5e...	2025-11-27T14:...	I have been coughing for 5 days and I feel weak.	I understand you've been coughing for 5 days and feel weak. Since your cough has lasted more than 3 days and you're feeling unwell, it's best to visit Klinik Kesihatan Petaling Jaya for evaluation.

## INPUT: User Message

- Read message from user

## 1. Language-Matched Reply

- Analyse user message
- Respond either in Malay or English

## 2. Health Guidance

- Symptom acknowledgement
- Urgency assessment
- Clinic hours or relevant info from the knowledge base

## OUTPUT: AI Message

## 3. Formatting

The assistant always includes:

- Phone number of clinic
- Emergency number 999
- A helpful suggestion or next step, such as staying hydrated.

# Appointment Bookings

<input type="checkbox"/>	ID	Updated at	<input type="text" value="Input str"/> patient_name	<input type="text" value="Input str"/> phone_number	<input type="text" value="Input str"/> preferred_date	<input type="text" value="Input str"/> preferred_time	<input type="text" value="Input str"/> reason	<input type="text" value="Input str"/> current_state
+	New Row							
<input type="checkbox"/>	06928593-20...	2025-11-27T13:...	Yim Zi Hao	+601198716532	2025-11-29	morning	My joint pain wont go away	Booked
<input type="checkbox"/>	06928590-65...	2025-11-27T13:...	Ilham Setiabudi	+601161278956	2025-11-30	morning	I have a fever and constant cough	Booked

**Input : patient\_name**  
Reads user's name

**Input : phone\_number**  
Reads user's phone number

**Input : preferred\_date**  
Reads user's preferred date

**Input : preferred\_time**  
Reads user's preferred time

**Input : reason**  
Reads user's reason

**Input : current\_state**  
Reads user's current state



# Appointment Bookings

Output str confirmation_message_ms	Output str confirmation_message_en
Permohonan temujanji anda telah diterima. Kami akan menghubungi anda di +60231653024 dalam 24 jam untuk mengesahkan temujanji pada 2025-11-29. Rujukan: APT-734912. Untuk perkara mendesak, hubungi 03-7956 2424.	Your appointment request has been received. We will contact you at +60231653024 within 24 hours to confirm your appointment for 2025-11-29. Reference: APT-739215. For urgent matters, call 03-7956 2424.
Permohonan temujanji anda telah diterima. Kami akan menghubungi anda di +601161278956 dalam 24 jam untuk mengesahkan temujanji pada 2025-11-30 (Pagi (8:00 AM - 12:00 PM)). Rujukan: APT-734912. Untuk perkara mendesak, hubungi 03-7956 2424.	Your appointment request has been received. We will contact you at +601161278956 within 24 hours to confirm your appointment for 2025-11-30. Reference: APT-837291. For urgent matters, call 03-7956 2424.

## Output : EN or BM confirmation msg

Checks current user language and produces a confirmation message matching the user's language

## Confirmation Message :

- User date and time selection
- User phone number



**THANK YOU**  
**Q/A**

