



Kliniku
Assistant | Pembantu Kesihatan

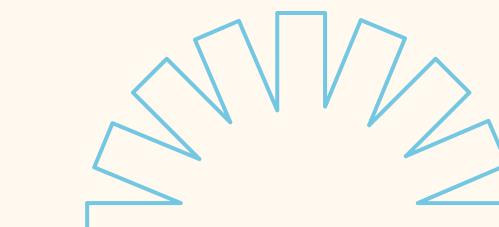
KLNIKU

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.



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

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



The Problem

Exhaustive Admin Work

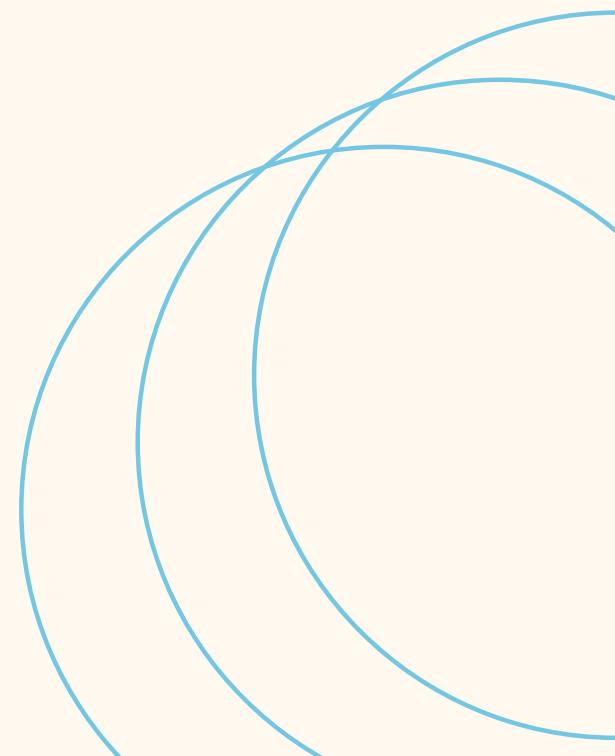
- Conventional methods i.e. pen and paper administration.
- Causing unproductivity and inefficiency

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

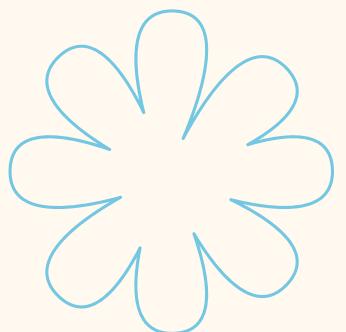


- Track appointments
- Answer patients' FAQs more conveniently

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 its 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 – JamAIBase

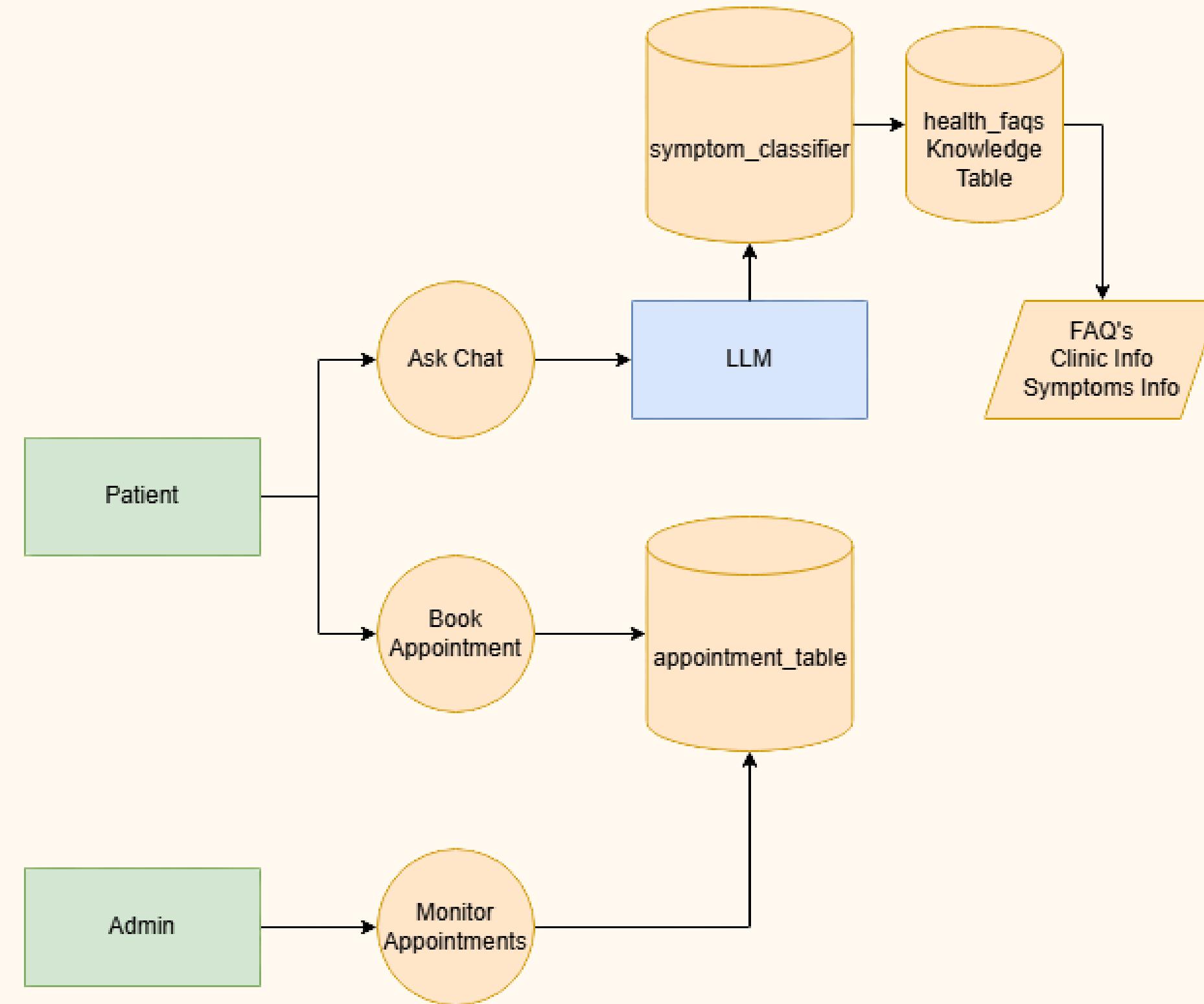
Knowledge tables: health_faqs

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

The screenshot shows a mobile application interface for Kliniku Health Assistant. At the top, there's a header with the app logo, "Kliniku Health Assistant", and a sub-header "Get health guidance and book appointments at Klinik Kesihatan Petaling Jaya". On the right, there are buttons for "Admin" and "BM". The main area shows a conversation between a patient and the AI. The patient message is "i have a fever and constant coughing" (04:47 pm). The AI response highlights "fever" with a green icon and "high" with an orange icon. It says: "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." It then provides guidance: "You should visit Klinik Kesihatan Petaling Jaya today if:" followed by a list of symptoms. It also gives advice for now: "For now:" followed by a list of self-care steps. Below this, it says "Call 999 immediately if:" with a list of severe symptoms. It includes a note: "Persistent fever with cough could be a sign of pneumonia, tuberculosis, or other serious infection. Early assessment helps prevent complications." At the bottom, there are "Quick Actions" buttons for "Check symptoms", "Vaccination info", and "Clinic hours", along with a large blue "Book Appointment" button. A text input field says "Describe your symptoms or ask a health question...". A small note at the bottom states: "⚠️ 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 *

Book Appointment

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

The screenshot shows the Admin Dashboard interface. At the top, there are four status indicators: Total Appointments (2), Booked (2), In Progress (0), and Completed (0). Below these are sections for Appointment Management and Doctor Notes.

PATIENT	CONTACT	DATE & TIME	REASON	STATUS	DOCTOR NOTES	ACTIONS
Ilham Setiabudi	+601161278956	2025-11-30 morning	I have a fever and constant cough	Booked	Check patient temperature	Booked
Yim Zi Hao	+601198716532	2025-11-29 morning	My joint pain wont go away	Booked	check for patient joint flexibility	Booked

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

ID	Updated at	Title	Title Embed	Text
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: "}

Text Embed	File ID	Page
-0.0493,0.0245,-0.0155,0.0063,0.0028,-0.0206,0.018 -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,-0.0243,0.002 6,-0.0517,-0.0175,-0.016,-0.0191,0.0611,0.033,-0.03 66,0.0316,0.0162,0.0166,-0.0538,0.0064,-0.0227,-0.0	s3://devcloud- file/raw/org_dd0f17e8a20aa31541fdf5df/proj_713bfe8d b08727032342c3db/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	Input str	user_message	Output str	symptom_category	Output str	urgency_level	Output str	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	Output	AI
New Row				
069285c2-ce8...	2025-11-27T14:...	Saya demam sejak semalam dan badan rasa sangat lemah.	- Disertai sesak nafas, sakit dada, atau kekeliruan - Keadaan terus memburuk walaupun sudah berehat	<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

	ID	Updated at	# Input str patient_name	# Input str phone_number	# Input str preferred_date	# Input str preferred_time	# Input str reason	# Input str current_state
+ New Row								
	06928593-20...	2025-11-27T13:...	Yim Zi Hao	+601198716532	2025-11-29	morning	My joint pain wont go away	Booked
	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**

