

Medicine Intake tracking System

Overview:

This is a simple Streamlit-based web application for recording, and managing user medicine intake. Created as a prototype for demonstration purpose. This web app reminds users to take medication at set intervals, and records the medication intake. Stores the intake history, and can be shared to the user's doctor and carer as CSV.

Why do we need it:

Forgetting to take medicine reduces the treatment effectiveness, worsens existing conditions, treatment failure, and increased healthcare costs. According to WHO, over 1.5 million deaths occur worldwide because of missed medication related emergencies. These are preventable deaths, and would take overheads off emergency wards, and hospital staff.

Limitations and Future Improvements:

- Reminders work while the web app is open only. Need to be changed to remind users at all times irrespective of usage.
- Currently data is stored locally on the local device, and would benefit if stored in the cloud in case of issues with the devices.
- Currently it supports single users only. Future modifications are possible to include family members, so that everyone can track and support others.
- Integration with pharmacy or doctor's records through Ayushman Bharat's digital records, or NHS GP records(UK) to track medicine and quantity. And to inform users of medicine refills, supply shortages, or alternate medicine etc.
- Remote monitoring of medicine intake for better results.

Features:

- Prompts to let user record medicine intake
- Tips for users to help to remember medicine intake.
- Reminders setup as per user requirements to help users with abilities.
- Medicine Intake History for easy tracking and analysis of intake data.
- History shared as CSV file to be analysed by doctors for remote monitoring.
- Emergency contact details of doctor, hospital and local emergency number.
- Medical emergency window describing specific conditions that could be fatal, and information explaining what to do in those situations.
- Quick contact form if unable to talk, or in non critical emergencies, to contact hospital.
- Quick stats tab displaying missed and medication data.

Medicine Intake tracking System

Test Case:

Name: Dave

Condition: Diabetic

Doctor's name: Dr. Satish

Emergency Numbers: 108, +919876543210

Medication:

Metformin: First-Line medication for type 2 diabetes

Sulfonylureas: Stimulates Insulin production

DPP-4 Inhibitors: Help regulate blood sugar levels

SGLT2 Inhibitors: Help kidneys remove sugar through urine

Thiazolidinediones: Improve insulin sensitivity

Schedule:

Morning - 8 AM - Metformin, Sulfonylureas

Afternoon - 1PM - DPP-4 Inhibitors, SGLT2 Inhibitors

Night - 7:30PM - Metformin, Thiazolidinediones

Product and Features:

Medicine Intake:

Morning



Time to take: Metformin, Sulfonylureas

Did you take your medication?

☒ Yes, I took it!

☐ No, I missed it

Tips for Remembering Your Medication



Medicine Reminder:

Medicine Intake tracking System



Medicine Intake Tracker

Hello Dave! Welcome to Your Health Journey

Next reminder: Afternoon at 01:00 PM - DPP-4 Inhibitors, SGLT2 Inhibitors

"You deserve to feel your best. Take your medicine on time! ❤️"

Menu bar:



Menu

Navigate to:

- ☒ Home
- ☐ History
- ☐ Reminders
- ☐ Emergency Contact
- ☐ About

User Info and quick stats:

User Information

Name: Dave

GP: Dr. Satish

Condition: Diabetic

Quick Stats

☒ Taken

10

☒ Missed


0

Medicine Intake History:

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Medicine intake history showing historical medicine intake and an option to download and share data as CSV for further data analysis.

Date & Time	Time of Day	Medicines	Status	Notes
2026-02-09 11:22:40	Morning	Metformin, Sulfonylureas	Taken	Medication taken on time
2026-02-09 11:22:41	Morning	Metformin, Sulfonylureas	Taken	Medication taken on time
2026-02-09 11:22:42	Morning	Metformin, Sulfonylureas	Taken	Medication taken on time
2026-02-09 11:22:42	Morning	Metformin, Sulfonylureas	Taken	Medication taken on time
2026-02-09 11:22:43	Morning	Metformin, Sulfonylureas	Taken	Medication taken on time
2026-02-09 11:22:44	Morning	Metformin, Sulfonylureas	Taken	Medication taken on time
2026-02-09 11:22:44	Morning	Metformin, Sulfonylureas	Taken	Medication taken on time
2026-02-09 11:22:45	Morning	Metformin, Sulfonylureas	Taken	Medication taken on time
2026-02-09 11:22:45	Morning	Metformin, Sulfonylureas	Taken	Medication taken on time
2026-02-09 11:22:46	Morning	Metformin, Sulfonylureas	Taken	Medication taken on time

 Download History as CSV

 Clear All History

Daily Reminders setup:

Daily reminder setup as per doctor's suggestion and medicine. These reminders can be changed as per user's requirements. These include additional options for better management of reminders and tips for better medicine management.

Set Reminder Times

Morning

Medicines: Metformin, Sulfonylureas

Morning Reminder

08:00



Set for 08:00 AM

Afternoon

Medicines: DPP-4 Inhibitors, SGLT2 Inhibitors

Afternoon Reminder

13:00

Set for 01:00 PM

Night

Medicines: Metformin, Thiazolidinediones

Night Reminder

19:30

Set for 07:30 PM

Medicine Intake tracking System



Additional Options

Snooze Duration (minutes)

10



Reminder Window (minutes before/after)



5

Save Reminder Settings

Reset to Default Times

Tips for Effective Reminders

Test Reminder Alert

Emergency contact information:

- Include emergency contact info of hospital, and local services.
- Quick contact form for users with emergency, abilities to contact the hospital with alert bar based on the emergency level of the user.



Emergency Numbers

Hospital Emergency: [+91 123-456-7890](tel:+911234567890)

Dr. Satish (GP): [+91 987-654-3210](tel:+919876543210)

Pharmacy 24/7: [+91 112-233-4455](tel:+911122334455)

Ambulance: [108](tel:108)



When to Seek Emergency Help

Diabetic Emergency Signs:

- Blood sugar very high (>300 mg/dL)
- Blood sugar very low (<70 mg/dL)
- Confusion or unconsciousness
- Severe nausea or vomiting
- Difficulty breathing

What to Do:

1. Call emergency number immediately
2. Check blood sugar if possible
3. Stay calm and don't panic
4. Have someone stay with you
5. Keep medication list handy

Medicine Intake tracking System

Quick Contact Form

Describe your concern:

Urgency Level:

Low

Low

Emergency

Send Alert

About info:

This shows the information about the web app, and the features it holds, and disclaimer. Some of them are shown below.



About This Application

The Medicine Intake Tracker is designed to help you stay on top of your medication schedule and maintain better health management.



Your Current Medication Schedule:

Morning: Metformin, Sulfonylureas

Afternoon: DPP-4 Inhibitors, SGLT2 Inhibitors

Night: Metformin, Thiazolidinediones



Medical Disclaimer:

This app is a tracking tool and does not replace professional medical advice. Always consult with Dr. Satish or your healthcare provider for medical decisions.

Medicine Intake tracking System

Tech Stack:

Python 3.14.0

Streamlit 1.54.0

Users would need a Streamlit server to run the web app with the following command.

```
bash  
streamlit run ninth_version.py
```

Acknowledgements:

Please note we have used Jupyter Notebook to create basic python code. And used the python code to generate Streamlit code using [Claude.ai](#).

REFERENCES:

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