Documentation

MedsTracker

1. Introduction

Project Overview:

* MedsTracker is a comprehensive medication management system built to help users stay on top of their medication needs with ease and precision. Whether you're managing your own prescriptions, assisting a family member, or simply keeping track of the medicine cabinet, MedsTracker simplifies the process with intuitive tools and intelligent automation. The system provides an integrated approach to medication tracking by allowing users to maintain an inventory of their medicines, schedule dosages, and receive timely alerts. It accommodates both pre-listed medicines with verified FDA information and custom entries, ensuring flexibility and reliability.

Key objectives:

* To provide an easy-to-use platform for tracking and managing medications.
* To support safe and informed medicine usage by integrating official FDA data. To offer scheduling and reminder functionalities that improve medication adherence.
* To help users avoid common issues such as expired medications or running out of doses.

Who is it for?

* MedsTracker is designed for a variety of users, including but not limited to: Individuals managing complex or daily medication regimens.
* Caregivers who need to keep track of medications for family members.
* Users who simply want an organized view of their medicine inventory.
* Anyone seeking better compliance with prescription guidelines and schedules.

1. Usage
2. User Registration and Login

Before accessing most features, you need to create an account and log in.

Register a New Account

Make a POST request to /auth/register with a username and password:

POST /auth/register

Content-Type: application/json

{

"username": "your\_username",

"password": "your\_password"

}

Login

Once registered, log in to receive your authentication token:

POST /auth/login

Content-Type: application/json

{

"username": "your\_username",

"password": "your\_password"

}

The response will include a JWT token. Use this token in the Authorization header for all authenticated requests:

Authorization: Bearer your\_jwt\_token

1. Managing Your Medicine Collection

MedsTracker allows you to either add existing, FDA-backed medications from the system or create your own custom medicine entries.

Add a New Medicine to Your Collection:

POST /medicines

Authorization: Bearer your\_token

Content-Type: application/json

{

"name": "Ibuprofen",

"category": "Painkiller",

"unit": "PILL",

"quantity": 30,

"expiryDate": "2025-01-01",

"startDate": "2024-06-01",

"endDate": "2025-01-01",

"dosagePerDay": 2,

"prescription": false,

"schedules": [

{

"timesOfDay": ["08:00", "20:00"],

"repeatDays": ["MONDAY", "TUESDAY", "WEDNESDAY"],

"dosageAmount": 1

}

]

}

You can:

* Add pre-listed medicines from a curated database containing FDA information.
* Create custom medicines with personalized scheduling, units, and dosages.
* Track inventory levels and expiration dates per medicine.
* Use different units like pills, ml, or custom types.

View All Medicines in Your Collection:

GET /medicines/user

Authorization: Bearer your\_token

Update an Existing Medicine:

PUT /medicines/:id

Authorization: Bearer your\_token

Content-Type: application/json

{

"quantity": 20,

"schedules": [

{

"timesOfDay": ["10:00"],

"repeatDays": ["FRIDAY"],

"dosageAmount": 1

}

]

}

1. Medication Scheduling & Adherence

MedsTracker provides a flexible scheduling system designed to reflect real-world medication habits.

Schedule Doses - Each medicine can have one or more schedules defining:

* Times of day to take the medication.
* Repeat days (e.g., every Monday and Friday).
* Dosage amount per intake.
* This allows for highly customized and realistic dosing regimens.

Record Medicine Intake:

When a user takes their medicine, it can be logged using the schedule ID:

POST /medicines/intake/:scheduleId

Authorization: Bearer your\_token

Content-Type: application/json

{

"takenAt": "2025-06-12T08:00:00Z"

}

1. Alerts and Notifications

MedsTracker actively monitors your medicine data and alerts you to important events.

Low Stock Alerts

GET /scheduler/low-stock

Authorization: Bearer your\_token

Expiring Medication Warnings

GET /scheduler/expiring

Authorization: Bearer your\_token

Upcoming Dose Reminders

While the backend supports alert logic, reminders would typically be integrated into a mobile app or frontend client using notification services. Backend endpoints provide the necessary data for those integrations.

1. Example Workflow Here’s a typical example of how a user might interact with MedsTracker:

* Create an Account Register and log in to get your token.
* Add Medicines
* Add Ibuprofen from the pre-set database, then add a custom vitamin supplement manually.
* Set Up a Schedule Set Ibuprofen to be taken every weekday at 8am and 8pm. Track Intake Log doses every time the medicine is taken.
* Monitor Inventory Check for low stock weekly and top up as needed.
* Get Expiry Warnings Remove or replace any expiring medications based on

automatic alerts.

1. Tech Stack

Frontend

* + - React Native
    - Expo
    - TypeScript

Backend

* Express
* Prisma

Database

* PostgreSQL

Containerization and Deployment

* Docker
* K8S