

1. Overview

This Clinic Management System (CMS) is a full-stack application for managing patients, doctors, appointments, schedules, prescriptions, medical records, billing, and staff. It consists of:

- A PostgreSQL database named clinic_db
- A Node.js/Express backend serving RESTful APIs on port 5000
- A React frontend running on port 3000

2. Prerequisites

Before you begin, make sure you have installed: • Node.js (v14+ with npm) → <https://nodejs.org/> • PostgreSQL (v12+) → <https://www.postgresql.org/> - Command-line tools: psql, pg_dump, createdb, dropdb • Git (optional, for cloning)

3. Database Setup

Ensure PostgreSQL service is running on your machine.

Create the database (run once):

createdb -U postgres -h localhost clinic_db (If it already exists, skip this step.)

Load the SQL dump into clinic_db:

psql -U postgres -h localhost -d clinic_db -f clinic_db.sql (You should see messages like CREATE TABLE and INSERT 0 N without errors)

DATABASE Troubleshooting

`createdb` or `psql` not recognized

- Add your PostgreSQL `bin/` folder to your PATH, or
- Open the “PostgreSQL Command Prompt” that ships with your install.

Authentication / password failures

- Double-check you’re using the right Postgres password.
- Try logging in interactively:

```
psql -U postgres -h localhost
```

```
# then inside psql:
```

```
CREATE DATABASE clinic_db;
```

```
\q
```

- **“permission denied” or access errors**
 - Make sure your OS user has rights, or use a superuser account.

- On Windows you may need to launch your terminal as Administrator.
- `psql: error reading file "clinic_db.sql"`
 - Confirm you ran the command from the folder where `clinic_db.sql` lives.
 - Check that the file isn't locked or in use by another process.
- **Encoding/corruption warnings on Windows**
 - If you see "code page" warnings, run `chcp 1252` before invoking `psql`
 - Or add `--encoding=UTF8` to your import command:

```
psql -U postgres -h localhost -d clinic_db \
--encoding=UTF8 -f clinic_db.sql
```

With that in place, no extra magic is needed—just that one `psql -f clinic_db.sql` command (after the optional `createdb`). Everything else in your `.env`, backend and frontend will pick up the freshly loaded `clinic_db` automatically.

4. Backend Setup

Setup Environment Variable : Once in the backend folder

- Create a new file `“.env“`
- Add these lines
`DATABASE_URL=postgres://postgres:admin@localhost:5432/clinic_db`
`PORT=5000`
- This file is required as the backend will connect to the database using this credentials and DB name

We have a file named `.env` in the project **root/backend(folder)** with this content:
`DATABASE_URL=postgres://postgres:admin@localhost:5432/clinic_db` `PORT=5000`
(Use your actual Postgres password in place of admin.)

Install dependencies and start the server (NEW TERMINAL):

First Run : `cd backend`

Then : `npm install`

Then: `npm run dev`

The API is now running at `http://localhost:5000` Test with:
`curl http://localhost:5000/api/patients`

5.Frontend Setup

Install dependencies and start React: (NEW TERMINAL)

First Run: `cd frontend`

Then: npm install

Then: npm start

The app will open in your browser at <http://localhost:3000> It proxies API calls to the backend at port 5000.

6.Default Login

Use these credentials to log in at the application's landing page:

Staff ID

Full Name Or Staff Id : **Alice Smith** OR **Bob Jones** OR **100** OR **101** OR **Gaurav G**

Password: **clinic123**

You may enter either the numeric Staff ID or the full name (case-insensitive), with the password clinic123.

7. Usage

- After logging in, use the sidebar to navigate through Patients, Doctors, Appointments, Schedules, Prescriptions, Medical Records, Billing, and Staff.
- Add, edit, or delete records as needed.
- You cannot delete the staff member you are currently logged in as.

8. Troubleshooting

- If ports 3000 or 5000 are in use, stop the conflicting service or change ports.
- If database connection fails, verify your .env DATABASE_URL is correct.
- Ensure clinic_db is loaded before starting the backend.

9. Support

For questions or issues, please reach out to any of our team member

Thank you for using Clinic CMS!