Medicine Alternative Finder

(A Web Platform for Drug Substitution Search)

Supervised by:

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Team Members

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Introduction

Medicine Alternative Finder is a web-based platform designed to help patients quickly and reliably identify safe drug alternatives when their prescribed medicine is unavailable. The project provides a responsive and intuitive React interface that enables users to search for any medication and instantly view available substitutes, including generic and branded equivalents. Search results are displayed in neatly organized cards or tables, showing key details such as the generic name and manufacturer.

Additionally, the platform aims to make the process of finding the right medication easier and more accessible for users with varying levels of digital literacy. By presenting information clearly and ensuring a smooth user experience, the system encourages patients to make informed decisions without relying on unreliable sources. This makes the platform not only a technical tool but also an important step toward improving public health awareness and accessibility.

Problem Statement

In many countries, patients frequently encounter drug shortages when attempting to obtain prescribed medications from pharmacies. These shortages lead to delays in treatment, increased stress, and wasted time visiting multiple pharmacies. Additionally, most patients do not have access to a reliable source that provides accurate information about drug substitutes or generic equivalents.

As a result, they may depend on guesswork, outdated information, or recommendations from non-specialists, which can lead to selecting alternatives that may not have the same effectiveness or safety. This situation highlights the need for a modern and trustworthy digital system that provides clear, accurate, and up-to-date drug substitution data. Addressing this issue not only improves treatment continuity but also reduces the burden on both patients and pharmacists.

Project Objectives

- ## Main Objectives

- Provide a reliable and user-friendly web platform for searching drug alternatives.
- Assist patients in finding equivalent medications when the original one is unavailable.
- Reduce the time and effort spent searching for medicines across multiple pharmacies.
- Improve patient awareness and support safer medication choices.

- ## Detailed Objectives

- Build a responsive and intuitive interface using React for smooth user interaction.
- Implement a fast and efficient search bar that allows users to enter a medicine name and retrieve accurate alternatives.
- Display search results in structured cards or tables containing alternative medicine names, generic names, and manufacturer details.
- Ensure the accuracy of drug information through validated medical data sources.

- Create a scalable system that can be expanded to include dosage forms, strengths, pricing, and availability.
- Prepare the platform for future integration with pharmacy systems to offer real-time stock updates and location-based availability.

Scope of the Project

The Medicine Alternative Finder platform provides a simple and reliable way for users to find alternative medicines when their prescribed drugs are unavailable. The project includes:

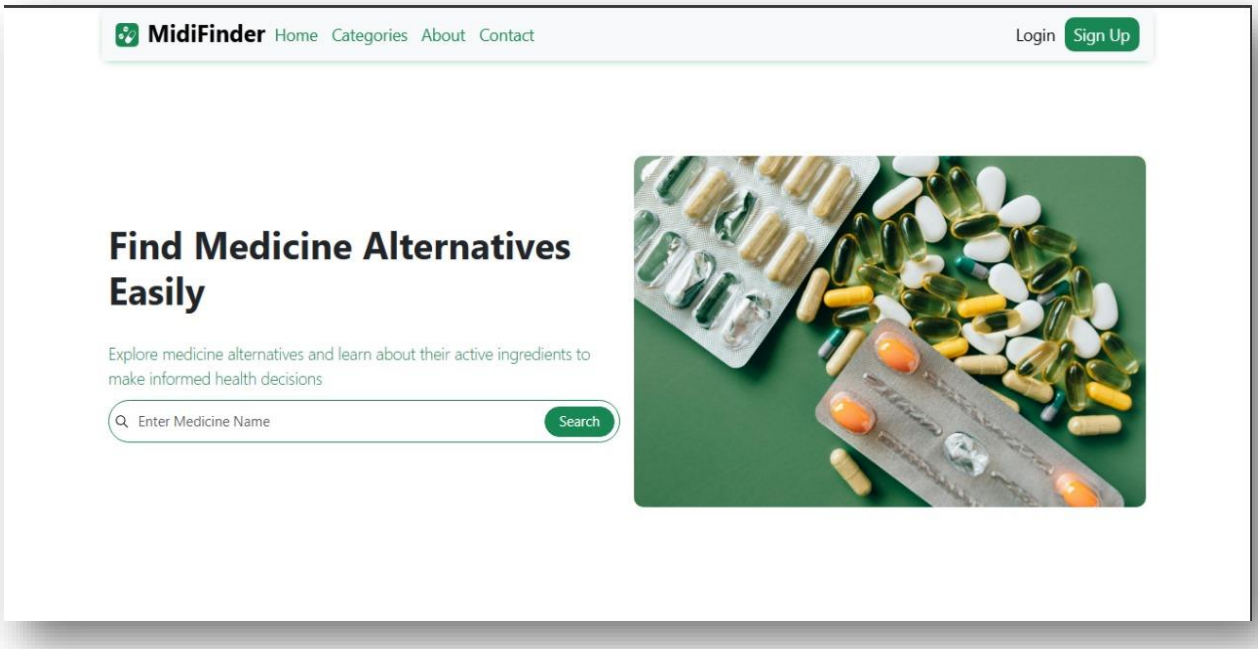
- **Search Functionality:** Users can search for medicines and view alternatives, including generic equivalents and manufacturers.
- **Responsive Web Interface:** Built with React.js and Bootstrap for seamless use on desktops, tablets, and mobile devices

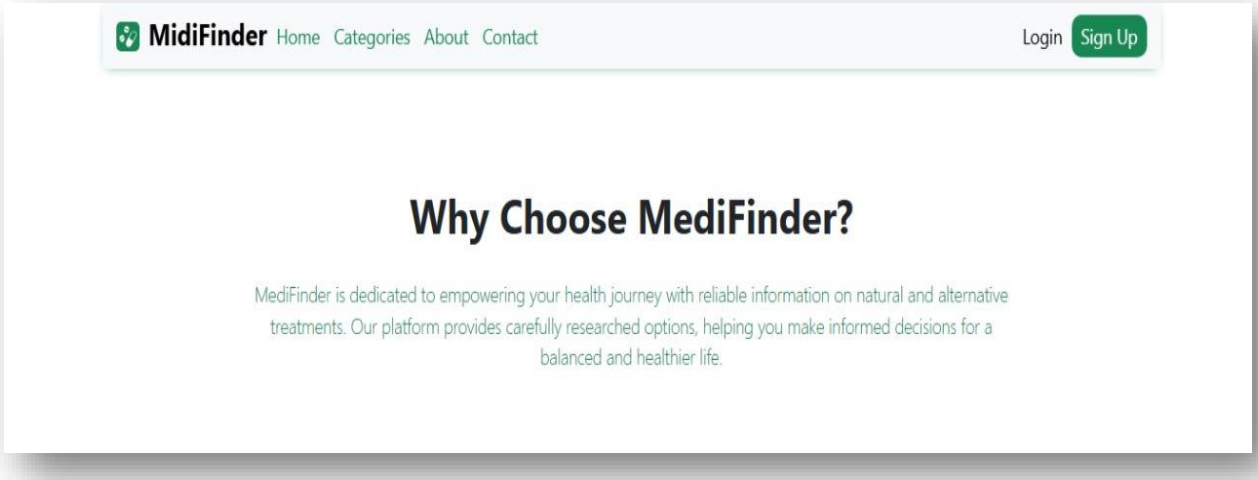
Out of Scope:

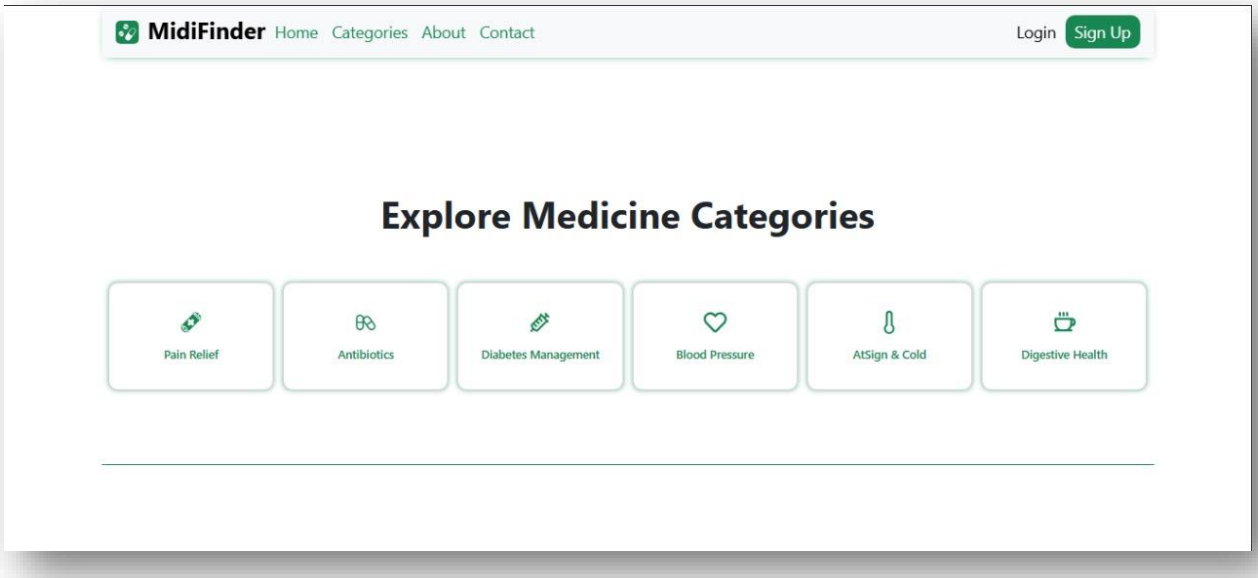
- Real-time integration with pharmacy inventory databases (planned for future work).
- Mobile app development (planned for future work).
- AI-based recommendation system (planned for future work).
- **Backend integration is not used in the current implementation**; all data is handled locally using JSON files

System Design

- **UI/UX Design:**



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Diabetes Management
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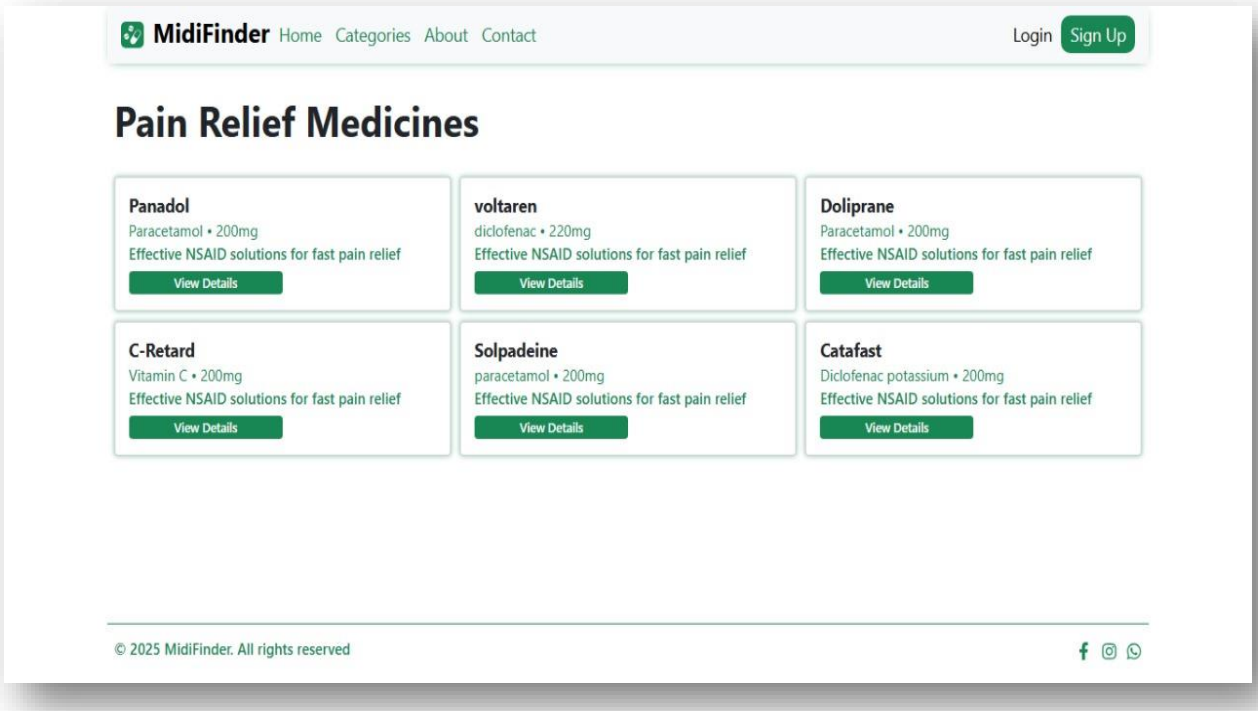
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voltaren
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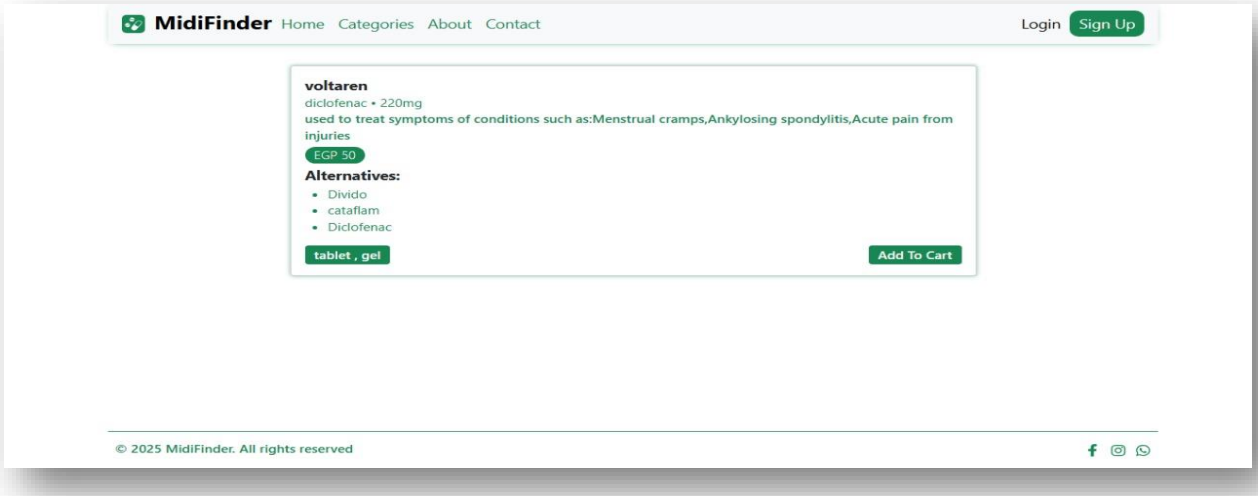
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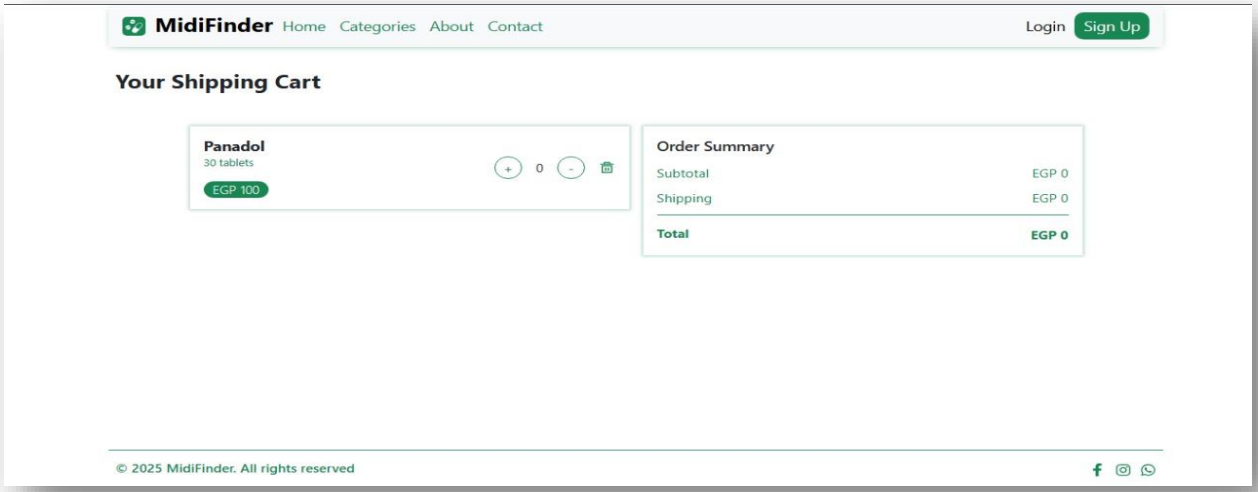
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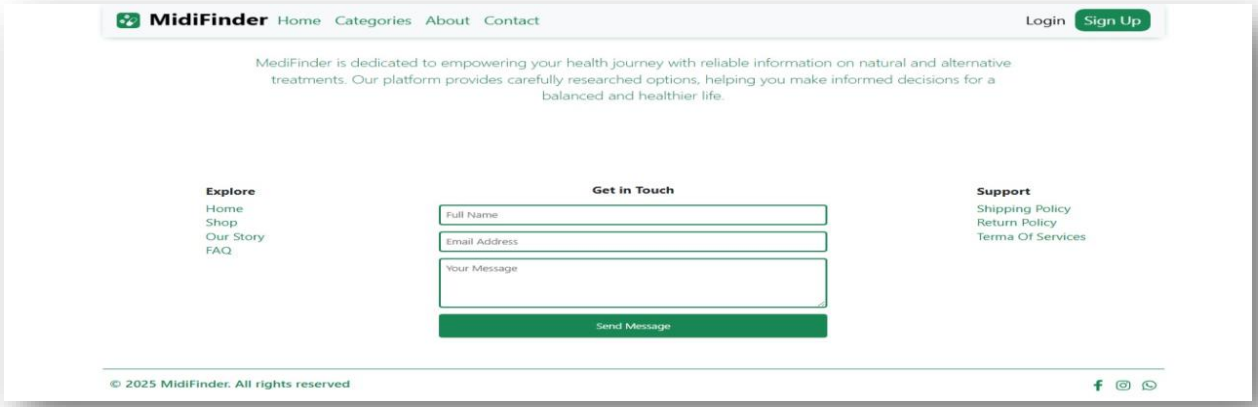
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Technologies Used

- ## Frontend

HTML5 – For structuring the web pages and content.

CSS3 – For designing and styling the user interface.

JavaScript – To add interactivity and dynamic behavior to the website.

Bootstrap – For creating a modern, responsive layout with pre-built UI components, grids, and styling utilities to speed up design and ensure consistent appearance across devices

React.js – For building a responsive and component-based frontend.

- ## Development Tools

Visual Studio Code

Git & GitHub – For version control and project management.

- ## Design & UI Tools

Figma– For creating the website layout

System Features

1. Home Page

The homepage provides an overview of the website and quick access to the main sections such as services, FAQs, categories, and contact information. It introduces users to the purpose of the platform and guides them to start searching for medicine alternatives.

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2. User Registration and Login

The system allows new users to create an account, while registered users can securely log in to access the platform's main functionalities. This ensures personalized features and a more structured user experience.

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3. Categories

A dedicated **Category** is included to help users explore different types of medicines and healthcare products. It organizes the content into clear categories, making it easier for users to find what they are looking for without needing to search manually.

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4. About Us

The **About Us** provides detailed information about the purpose of the platform, the vision behind the project, and how it aims to help users find reliable medicine alternatives. It builds credibility and enhances user trust.

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5. Search Functionality

Users can search for any medicine using a simple and intuitive search bar. The system then displays alternative drugs, generic names, and manufacturers in a clean, organized layout.

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6. Results Display (Cards/Tables)

Search results are presented in responsive cards or tables to ensure the information is easy to read and understand. Each item includes essential details to help users make informed decisions.

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7. Contact Us

This page allows users to communicate with the website team by submitting messages, inquiries, or feedback. It enhances user interaction and improves support.

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8. Responsive Design

The website is fully responsive, ensuring smooth navigation and proper layout across different devices such as desktops, tablets, and smartphones. The interface adapts automatically to different screen sizes for optimal user experience.

Future Work

- **Implement advanced animations and micro-interactions** to improve user engagement and make the interface more dynamic and visually appealing.
- **Replace the current JSON-based data handling with a full backend system**, using Node.js, Express, or another backend framework. This will allow dynamic data.
- **Develop an API layer** to handle search queries, filter results, and deliver accurate drug substitution data in real-time.
- **Build an admin panel** where authorized users can update drug data, add new medicines, and manage system content.
- **Develop a mobile app version** to increase accessibility and provide a more convenient experience for patients.
- **Integrate AI-based recommendation models** to suggest the safest and most effective substitutes based on medical guidelines and user inputs.

Conclusion

The *Medicine Alternative Finder* platform provides a practical and efficient digital solution to one of the most common challenges faced by patients—drug shortages. By offering a responsive and intuitive React-based interface, the system allows users to quickly search for medications and view reliable alternative options, including generic equivalents and manufacturer information. The platform enhances treatment continuity, reduces patient stress, and supports informed decision-making by delivering clear and accessible data. Overall, the project demonstrates how technology can improve healthcare accessibility and streamline the process of finding safe medication substitutes.