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MedKart - Medicine Price Comparator

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ABSTRACT :

With the increase in healthcare costs and online pharmacies, it is becoming increasingly difficult to get the best prices on medication without wasting a significant amount of time going through various websites. Our project, Medicine Price Comparison App with AI, aims to simplify the process, make it quicker, and more economical.

This application assists consumers in comparing the prices of medicines across different online stores in one location. It uses web scraping methods to collect real-time price information, discount offers, and product availability across different websites. Rather than moving from website to website, users can see where they can access their needed medicine at the lowest price instantly.

What is smarter about our app is the use of AI, which not only guarantees precise results but also offers personalized recommendations based on the user's previous searches or requirements. Whether a person is searching for a generic painkiller or a specific drug, the app identifies the best choice clearly and assists them in making well-informed decisions.

This solution is particularly beneficial for individuals residing in high-density urban regions, where time is of the essence and convenience takes precedence. By preventing users from wasting their time manually comparing prices, our application saves them time, effort, and money—while making healthcare more accessible and economical.

Introduction:

E-commerce has transformed into one of the most viable and quickly expanding sectors of the contemporary period. Due to the widespread use of smartphones and internet connectivity, consumers can now research, compare, and buy goods from home without the confines of time and location. Based on eMarketer, retail e-commerce sales globally have increased exponentially and are forecasted to increase steadily over the next few years.

In this era of the Internet, online shopping websites provide huge convenience, but they introduce a new challenge: information overload. With thousands of online sites selling seemingly equivalent merchandise, consumers are unable to find the best price for the very thing they require. This is particularly important in industries such as healthcare, where even tiny price fluctuations for prescription medication can greatly affect an individual's monthly budget.

In order to overcome this problem, our project—Medicine Price Comparison website with AI—strives to build a one-stop platform for comparing medicine prices across different online pharmacies instantly. Our intention is to enable the user to make wise, budget-oriented choices without browsing through different websites individually. The application retrieves live information through web scraping from multiple e-commerce platforms and makes use of a web crawler in identifying and referencing associated products. It also incorporates AI to improve the search process by providing personalized recommendations, enhancing accuracy, and delivering a more user-focused experience.

The system finally saves users time, effort, and money, enabling online purchase of medicines to become more accessible, reliable, and efficient. Through a healthcare setting, our project fills a genuine need in real life, enabling consumers to gain transparent prices and improved options for their medical buying.

Objectives :

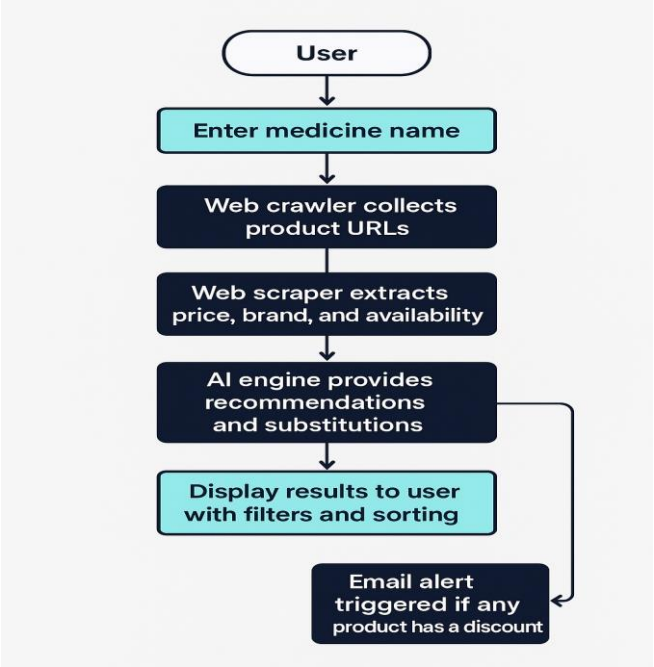
The main goal of the proposed system is to create a smart and secure Medicine Price Comparison App that enables users to compare prices of medicines on various e-commerce and pharmacy websites through web scraping and crawling technologies. The methodology starts with a web crawler that crawls different e-commerce and pharmacy portals to gather a large number of relevant URLs. These URLs are processed by a web scraper, which parses structured HTML information like product names, brands, prices, availability, and discounts.

To guarantee real-time price correctness and deal exposure, the system will be able to automatically refresh its database with the current price details from time to time. A major objective is to improve user privacy and security with AES (Advanced Encryption Standard) encryption for user information such as login credentials and search history. An admin dashboard is included to handle product listings, monitor user activity, and monitor discount alerts. In case any product is on offer at a discounted price, an automatic email alert system will notify users immediately.

Along with fundamental comparison capabilities, the app will incorporate AI-based recommendation systems to recommend substitute brands, generics, or alternatives based on user choice, medical category, or price. It will also have search history tracking, allowing for personalized user experiences and easy re-access to past searches. In addition, the app seeks to have an easy-to-use UI for seamless navigation, filtering capabilities for sorting results by price, brand, or rating, and multi-language support to appeal to a broad base of users.

Finally, this project will provide a safe, effective, and accessible platform for customers to buy drugs at the lowest possible prices, saving precious time, effort, and money—particularly useful in a healthcare setting where affordability and speed are paramount.

System Architecture :



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