IT 314 software engineering

64. E Commerce Price Comparison

Lab - 2

Group: 28

Description

The eCommerce price comparator is a web scraping project that aims to gather and analyze data from various online retail websites to provide consumers with the most up-to-date and accurate information on product prices. The project will use web scraping techniques to extract data such as product name, brand, model number, and price from several popular eCommerce websites. The data will then be stored in a database, where it can be easily accessed and analyzed.

The eCommerce price comparator will have a user-friendly interface that allows consumers to search for a specific product and compare prices from different online retailers. The results will be presented in a tabular format, making it easy for users to see the lowest and highest prices for the product they are interested in. The project will also include features such as price history tracking and price alerts, so that users can stay informed about price changes for their favorite products.

The eCommerce price comparator will be a valuable resource for consumers who want to save money when shopping online. By providing up-to-date and accurate information on product prices, the project will help users make informed purchasing decisions and avoid overpaying for the items they want to buy. Additionally, the project will provide valuable insights into consumer behavior and market trends, which can be useful for online retailers and manufacturers.

Overall, the eCommerce price comparator is a comprehensive web scraping project that will bring together data from multiple sources to provide consumers with a one-stop-shop for comparing prices and making informed purchasing decisions.

Need

The eCommerce price comparator serves a critical need in today's online shopping landscape, where consumers are overwhelmed by the vast number of retail websites and the multitude of options available for any given product. With so many options, it can be challenging for consumers to determine the best price for a product, and they often end up paying more than they need to.

The eCommerce price comparator addresses this problem by collecting data from multiple online retail websites and presenting it in a simple, easy-to-use format. By comparing prices from multiple sources, the project helps consumers find the best deal for a particular product, and avoid overpaying for items they want to purchase. This not only saves consumers money but also empowers them to make informed purchasing decisions.

The eCommerce price comparison tool will be a useful tool for customers who wish to cut costs when they shop online. The project will assist users in making knowledgeable shopping decisions and prevent them from overpaying for the goods they wish to purchase by offering current and accurate information on product costs. The research will also offer insightful data on market trends and consumer behavior that might be helpful to online manufacturers and retailers.

The eCommerce price comparator is an extensive web scraping project that will combine data from several sources to give customers a single location to compare costs and make knowledgeable buying decisions.

Features

The e-commerce price comparator web scraping project is designed to offer a range of features to help consumers make informed purchasing decisions and save money when shopping online. Some of the key features of this project include:

Price Comparison: The primary function of the project is to gather data from multiple online retail websites and present it in a tabular format, making it easy for users to compare prices for a specific product.

Product Information: The project will gather product information such as name, brand, model number, and specifications, making it easy for users to identify the exact product they are interested in.

User-Friendly Interface: The project will have a user-friendly interface that allows users to easily search for products and compare prices from multiple sources.

Price Alerts: The project will allow users to set up alerts for specific products, so they can be notified when the price changes.

Insights into Consumer Behavior: The project will provide valuable insights into consumer behavior and market trends, which can be useful for online retailers and manufacturers.

Data Security: The project will implement measures to ensure the security and privacy of user data, including encryption and secure storage.

Overall, the e-commerce price comparator web scraping project is designed to provide a comprehensive solution for consumers who want to save money when shopping online. By offering a range of features that make it easy to compare prices, track price changes, and access product information, the project empowers consumers to make informed purchasing decisions and avoid overpaying for items they want to buy.

Functional Requirements

The functional requirements for e-commerce price comparator is the requirements that manage the core operations and functionalities such as:

User Login and Authentication: In order to use the price comparison functionality, users must be able to register for an account and log in. With different credentials for admin and users.

Product Search: The system needs to support keyword, category, and brand searches for products.

Product tagging: In order to make search more convenient, a proper tagging of information related to the product is added.

Product Comparison: The system must enable users to contrast the costs of comparable goods available from various e-commerce sites.

Product Specifications: The system must offer comprehensive details about the products, including descriptions, features, and user opinions.

Product ratings: The rating is the best way to get the overall rating of any product to compare the price as well as quality.

Price Alerts: Users must be able to set price alerts for particular products in the system and receive information when prices change.

Product Availability: The system must show which e-commerce websites have the products in stock and thus notify the user when it is in stock if it was not before.

Product Recommendations: Based on the users' search histories and preferences, the system must suggest products to them.

Non-Functional Requirements

The quality attributes of any system which makes the overall user experience and sets the expectations includes:

Usability: The system ought to be simple for all users to use and comprehend.

Performance: To offer a seamless user experience, the system must deliver quick and dependable performance.

Scalability: System scalability is necessary to meet growing traffic and data storage demands.

Security: The system must make sure that user data and transactions are private and secure.

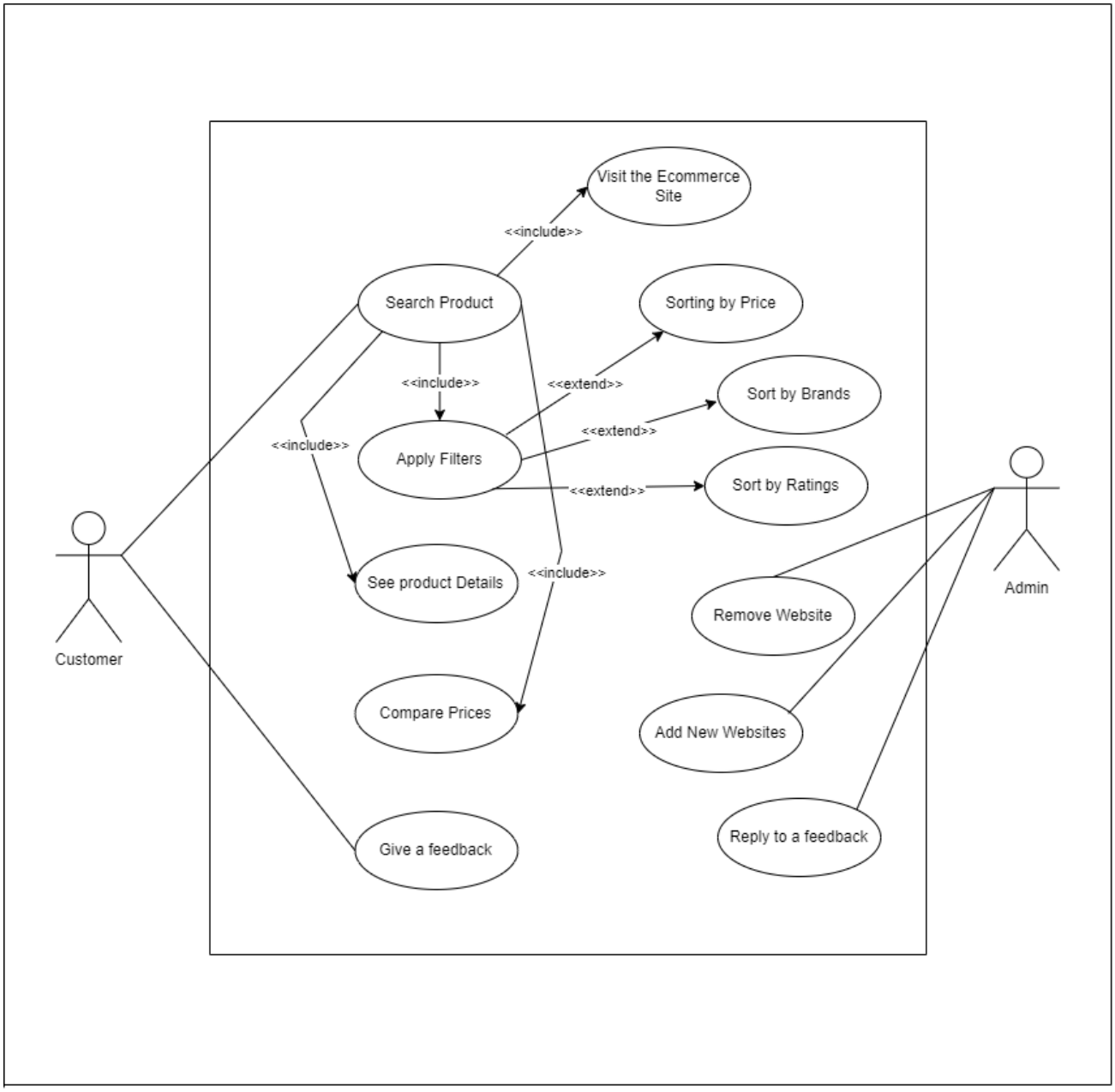
Availability: To ensure that users may access the system at any time, it must be accessible around-the-clock.

Compatibility: The system needs to work with a variety of browsers and hardware.

Responsiveness: The system must be responsive in order to provide a smooth user experience across a variety of devices and screen sizes.

Localization: To serve a global audience, the system must handle multiple languages, time zones and currencies.

Use Case Diagram



Process Model

We will be using an Incremental model for E-commerce price comparisons.

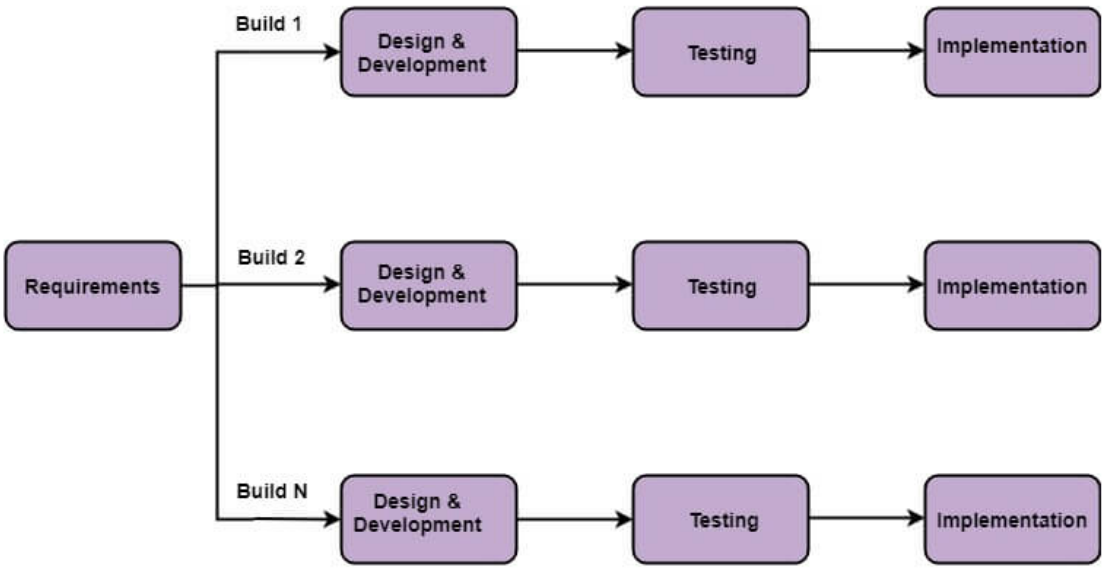


Fig: Incremental Model

Why?
There are various advantages to using an incremental model for e-commerce price comparisons:

incremental approach: Software development using the incremental model divides requirements into numerous independent system development cycle modules. Each module in this model undergoes the phases of requirements, design, implementation, and testing. The module's functionality is increased with each new release. Up till the full system is achieved, the process is continued.

Faster time to market: The incremental model enables the rapid release of a minimum viable product (MVP), which enables the development team to gather early feedback and make necessary improvements. The e-commerce pricing comparison system's time to market may be reduced as a result.

Better user involvement: Users can begin using the system and offering feedback when a working product is delivered early. This promotes better user engagement and a more user-centered development process.

Risk reduction: The incremental model lowers risk by enabling a more phased development process. If issues arise during development, they may be dealt with and fixed quickly, lowering the possibility of expensive delays or failed projects.

Improved quality: A higher-quality output is produced as a result of the incremental model's ability to test and improve the system.