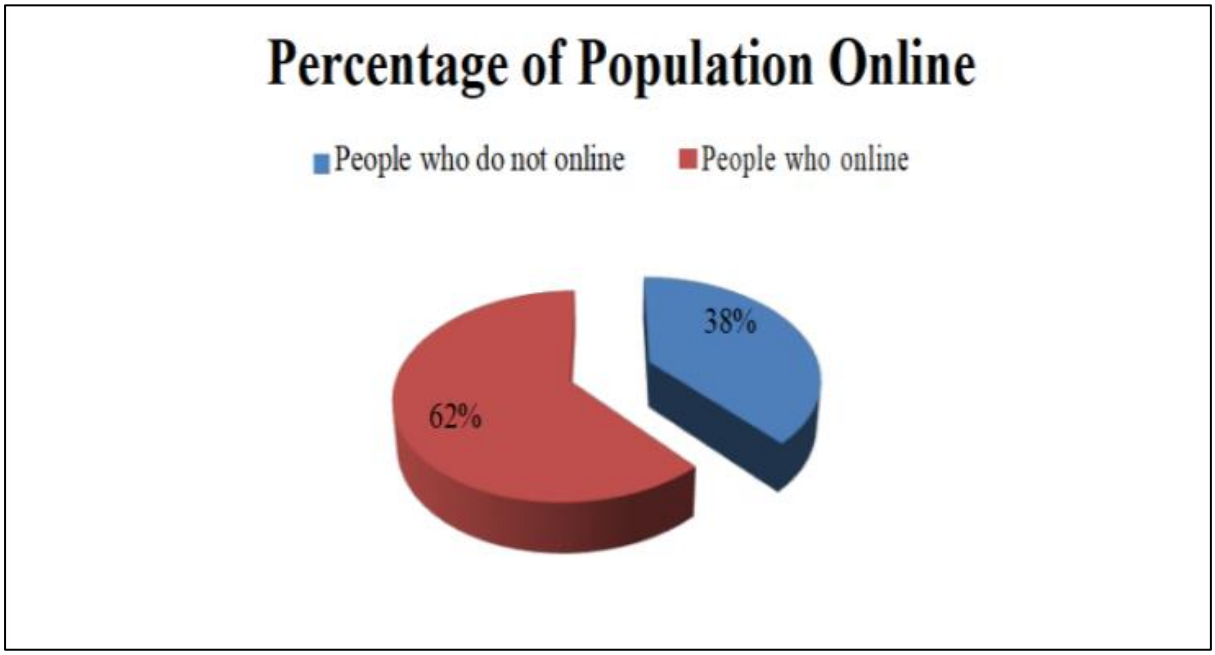
Group No: 28

Project Name: E-commerce price comparisons

Software Requirements Specification (SRS)

1. Introduction:

The Price Comparison Website intends to provide a web-based platform that lets customers compare the costs of different goods and services from multiple websites. This website will compile data from many sources and present it in an approachable way so that customers can quickly and easily compare pricing and different product characteristics.



1.1 Description

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.

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.

1.2 Purpose:

E-commerce price comparison is to develop and implement efficient algorithms and systems that can retrieve and analyze pricing data from different E-commerce websites. This data can then be used to provide consumers with accurate and up-to-date price comparisons for various products. E-commerce price comparisons is to help consumers make informed purchasing decisions by providing them with accurate and up-to-date pricing information.

1.3 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.

1.4 Intended Audience:

The intended audience for e-commerce price comparisons can vary, but typically includes consumers who are interested in buying products online and want to compare prices across different e-commerce websites to find the best deals.

anyone who is interested in making informed purchasing decisions and finding the best deals online can benefit from e-commerce price comparisons.

1.5 Product Scope:

The scope in the present times is restricted to the e-commerce websites where we search for an item and find the best deal.
The scope of products that can be compared includes a wide range of products sold online, such as:

- Electronics, including smartphones, laptops, and cameras.
- Home and garden products, such as furniture and home décor.
- Fashion and beauty products, such as clothing and cosmetics.
- Health and wellness products, such as supplements and fitness equipment.
- Automotive products, including car parts and accessories.

2.1. Product Function:

2.1.1 Product Search:

The product search function in E-commerce price comparisons is a crucial component of the overall user experience. It allows user to search for product using keywords or phrases that accurately describe what they are looking for. The search function is able to handle spelling variations as well.

2.1.2 Filter by one Store

To filter by one store, user must enter the correct store name in the search bar of an e-commerce price comparison website. Once user have filtered by one store, user can then compare prices and availability to informed purchase decision.

2.1.3 Sort by Prices

Sorting products by price is a common feature that allows shoppers to easily find products within their budget. Typically, this involves sorting products in ascending or descending order based on their listed price.

2.1.4 Comparing between two stores

This product Function is Compare prices between two e-commerce stores is to help user make informed purchasing decisions. By comparing prices between two stores, user can ensure that they are getting the best value for their money.

2.1.5 Direction to store

The purpose of providing directions to an e-commerce store is to help consumers easily locate and access the store they are interested in purchasing from. Additionally, providing directions to an e-commerce store can help consumers to ensure that they are accessing the correct website and not accidentally accessing a fraudulent or scam website.

2.1.6 Search History

The search history function plays a critical role in enhancing the user's shopping experience by providing them with relevant and personalized information, and improving the E-commerce website's ability to meet the needs and preferences of its users.

2.2 Constraints

2.2.1 Technology Constraint
2.2.2 Security Constraint

2.3 Assumption:

Accurate product data: E-commerce price comparisons assume that the product data used for comparison is accurate and up-to-date.

Users have access to all information: E-commerce price comparisons assume that users have access to all information needed to make an informed decision, such as Product descriptions, reviews, etc.

Price is the only deciding factor: E-commerce price comparisons assume that price is the only deciding factor for User.

2.4 Dependencies

The system depends on the availability and reliability of the internet connection to access the database and display information to users.

The system depends on the proper functioning of the software used to access it, such as the user's device and web browser.

The system depends on the accurate and timely input of Product information by the admin to ensure that the information displayed to users is up-to-date and accurate.

2. Requirements

3.1 Function 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 sign up for an account and log in.

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

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 Availability: The system must show which e-commerce websites may not have the product information or pricing data for a particular product or product may not be sold by any of the retailers listed on the website.

Product wishlist: The system wishlist allows users to save products they are interested in for future reference on an ecommerce price comparison website.

Search History: The system has to track and store the user's past searches on an ecommerce price comparison website.

Delete Search HIstory : System has provided this feature if users search history gets too many stuff so users can delete it.

Apply Filters: The system enables users to refine their product search results based on specific criteria.

Visit Ecommerce Website : The system has provided a feature that if users want to buy a particular product then users can visit that ecommerce site by the link which is provided on the screen.

Product Recommendations: Based on the users' search histories and preferences, the system must suggest products to them (not implemented in our system).

Product tagging: In order to make search more convenient, a proper tagging of information related to the product is added (not implemented in our system).

Price Alerts: Users must be able to set price alerts for particular products in the system and receive information when prices change (not implemented in our system).

Product ratings: The rating is the best way to get the overall rating of any product to compare the price as well as quality. (not applicable in our system)

3.2 Non-Functional Requirements

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

● **Justification:** The system is for a vast variety of user base and so the design should be such that it is easily understandable and easy to use for everyone irrespective of their technological literacy. Thus, making it usable for everyone.

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

● **Justification:** As mentioned, the system is for everyone and by so, it can be used in any device which has internet connectivity and so the performance should be optimized for every device.

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

● **Justification:** As the website grows, the number of users interacting with the system increases and so the servers should have capabilities to handle the traffic so that it gets close to 24 hours of uptime. This can be achieved by using the optimized code with less bugs and less cluttered server architecture.

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

● **Justification:** The payments made through the website must be secure so that there are no security issues from the system side with proper APIs and security framework provided by the bank or any other payment services. Also the data of the user logging in and signing up in the database should be secure as they contain many important data related to the user, and to protect against any data breaches. (not implement)

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

● **Justification:** As discussed earlier, the system should be available 24x7 for the user as the location of the user accessing the system is not fixed. The user can access the system as per his/her convenience.

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

● **Justification:** Various users have different devices, architectures and different operating systems and so the system should be compatible with all the kinds of device possible. The coding language should be chosen in such a way that there should not be any kind of exclusivity among any group of users.

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

● **Justification:** It is not certain that users would access the system on a particular device and so the system should be responsive as much as possible so that many users can access and in as many ways as possible.

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

● **Justification:** To make users more accustomed to the system and to make them feel less alienated, adding localization would be a great tool. It reduced ambiguity and less confusion. It makes interaction for the user very easy and reduces the learning curve. (not implement)