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# A Review on E-commerce Price Evaluation System

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**Abstract:** *With the rapid growth in e-commerce nowadays, a large number of online shopping websites are available like Amazon, Flipkart, Croma, which provide service to the end user. But, due to large number of websites user spend plenty of time to find quality products at a cheap price. Price comparison systems are designed to compare quality products from a range of providers, which will help consumers in choosing the product that will scrimping. As the busy lifestyle of customers living in cities most the consumer prefers to buy their product through ecommerce websites as its saves their time. Besides, customer always prefer buying cheaper products therefore by using price comparison system, customer don't have to go out to survey the price offered in offline markets for the same product. They can check the price from ecommerce price comparison system and decide where they should buy the product needed. In the system the best deals will be clearly highlighted. The price comparison will contain a user-based system, which retrieves the costs of the same product across various different websites, providing the best choice to the user. Thus, it is a benefit for the customer to buy product at low price as compared to the market rate, and therefore they can't be cheated.*

**Keywords:** *Scrimping, aggregate price, scrapper, crawler, prevailing*

## I. INTRODUCTION

In the current era, ecommerce has become an enormous marketplace for the people to shop for products online. Increasing use of internet and other mediums has paved the way for users to shop for products almost from anywhere. This has increased online buyers evolving e-commerce business. These large numbers of e-commerce websites put users in confusion to go looking and choose to buy one product from multiple ecommerce websites. The proposed solution helps online users to grab best deal for their product from multiple ecommerce websites on single system. This may successively save users time, money, and efforts to search out the same product prices on different ecommerce websites. Proposed system uses web scraping technique to extract data from ecommerce web pages and web crawler to links for products. This system uses the following technologies:

### A. Web Crawler

The system deals with price comparison algorithm. The primary thing required during this system is to collect large amount of data of products from different e-commerce websites. It is impractical to manually collect the data from websites. Hence, the most effective way is to make a web crawler which will navigate to those e-commerce websites. The URL's fetched are then sent to scrapper for processing.

### B. Web Scrapper

Web scraping refers to the extraction of data from a HTML and XML pages. This information is collected then exported into a format that's more useful for the user. As this is web scrapping system data is scrapped from different e-commerce websites. In this system, for scrapping python libraries like requests and beautiful soup are used. Beautiful soup is a python library for pulling data out from websites. Using this library product information from various e-commerce site is scrapped in real time.

### C. Tkinter

Tkinter is a standard python interface to the GUI toolkit. Tkinter library is used to create the Graphical User Interface of this system. It provides quick and easy way to make GUI applications.

#### D. Python

Python is widely used high level interpreted programming language. It makes writing of code easy by making number of lines of code less.

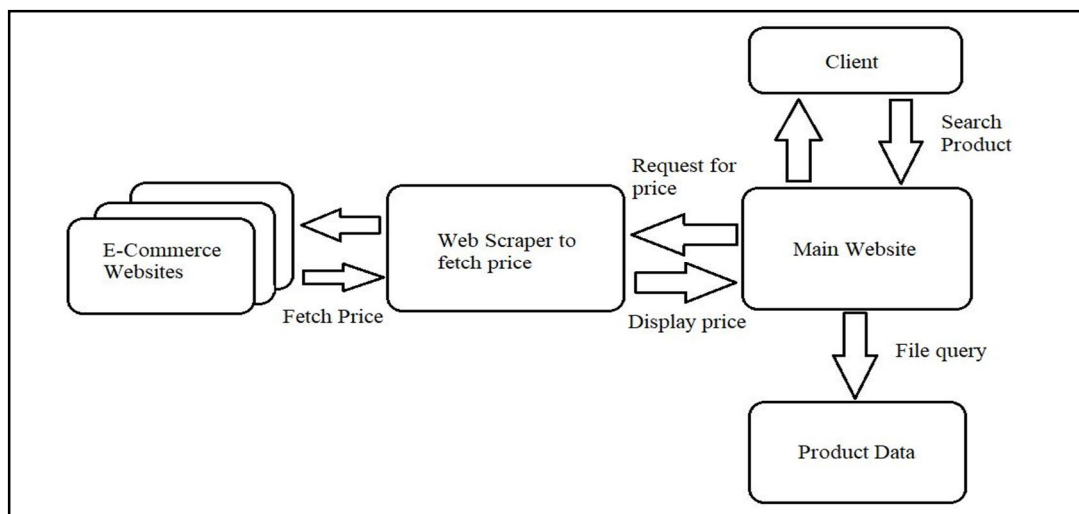


Figure 1:- Block Diagram of Price Comparison System

## II. LITERATURE REVIEW

In order to create this project more credible, previous research and article that associated with price comparison website has been gathered and examined. Hence, this chapter covers the literature review which is that the analytical, critical and objective review of written materials. There are three published research articles and journals that are being used as the main references for the literature review of this project.

Nowadays people usually conduct first research on the web regarding a specific product or service that they need which is extremely convenient as compared to what consumers need to do previously when there's no internet. Back then, consumers have to go through books, magazines, newspaper, encyclopaedia and other medium to find needed information meanwhile yellow pages, directories, advertisements and others are useful to locate business and their products. Everything has to be done manually and requires a lot of time, energy and resources to find information without the help of internet. Comparison sites are known as the second type of search technologies as it helps users find products and services according to users' have chosen. It helps consumers to easily compare between the alternatives available in the market and reduce consumer search costs at the same time.<sup>[2]</sup> Online switching behaviour (or eSwitching) is considered to be a possible outcome of this process. Similarly, since it has been suggested in the literature that digital ads may be an important source of consumer empowerment today (Hudders et al. 2019), it is considered therefore to play an influential role in shoppers' behavioural tendencies to use price comparison websites and to consequently eSwitch. Compared to the price comparison site from its first being established and act as online classifieds, nowadays comparison sites able to do a lot of things such as draw the products' cost, able to trawl sites and give the sites much greater control over the users with the help of current technology. It gathers and **aggregate price**, products and other relevant information from third-party sellers and presents it to the consumers with its own way. The results shows that there is increased on the advertising spend and competition and it gives adverse effect on the financial performance towards the price comparison sites. Meanwhile the number of consumers using price comparison sites for quotes has remains high and its average number of sites used are increasing over time.

## III. PROPOSED METHODOLOGY AND DISCUSSION

It is important for an internet comparison website to return results with the low prices as what the purchasers want but accurate results also important so customers can get what they really want. It also depends on how regular the database is being updated otherwise customers are confused once they compared it from other site.

Users Access the online and procure the info through different E- commerce websites. this fashion approach to look out data from websites is also a time-consuming task. To ease for searching information over the websites by giving search keywords requires software. The program software ensures the highest user to induce the information by accessing the websites that are laid come in the database.<sup>[1]</sup>

Every shopper looks for the only deals & discounts before buying any product. Nowadays before purchasing anything the buyers do some online research of the products on the online. one all told the most factors which cause purchasing of any product is cost or pricing. The buyers tend to test prices before purchasing any product. But since it is very difficult to travel to every & every website for price comparison, there needs to be a solution to automate this process.

The Price comparison website project proposed here gathers information on product prices from various websites & presents it to the users. The users can then favour to shop for from the foremost effective options available.<sup>[2]</sup> Even Ecommerce traders can use this price comparison website to test their competitors and form new strategies accordingly to attract new customers & stay before their competitors.

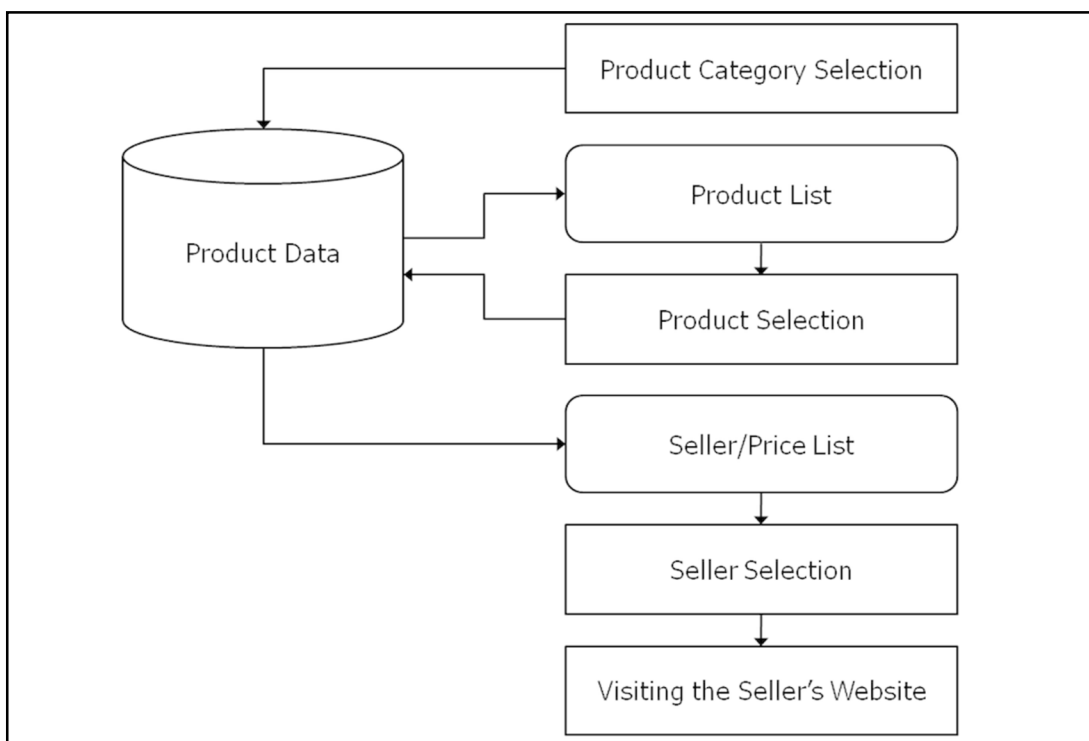


Figure 2. Decision-making process for Price Comparison System

This price comparison website for products will help to test the worth from various e-commerce websites. Price comparison site is extremely helpful for frequent internet buyers to check prices on different online stores in one place, this method will show you the merchandise prices from different retailers to point you where to buy for the merchandise at affordable price, Any two static websites classes are analysed to urge the pricing details, to induce the pricing details, the system visits the online site supported user’s search and downloads the html search page of that specific website.<sup>[3]</sup> Once prices from both the websites are retrieved, it's displayed on our website within the kind of price comparison

Proposed system uses web scrapping technique to extract data from ecommerce sites and web crawler to links for products. Additionally, this page contains the feature of price alert, which user can set, to induce notified by the online site whenever the acceptable price comes up.

The backend system consists of important technique web scrapping. Web scrapping is also a method that's accustomed extract information within the human readable format and display it on destination terminal.<sup>[4]</sup> Web scrapping essentially consists of two tasks: first is to load the specified website and second is to parse information of the page to locate intended information. during this technique.

Scrapping is finished using python because it provides rich set of libraries to house these tasks. “Requests” is utilized to load the URLs and “Beautiful soup” library is used to parse the net page. After scrapping the products information form.

#### IV. CONCLUSION

The system provides users with useful information that may help them making informed decision. With this price comparison website, it solves the issues of the working people to test on the value before buying products. This website will facilitate users to analyse prices that are present on different e-commerce shopping websites so they get to understand the most cost effective price of product with best deal. This may surely save buyers efforts and valuable time. Ultimately, this can gather strategies, best offers and deals from all leading online stores and can help buyers to buy online. The literature review shows the research that has been done previously by other researchers. it's important to induce more knowledge during this topic so as to develop a successful and well functional price comparison website. More research must be worn out order to induce the required results because different site uses its own formula to work out how, when and from where it gathers prices. Therefore, it's important to induce the proper thanks to retrieve the required data in line with what the user wants.

#### V. FUTURE RESEARCH

It is recommended to own more research on this project and determine what are often improved from the prevailing comparison site. one in every of the functions that would be included into PriceWar.com is by allowing users to line price trigger alert where by customer will have the flexibility to line a particular price for a selected item, and once there's seller offers the value match with the parameter set by the user, PriceWar.com will send a notification alert through email saying that the product's current price has triggered the alert.<sup>[5]</sup> This kind of alert is widely getting used by the sites that provide tools and guidance for securities market business. When the value of a specific stock has reached a specific value set by the user, it'll trigger the alert and notify the user. Therefore user doesn't must stay and watch the value movement all the time. Other recommendation for the worth comparison website is to be developed as mobile application for android or IOS phone

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