

Electronic Commerce Web Data Comparator Management (ECWDCM): E-Commerce Web Application

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Abstract: The Internet revolution has led to the continuous rise in E-Commerce all over the world. With more and more people adopting, and becoming savvy with online shopping portals, it has become absolutely necessary for businesses to have deepening customer relationships with its user base. Various studies and publications have shown that targeting and maintaining loyal customers remains a considerable challenge for online enterprises. This paper describes a comparator for E-Commerce web application, which is designed around the concept of Crawler, Yahoo pipes & web page mash-ups. Here we have proposed a system of conducting E-Commerce, keeping at the forefront, the customers' demand for good quality reliable products while maintaining a profitable and sustainable business model using Web based latent benefits. We believe this modeled approach has great potential and can be implemented for startups and other ambitious projects as well. It is a comparator technique to ease the use of the customer, saving his time and make tedious task easier all at a mouse click.

Keywords: E-Commerce, Yahoo pipes, Web Mash-ups.

I. INTRODUCTION

E-commerce is the process of doing business through computer networks. A person sitting in front of a computer can access all the facilities of the Internet to buy or sell different products. The main advantage of e-commerce over traditional commerce (brick and mortar) is the user can browse online shops, compare prices and order merchandise sitting at home on their PC. On the other hand, E-commerce contains a comprehensive set of processes and technologies for managing the webpages & extracting resources from various web pages with potential customers and business partners across marketing, sales, and service (regardless of communication channel). *Yahoo Mash-ups* is quickly becoming one of the top strategies that many successful companies use nowadays.

The term Electronic Commerce Web data comparator Management (ECWDCM) refers to the application of web data comparator in electronic commerce, i.e. when web data are published on the Internet also known as the Worldwide Web. Here we aim to design an application based on providing customers a pleasing experience, and a trustable online ecommerce portal in general & enabling them to ease of web data comparison. Unlike in traditional E-Commerce, Online portals have access to the minutest of the customers' details, often providing deep insights into the purchasing patterns, psychology, likes and dislikes, inclinations and interests, as well as affinity for quality. This project is mainly about offering a different type of e-commerce web application by integrating a customer-oriented comparator & refine search system to provide a trusted & reliable experience for the customers. The proposed framework includes a new feature, the Quality Bar. Using this feature, customers can view what level of quality of products they can reasonably expect and rely on. Another feature of the application is the Smart Review, which provides different types of feedback from various certified reviewers.

II. PROBLEM OF E-COMMERCE

- The second biggest complaint among survey respondents about shopping websites overall was not knowing what their final cost would be until checkout.^[1]
- On 6 percent of visits, readers complained about not knowing the full cost until checkout.^[1]

- On 7 percent of visits, readers complained about high shipping or delivery charges, a particular problem at shopping websites, where more than one in four readers complained.^[1]
- On At one shopping website site our search for "Converse" found 106 items with reviews, plus pull-down menus at the top of the page that let you narrow the selection by color, price, brand, and store availability. But, we found other online shopping deals and coupon websites that have no search function, and one where we had to resort to using Google to find a deal we had seen earlier in the day.
- At the other extreme, some online deal websites have no user reviews, or simply take reviews from other websites and weeds out the bad ones.

“MySmartPrice”^[11] is the existing system that works like our project. But performance of “MySmartPrice” is slow.

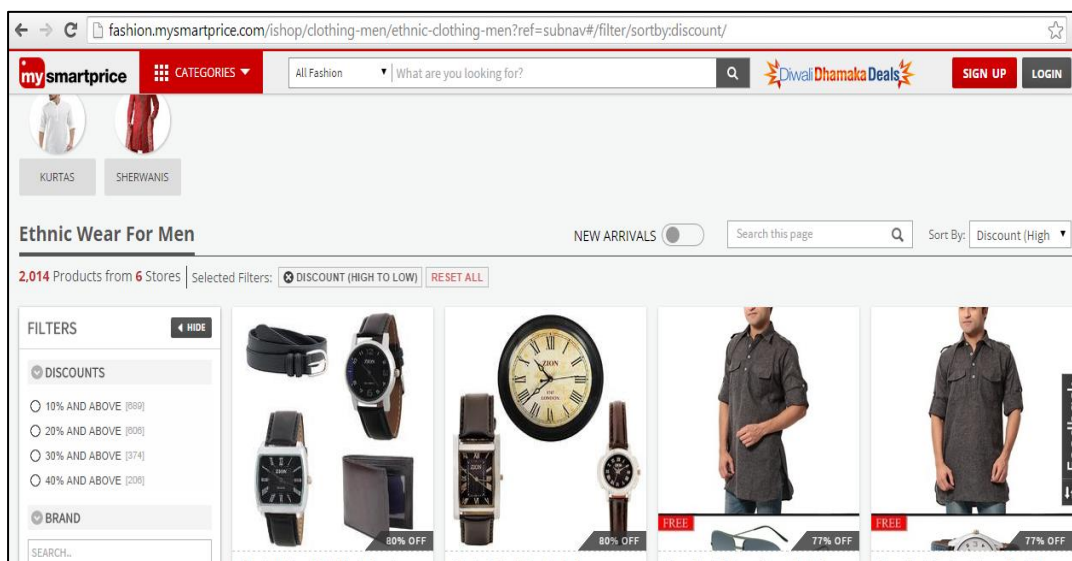


Fig.1 Inaccurate result of MySmartPrice.com^[11]

III. IMPACT OF RATINGS

According to a new survey conducted by Dimensional Research^[13], an overwhelming 90 percent of respondents who recalled reading online reviews claimed that positive online reviews influenced buying decisions, while 86 percent said buying decisions were influenced by negative online reviews.

The Primary function of product classifier is to categorize the product details received from the parser into various categories of products available.

Consider a product price at our website claiming that Sony Digital Camcorder at Rs 24,000. A conscious user would visit that website for example, Flipkart^[3] or Snapdeal^[4] and cross check the claim to get more confident on their judgment.

The reliability however does not come for free. Performing cross checking in our automated price monitoring service requires more elaborated text processing (example information extraction^[5]) and additional semantic analysis. Without them, it is virtually impossible to distinguish, for example the regular product price from the other numeric values in a message. We believe the development of the semantic web^[6] should help in this regard

Considering the reviews each product gets, the consumer would find this a new platform of trust. Well, the security bug user’s buying decisions, we crawl online shopping websites and fetch the user reviews about the products and display them on our site. Based on the number of associated with the review concept could be false review. An attacker could create a program to spam the reviews of any product. To generate true reviews for our consumers, we add the ratings to the reviews.

Each review would have 2 options: “helpful” and “not helpful”. Users who find the consumer review trust worthy, could go with the helpful option. However, the review with the most “not helpful” rating would be considered as spam. We could thus implement the concept of *True review*.

IV. NEED OF HYBRID FILTERS

For saving user time in searching the required product, we have various search filters. These search filters will narrow down the search result from 100 to 5 products. We maintain a database table for various categories which contain the brand list of those products. Out of the various search filter categories, there are 4 common things that are available for almost every product. We could use these 4 common things as our global search filter for our products. The global search filters which we use are Category, Brand, Price, Feature-based dynamic filters.

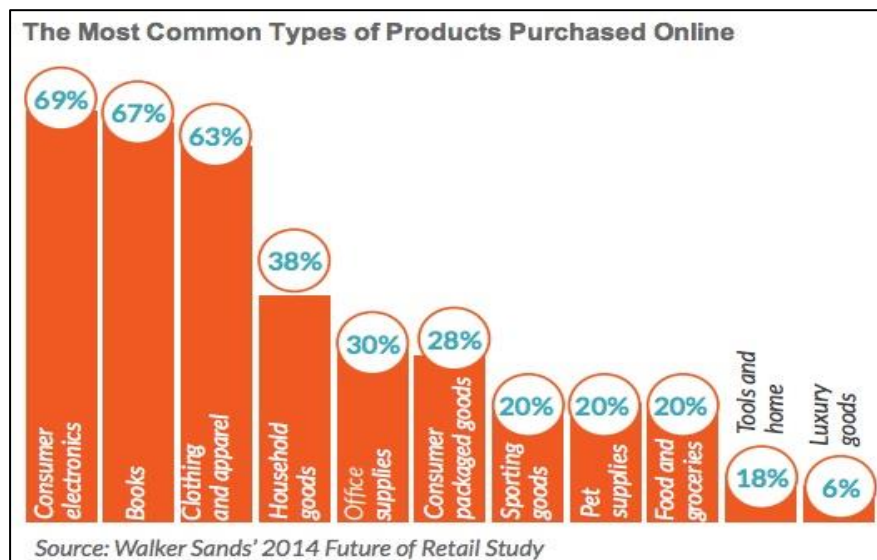


Fig. 2 Common products sold online ^[1]

Category Filter: The most common types of products bought online in the last year include electronics (69% percent of consumers surveyed purchased online in 2013), books (67%), clothing (63%), household goods (38%), and office supplies (30%).^[8]

Brand Filter: The next important thing the consumer would opt for in a product purchase is the brand..

Price Filter: 80% of consumers surveyed are more likely to purchase a product online when offered free shipping, and 66% when offered one-day shipping.

64% of consumers are more likely to purchase when offered free returns and exchanges.

30% would spend more than \$1,000 on a product online with free shipping and returns, compared with 10% who would do so without free shipping and returns.

Since shipping charges matters a lot to consumers, we offer search results of products filtered price-wise. This product price also includes shipping charges.

Classifier: The data being fetched by the crawler from the web page is then passed through a parser. The parser finds out the relevant information from the web page. We use product classifiers to categorize the data which is just parsed from the parser into various categories like Electronics, Clothing, and Home Appliances etc.

This feature includes a graphical bar that displays a quantitative measurement for the given product's quality, based on different factors, to accurately depict the estimated expected value for price, for the given item on sale. This quality bar rating will be calculated using various inputs like expert's ratings, user's ratings, expert reviews and user reviews, using a Performance metric(PM).

$$PM = 0.6(\text{User ratings}) + 0.4(\text{No of votes})$$

V. E-COMMERCE USING YAHOO PIPES

Yahoo Pipes is a web application from Yahoo^[12]. According to Wikipedia: "...it provides a graphical user interface for building applications that aggregate web feeds, webpages, and other services, creating Web-based apps from various sources, and publishing those apps.

The site works by letting users "pipe" information from different sources and then set up rules for how that content should be modified (e.g. filtering)."

There exist two innovations that make that process simple: Yahoo Pipes and RSS. Whether you seek employment or hot sales, these tools can get you the information you crave with very little effort.

It works like this: RSS feeds contain timely updates from your favorite websites. Yahoo Pipes can filter information from RSS feeds, restricting what reaches you. For example, if you need job notifications pertaining to specific fields, such as nursing, you can subscribe to all of Monster.com's job postings, via RSS, and create a Pipe that monitors for that particular word. You would then receive updates, in realtime, as new postings show up.

The Yahoo Pipes interface consists of a left pane, containing various modules and a primary window. To create a Pipe, simply drag a module from the left window onto the primary window on the right. In this tutorial, you will use the "Fetch Feed" module.

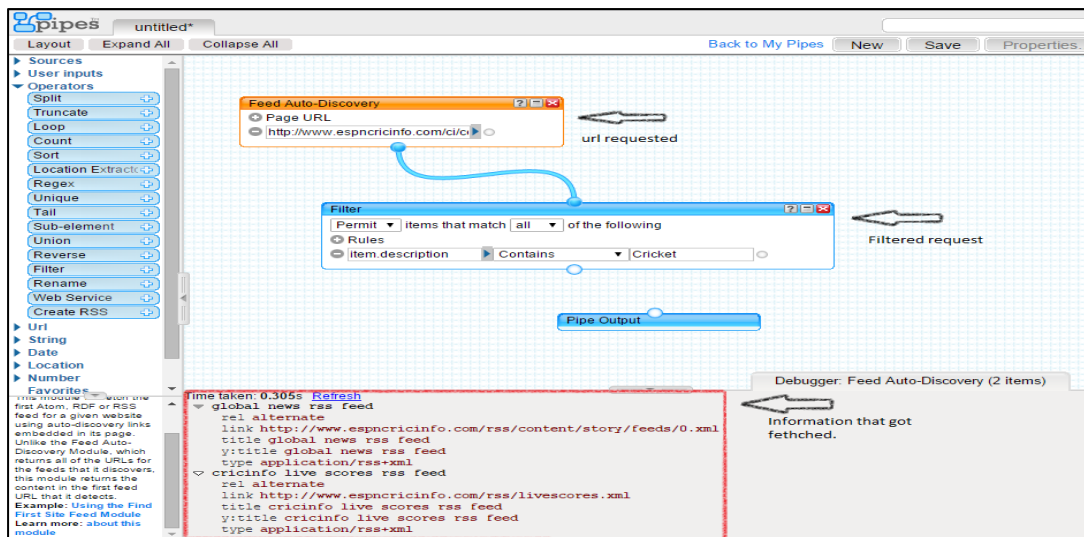


Fig. 3 Creating a yahoo pipe, step 1.

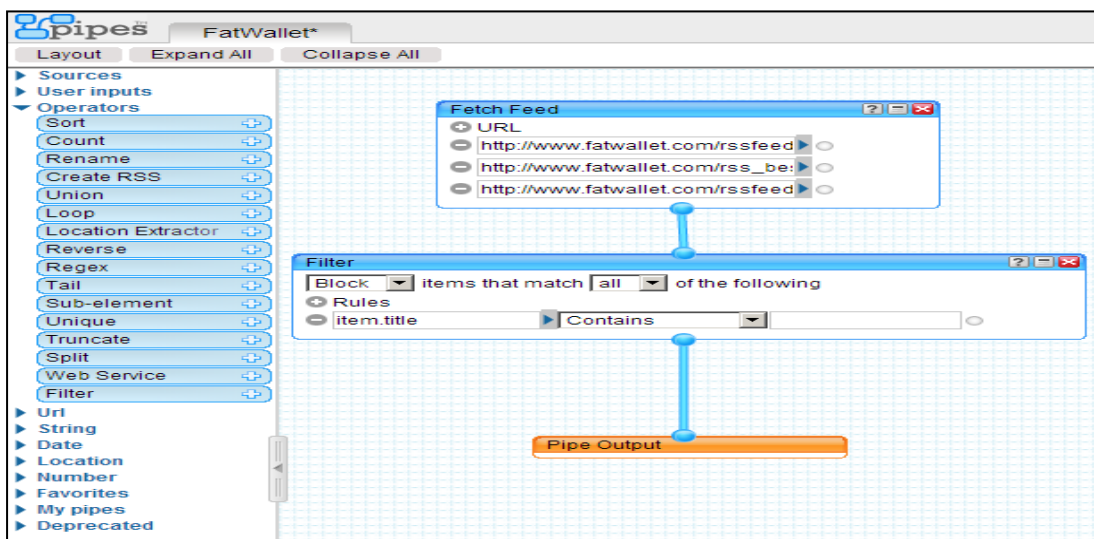


Fig. 4 Creating a yahoo pipe, step 2

The above image shows how you can fetch particular information from the *url* you wish from. Also you can apply various types of filters to it.

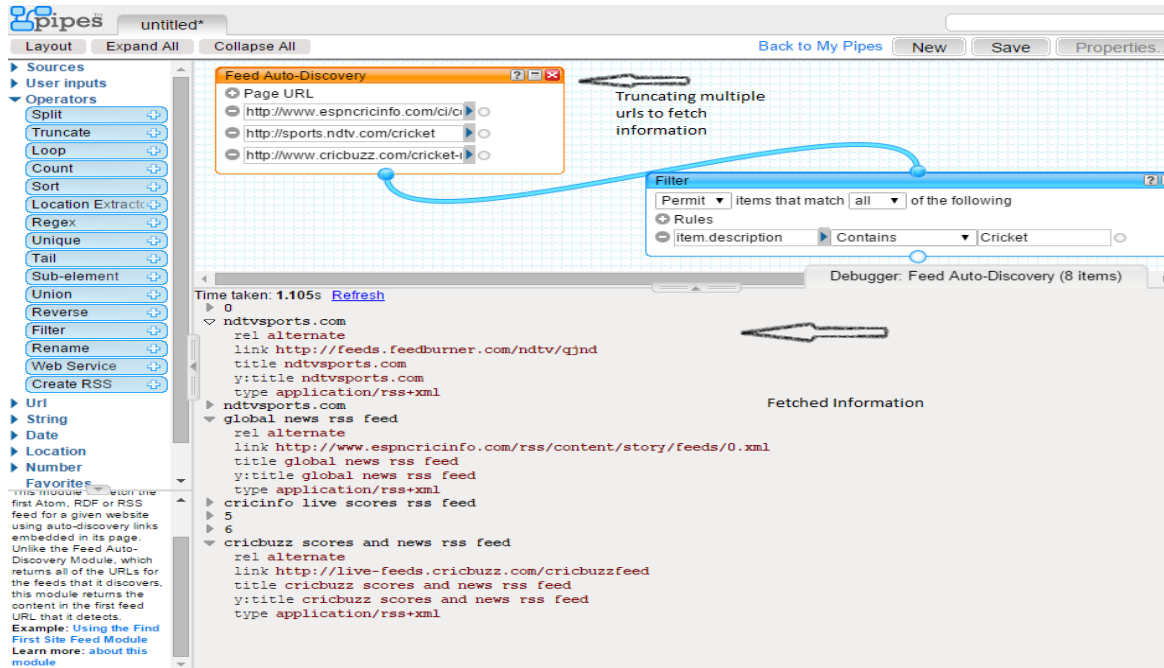


Fig. 5 Creating a yahoo pipe, step 3

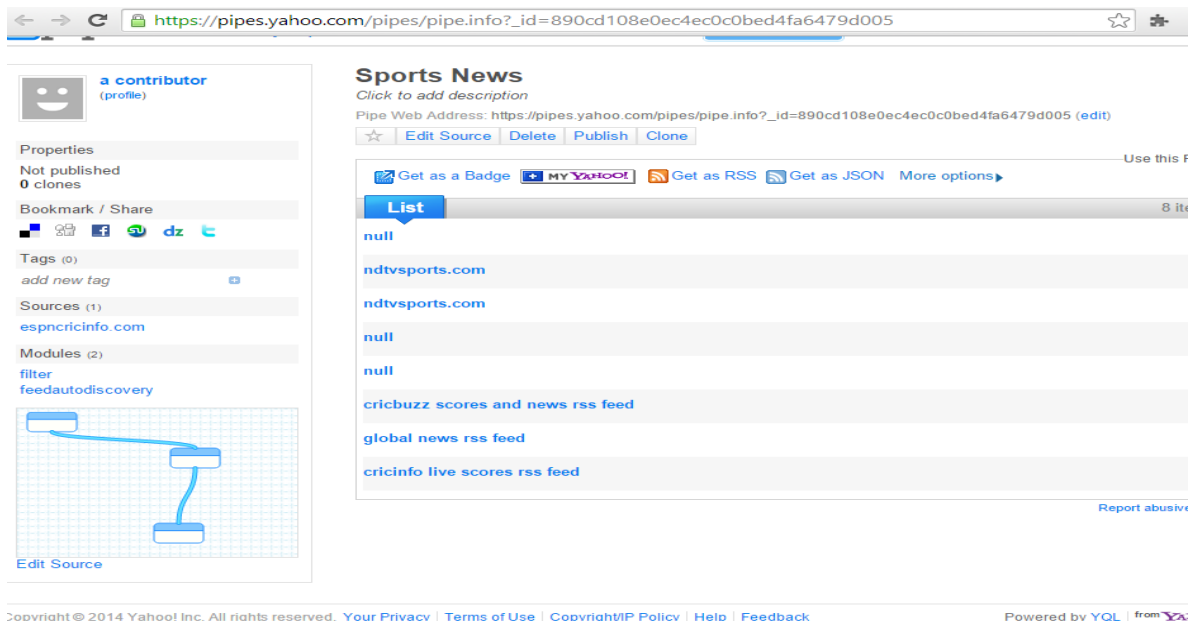


Fig. 6 Output of a yahoo pipe

VI. WEB MASHUP

A mashup is a nothing but a web application which borrows services from a 3rd party for a specific purpose. These services can be easily integrated with the project.

A mashup, in web development, is a web page, or web application, that uses content from more than one source to create a single new service displayed in a single graphical interface. For example, you could combine the addresses and photographs of your library branches with a Google map to create a map mashup.^[13] The term implies easy, fast

integration, frequently using open application programming interfaces (open API) and data sources to produce enriched results that were not necessarily the original reason for producing the raw source data.^[14]

Followings are benefits of mashups:

- Its provides immediate benefits at little cost.
- Reuse of using the APIs provided.
- Faster time to market.
- Cost efficient

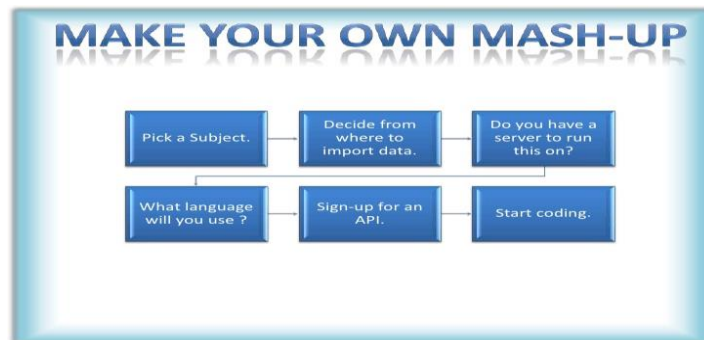


Fig .7 Steps in creating a web mashup

VII. PROPOSED SYSTEM

In the proposed system, the ECWDCM system in the application helps the site implicitly offer products according to the user's preferences, depending on their choice of price over quality or vice versa. Here, special importance is given to the users' preference of quality and costs. There is also a special Quality Bar feature that displays a quantitative measurement for the given product's quality, based on different factors, to accurately depict the estimated expected value for price, for the given item on sale. Quality Bar rating will be calculated using various inputs like expert's ratings, user's ratings, expert reviews and user reviews.

VIII. IMPLEMENTATION

The implementation of the service has a modular architecture. The modular design allows the component services to execute concurrently. In particular, all the component services are loosely-coupled around a shared database.

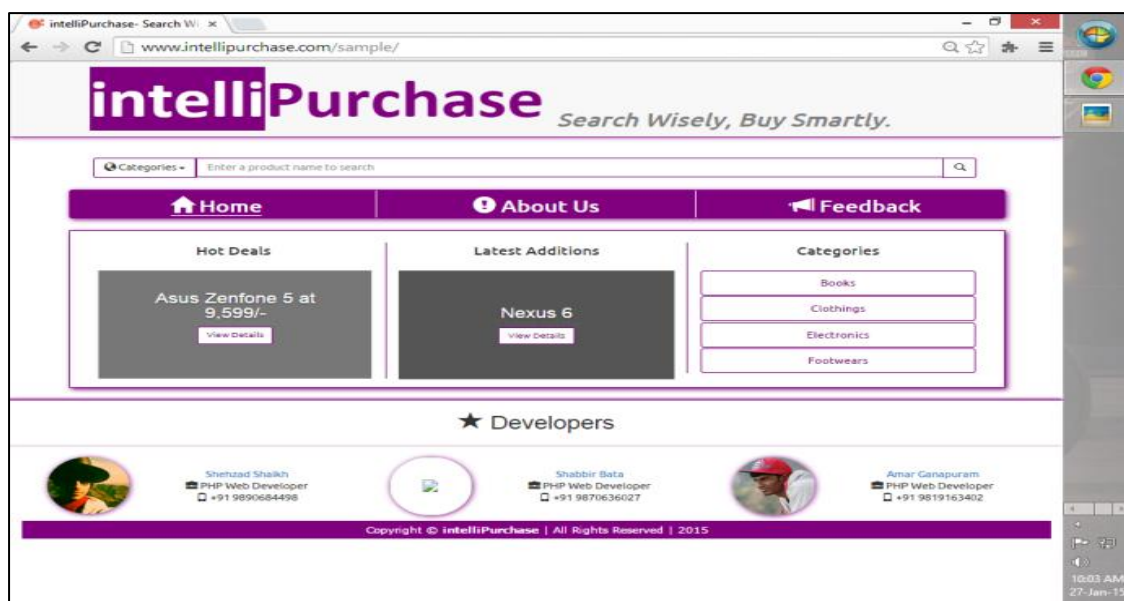


Fig 8.Homepage (Showcasing various products)

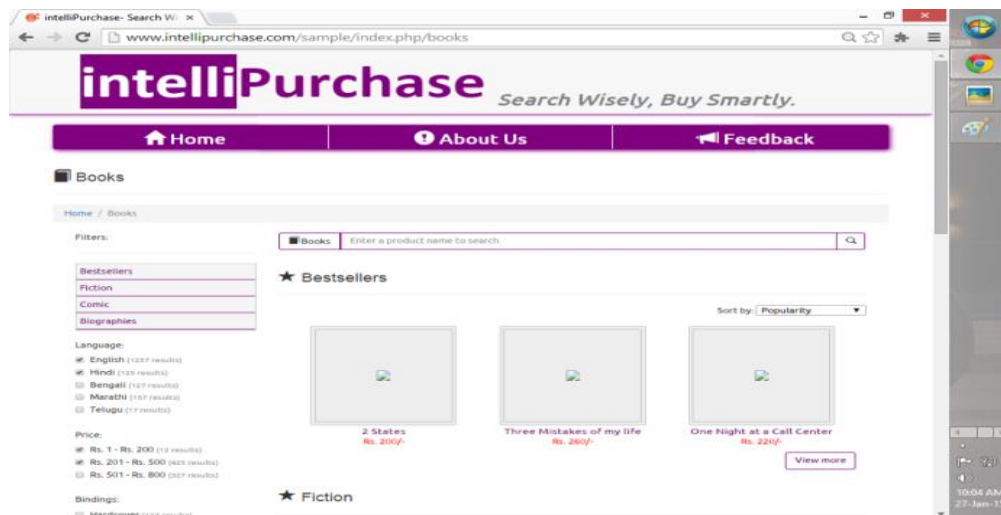
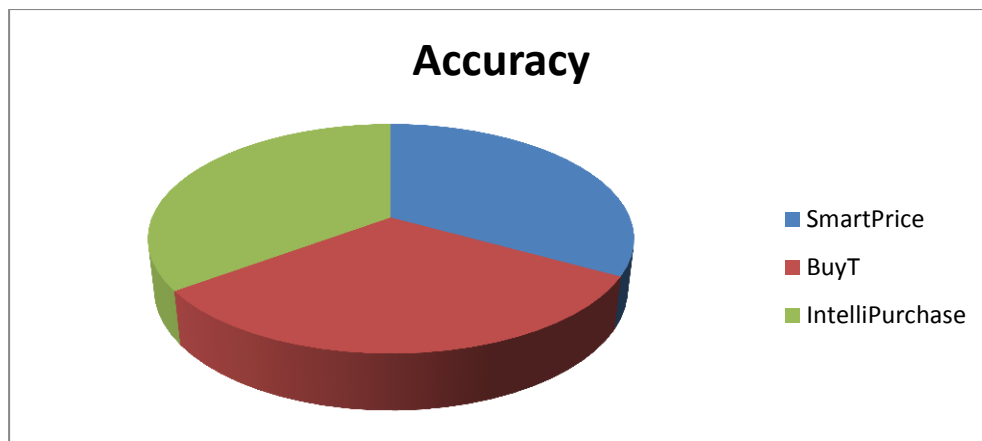


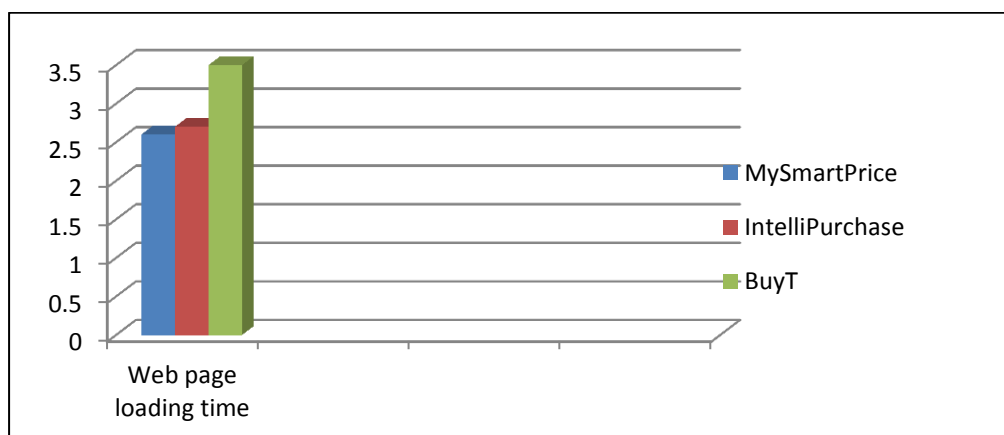
Fig 9. Books Section (Where various books from various websites are shown)

IX. RESULT ANALYSIS

A following comparison had been made as per the recent comparison. Depending upon the result evaluating 10 different scenarios, an accuracy pie diagram has been charted. From the description given below, we measured 10 various distributive domain functionalities of Mysmartprice and buyt and compared the results with our domain.



A Graphical representation illustrates the hybrid nature of the various aspects of a web page. The web page loading time has a greater impact on a site's functionality. Lesser the loading time, better the customer attraction.



X. CONCLUSION

In agreement with our conclusion, we strongly propose that a system as Intellipurchase reduces customer's valuable time and improves quality product and value in agreement to monetary gains. Thereby before a customer evaluates same products on different websites, it is advisable as well as feasible to make use of a comparator at which Intellipurchase falls no short off. It is an highly reliable, efficient and the most user friendly web application.

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