

A Comparative Study and Integration of Multiple E-commerce Websites

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the Degree of Bachelor of Science in Computer Science and
Engineering

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APPROVAL

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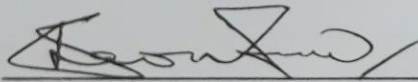
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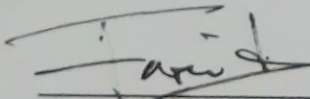
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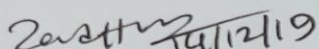
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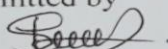
We declare that this project is done by us under the supervision of **MD Zahid Hasan, Assistant Professor**, Department of CSE, Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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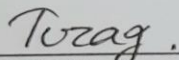


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ABSTRACT

We live in modern civilization. Modern civilization's people are getting also modern. So, they try to do their work very efficiently, accurately, and also time consuming. Therefore, they use various kinds of technology. As this system, many online E-Commerce sites selling their product online processing systems & people ace buy their product by visiting their online web page. Nowadays we can see that many online E-Commerce sites are growing day by day. As if there are so many competitors are online holder are trying to give a discount on their site so that customer shopping from their site. As a result, customers are visiting many E-Commerce sites and they finding various kinds of products. From our side, we try to compare product facilities from these sites and it's very efficient to compare a product that's for the customer can choose suitable products at a glance.

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CHAPTER 1

Introduction

1.1 Introduction

Our website is basically an online product shopping comparison system between some E-Commerce sites above the same product. A customer just visits this site and doing a search, compare and following through the main website link they can visit the main website might be ordered. This is proposed for the web application.

1.2 Objectives

The main objective is by this apps system Customers don't need to visit various websites for finding which website gives the best offer or service above this product. Our website can give the best comparison. Also, it gives

- Comparing multiple E-commerce site.
- Flash sales
- Delivery Service and charge.

1.3 Motivation

In the world many E-Commerce site holder sales various kinds of product online. The customer only visits these links to choose the product after choosing the can be ordered. Wholesaler delivery this product to the customer. As if many sellers are selling so that customers should visit all of this website and finding these items. It's so boring sometimes. So we try to attach all some addresses on our site. As a result, customers can collect like all information on a single page at a glance. For that purpose, we developed a website. For this developing website we using HTML, CSS, JQuery, JavaScript, Node JS, Express JS, Vue JS, MongoDB etc.

1.4 Expected Outcome

As if we collect data from the E-Commerce website by web scraping and crawling. So we try to focus on handling data collection. Unnecessary data will take big space on the database and searching product we handling filter option. Also, we wanted the outcome data will similar to customer search. Customers can visit this site by any browser through an internet connection.

By our website people can search any product if that product available our four comparison websites like Daraz, Pickaboo, Ajkerdeal, Priyoshop, then the product will display with full description.

So people can easily compare products and go to the website that gives much facility and order to them.

1.5 Report Layout

We all know, practical knowledge is more valuable than theory. In our study about this subject, we trying to enroll a lot of things which I learned from our course and what we learn. This project gives us scope to share our knowledge, our thesis, our activities and utilize our though also represent what we can do from our course basis. By doing this project we can implement our skills more effectively learn a lot of things in between real-life work, group work, maintenance time e.t.c.

The first chapter of our report contains the Introduction, Objectives, Motivation, Expected Outcome and Report layout of our project.

Then the second phase contains Project Introduction, Related works, Comparative Studies, Scope of the problem and also Challenges of our project.

Our third chapter contains all about Requirement Specification which are Use Case Modeling and Description, Logical Data Model, Design Requirements.

The fourth Chapter shows our full web site description which is related to Design Specifications like Back-end Design, Front-end Design, User Interface, and Interaction Design Implementation obsession.

Our fifth chapter is all about Implementation and Testing. This contains Implementation of Database, Front-end Design, Interactions, Testing Implementation, and Test Results and Reports.

Our last chapter has the conclusion of the full project. This report contains all about our problem, web system, features, benefits, advantages or disadvantages, solution and use of the system.

CHAPTER 2

BACKGROUND

2.1: Introduction

Online shopping system is an application which represent where from customer buy product. By this application customer can order product and Institute of E-Commerce are delivery this item. The customer can order something to stay in a room. As a result they no need to visit a market. They don't need to check many shops to buy anything. It's very awesome idea that makes people leading life easier to easiest. And also one side the resolve the unemployment problem. Customers don't need to expense extra money for goto market. As if all products are available on online customer can know the details of a huge number of products.

2.2: Organising

Various Online shopping apps like Daraz, Pickaboo, AjkerDeal e.t.c are selling various products. So that customers can buy a product from those sites. They are organizing all kinds of seller in single platform. Wholesaler are sell products just using those sites. As a result they just give a post on sites.

2.3 Shop Collaboration

Various E-Commerce are providing their services online. From these customers can buy various products. The organizations developed a market policy. By accepting their policy seller can sell product. After that when customer order from sites through one medium the product will supply from seller to customer door. So seller don't worry about how the product will be travelled from here to there. Customer can pay products price through cash on delivery or credit system. So the sellers can collect product price from organizations.

2.4 Related Works

The modern era from tiny to large work all work will going to do in simplest medium. Something like that from ticket reservation, online hotel booking, online restaurant booking, online medical facility, appointment booking these all work done through online. Similarly now a days a huge number of E-Commerce websites are providing their service through online so that man can buy any product through those sites. That's result its one kind of business for provider. And life becomes easier to customer. Same work also done by us. Like as Ali express, Ali baba, Daraz, Amazon, Pickaboo and so many sites are providing us this. So they are already established this option. We just have rearranged them on our website for customers to get more facility.

As if many sellers sell their products through ecommerce websites so that same category various sellers are create a post. As a result price and discount can be different. So authority can make change on this product. In admin panel they can be contact with seller for review post. Also authority can checked fake and unwanted items.

2.4.1 Daraz Online Shopping system

Daraz is the number one e-commerce site in Bangladesh. Daraz never sell the product. Daraz make an advertisement product in their apps which include discount, previous price, recent price, delivery charge etc. This product arranged by category system so that customers can find out any any product by category. Again, there is available search item from searching customer can find any product as soon as possible. Also, they showing flash sells which include more hot products in very low of cost.

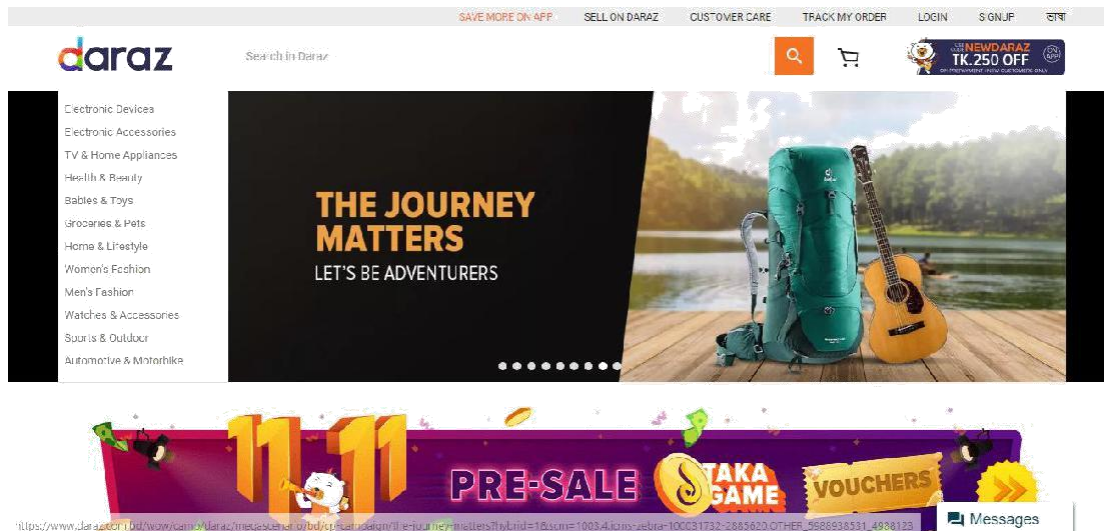


Fig:2.1 Daraz dashboard [1]

Ordering product customer must be Sign up on daraz account which having address. In that address Daraz sellers are delivery ordered product. Daraz also provide flash sells a set of day interval or occasion day is shown on Fig:2.1.

Features of Daraz :

- Flash sell.
- Occasion offer.
- Discount.
- Low delivery charge.
- Easy way to find product.
- Comfortable order system

2.4.2 Pickaboo

Like as Daraz, Pickaboo is another e-commerce shopping site in Bangladesh. Pickaboo mainly sells Electrical items. Mobile phones and Accessories e.t.c.Shows on Fig:2.2

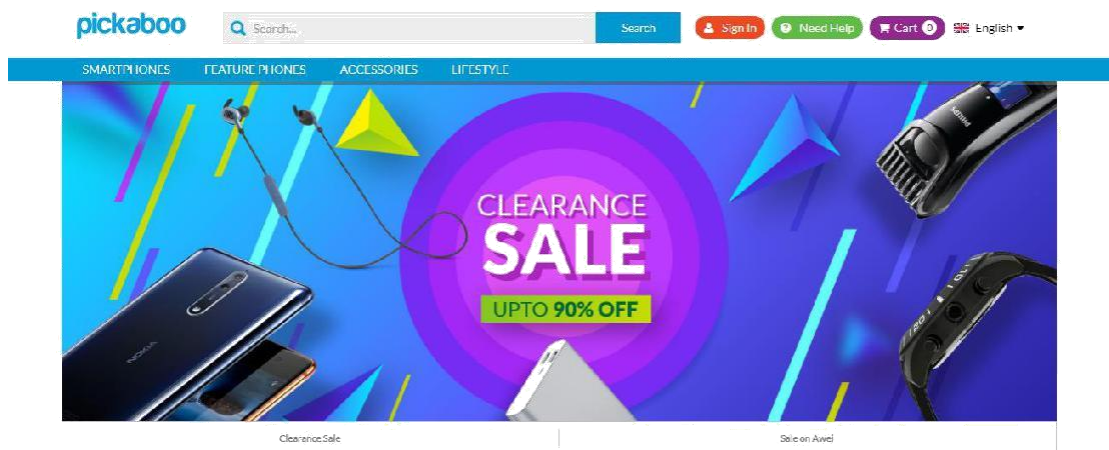


Fig:2.2 Pickaboo dashboard [2]

Features of Pickaboo

- Occasion offer.
- Discount.
- Low delivery charge.
- Easy way to find product.
- Comfortable order system

2.5 Scope of the problem

1. Multiple order system policy
2. Different sellers sell the same item with different price.

2.6 Challenges

The most challenging part is crawling & scrapping the set of data from the e-commerce site. After these all data making in the same format and store these data on Database. We can say that choosing the Database also a big challenge. Because it depends on which data we will, how the data store and retrieve those data and visualize.

2.7 Comparative Studies

Some are web site are doing data scraping and they visualize this product. We also do this but we also adding more functionality like as compare, visit different websites at a time. It's more efficient than others.

CHAPTER 3

SOFTWARE REQUIREMENT SPECIFICATION

3.1 Business Process Model

Firstly we need to introduce what is Process. A Process is a series of actions or steps taken in order to achieve a particular end. In the Software, the system is a set of related activities that leads to the production of the software. All Process model describes the workflow of a model & also how the model will be worked. Like that the Business Process Model (BPM) is also one kind of model which is the enterprise process model is often referred to as the business process model. BPM or Business process model is a diagram which is described how the model will be worked. describe the workflow of a model & also how the model will be worked. Like that the Business Process Model (BPM) is also one kind of model which is the enterprise process model is often referred to as the business process model. BPM or Business process model is a diagram which is described how the model will work. Shown in Fig: 3.1.

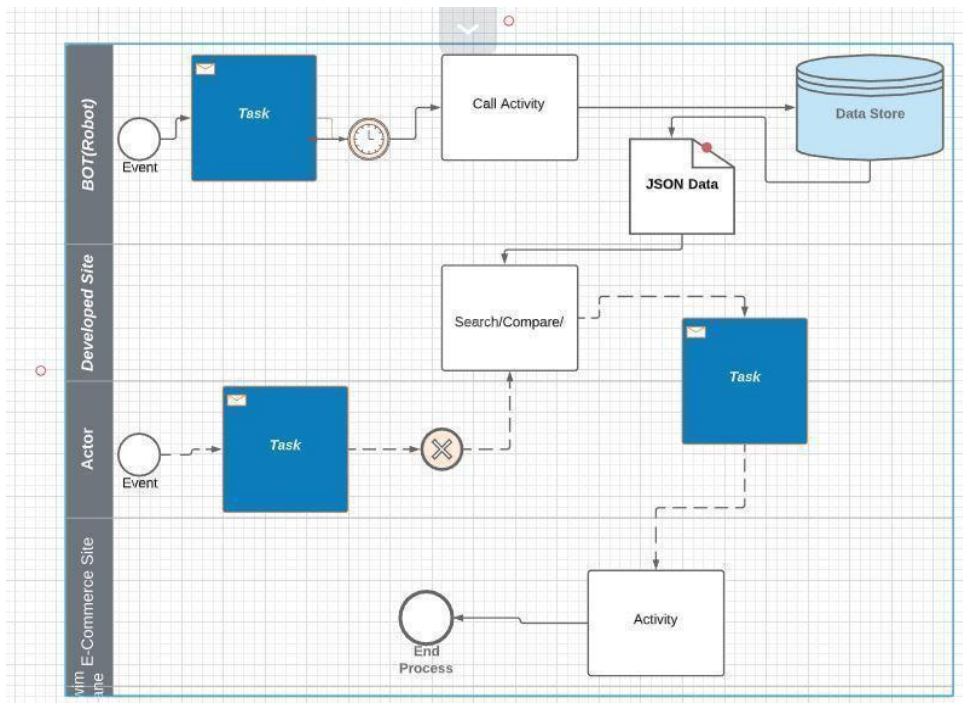


Fig: 3.1 Business Process Model

Business Process Model shows how the developer to user apps will work.

3.2 Requirement Collection and Analysis

Requirement collection is called one kind of Requirement Collection engineering. And after gathering the data when we analysis with those data this is called Requirement analysis. For our website, we are trying to collect how's our application will work and we are trying to target users who will be used in our application. Now in the modern era, all people are very busy. They ain't wants to spend a lot of time shopping. So many E-Commerce sites are selling their products online. So that customers can buy any product simply browsing different sites. But day by day the huge number of E-Commerce sites established. So customers are checking all of the sites and measuring which site will give better service and a much valuable product. It's more time consuming to visit multiple e-commerce sites. So if a customer can view all sites in a single site and compare their product at a time then they can decide very fast and can compare which product is good or not.

3.3 Use Case Model

The use case model proposed a model that explains how the user and working follow to connect with others. It explains a new functional model. A model where the user and system model interact with the data model. The use case model explains the communication between actors and the system such as improving these aims or goals.

A use case model visualizes some drawing components in which components explain how to interconnect with actors and these apps. Some components explain the use case. They are Extends, Include, Actor, and package. By this component, we can propose a use case diagram.

A use-case model visualizes of several models of elements. The most important model component is a relation. Actually, we can call that relation is the main part of this. The package of are meaning is communication, analysis, development, and planning.

Basically, the use case model is a graphical diagram. Which contains how the relation between actor and apps are connected with each other. Its main theme explains how strong a relationship made with actor apps.

The use case model is a fact graphical context that contains apps main work. Its specifications are described by their elements

3.4 Use Case based on project

3.4.1 Scenario

Developers get data from different E-Commerce web site like Daraz, Pickaboo, Ajkerdeal, and Priyoshop. by web crawling and scraping. Then they make a website for consumers or users. From this website, the user can gather product information from some E-Commerce website. And they can compare the same items product price, service, ratings and finally can decide which site give consumer more facility again they will be ordered from the developer site. Shown in Fig: 3.2

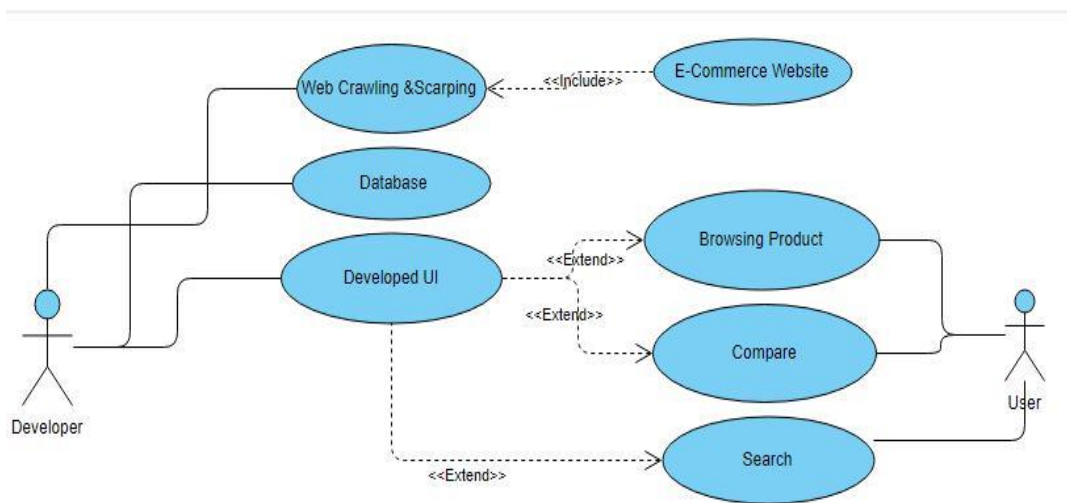


Fig: 3.2 Use Case Model

This is the model of use case. This use case describes communication between Developer and user. From scenario we can understand what the project is but its not capable to visualize how connect with developer and user. So we can call that use case is a one kind of graphical element which is represent the scenario topic.

3.4.1 Developer scraping data from web

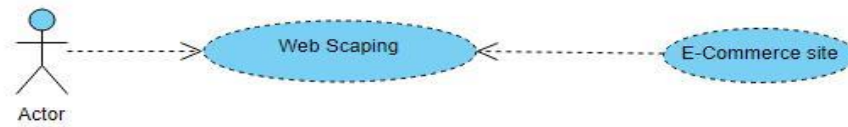


Fig: 3.3 Developer scrapes data

Developer data scraped from e-commerce site here including e-commerce site because without E-Commerce other data are not important. Shown in Fig: 3.3

3.4.2 Store data in Database

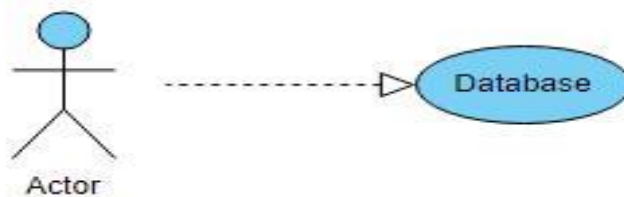


Fig: 3.4 Data stored in database

Developers scraping data from web and send those data to database. The developer has taken data by web scraping and store them on Database. Shown in Fig: 3.4

3.4.3 Developer developed User Interface

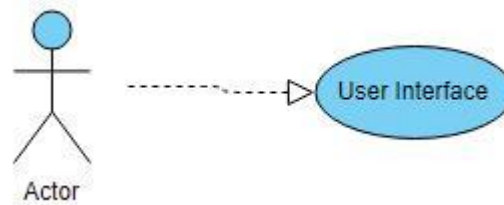


Fig: 3.5 Developer user interface

The developer develops User Interface as if the user can view our site. Shown in Fig: 3.5

3.4.4 User browsing user interface

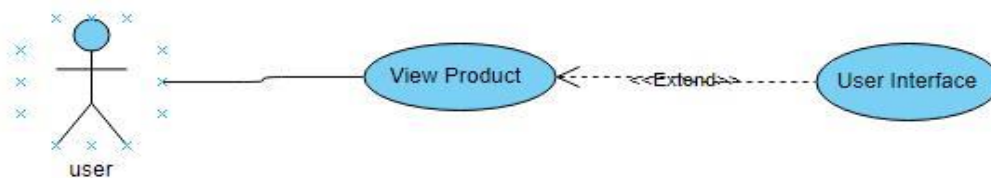


Fig: 3.6 User browsing User interface

User browsing product from the user interface. Shown in Fig: 3.6

3.4.5 User Compare

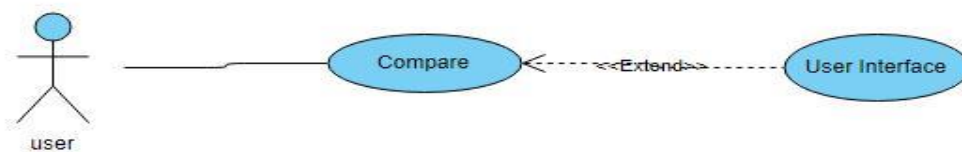


Fig: 3.7 User compares products

Users can compare different site products by using the User interface. Shown in Fig: 3.7

3.4.6 User search

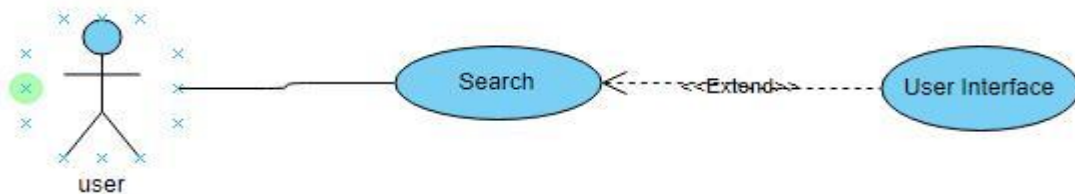


Fig: 3.8 User compares products

User can search product using user interface. Shown in Fig: 3.8

3.5 Logical Data Model

The logical data model is the use of hows the data contribute or use on the application. Extends, Implements, Abstraction, Privet, Public are different kinds of data models of the Logical data model. In that case, we scraping data and push those data stores in the MongoDB. So we should not worry about the dataset.

3.6 Software Development Model

Software Development Life Cycle (SDLC) is a process used by the software industry to design, develop and test high-quality software. Its aim is to produce high-quality software that faces or better client expectations, reaches completion within time and cost prediction. And we use the Agile model for the development of this app. Shown in Fig:3.9

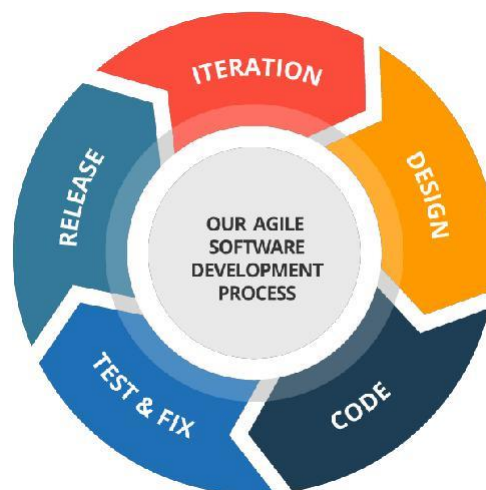


Fig: 3.9 Agile model [3]

3.6.1 Advantage of Agile Model

Why use the Agile model?

The agile model most importantly uses for modern applications. Nowadays Mostly all software is dynamically arranged and it makes a big project and randomly its will change some topics. In the agile model customer satisfaction always rapid it's also useful for software delivery. Software development frequently. It can be changed at any time. It can be updated anytime.

3.6.2 Disadvantage of Agile Model

The project can over long-lasting. When developers run out of work, they can't work on a different project since they'll be needed soon

3.7 System Environment

Here only one active actor and these are the user. User can find products what is needed. But the Actor must visit these sites using internet connection and any browser. Shown in Fig: 3.10

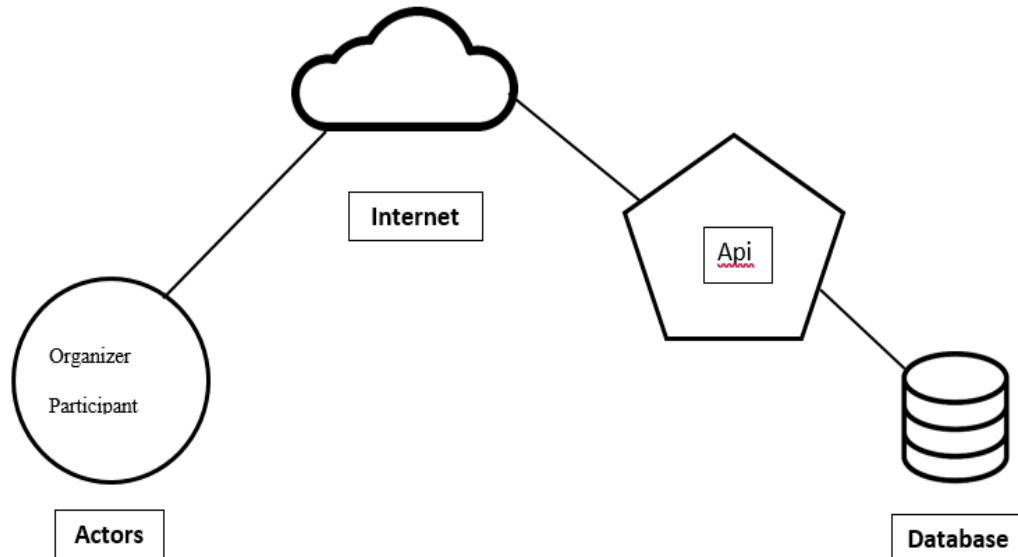


Fig: 3.10 System environment

CHAPTER 4

DESIGN SPECIFICATION

4.1 Implementation Requirements

Before any programming could be done decisions needed to be made on which technologies should be used to program the project. The following is a critical evaluation of the different programming languages that could be used to program such an online application.

For developing this application it needs two types of work. One is Frontend for user interface and another one is Backend for developer collecting data. Discuss this major part.

4.2 Backend Requirements

4.2.1 NodeJs with Cheerio and Puppeteer

About all the material on the web occurs in the form of HTML beep. The material in these pages is represented as paragraphs, headings, lists, or one of the many other HTML components These components are standardized in the browser as a hierarchical tree architecture called the Document Object Model. Respective material can have many child elements, which can also have their own children. This structure makes it acceptable to excerpt

Cheerio is a Node.js library that helps developers clarify and consider web pages using a jQuery-like syntax. In this post, I will explain how to use Cheerio to scrape the web. We will use the ButterCMS API documentation as an example.

4.2.2 Puppeteer

Puppeteer is a Node.js library developed by **Google**. It allows many facilities to control API with chromium or any browser. It can run headless instances and for DOM state change puppeteer is an asynchronous element and easy to handle. It can produce pdf files from the web by scraping data [4].

4.2.3 Why cheerio and Puppeteer with JQuery

There are many other web scraping libraries, and they run on the most popular programming languages and platforms. What makes Cheerio and puppeteer unique, however, is its jQuery-based API.

4.2.4 jQuery

jQuery is by far the most popular JavaScript library in use today. It's used in browser-based JavaScript applications to traverse and manipulate the DOM.

4.2.5 MongoDB

MongoDB is no SQL database and it uses a document-oriented database model. MongoDB proposed the No SQL system or dataset. That means this database having no attribute system. No table system. MongoDB carries no condition datasets. That any system can be no data. But another site Mongoose library can provide various condition datasets. Some methods can be applied by this library. So we can finally choose MongoDB with a mongoose library [5].

- Large figure of rapidly changing structured, semi-structured, and unstructured data
- Agile dart, quick schema iteration, and frequent code advance
- Object-oriented programming (OOP) that is easy to use and flexible
- Geographically assigned scale-out architecture instead of expensive, monolithic architecture

4.2.6 Express JS rest API

Express JS is a framework of JavaScript. Express JS use for creating a basic API with rest API which is sending data from database to frontend and validated data to frontend. It's easy to use with handle. That's a result User can module with any data. Also never access the data [6].

4.3 Front End Requirements

Here describing the part of the frontend part. For that we using

4.3.1 HTML

Hypertext Markup Language (HTML) is used for developing web pages and web apps. Web browsers send/receive HTML script from a web slave or from the local repository and distribute the documents into multimedia web pages.

When a normal document is reported applying a word processor like Microsoft Word/Office, the text is saved in a file with an important pattern. It is not simply saved as the string of words typed since the document demand to conserve things like the font called, the size of the text, which words are in bold, italics, and so on. The important format consists of not only words but all this other data so that the next time Word opens the document. It can focus the document with the exact arrival created prior. In the same way, web pages and entry are commonly strings of words which put in a special format that web browsers are able to display. While the format of Word documents is simply called Word format, loosely speaking, one might say that web pages are formatted using HTML [7].

4.3.2 CSS

Cascading Style Sheets (CSS) is the style of HTML (Hyper Text Marker Language) CSS represent how will make stylish the HTML contains. CSS has a lot of attributes. This attribute represents all content. When we browse a different kind of web page then we can see the HTML very stylish but its not the power of HTML. It's the power of CSS. So in the HTML page, we link up with the CSS page [8].

4.3.3 JavaScript

JavaScript is the most important famous language in the world. Nowadays it's a very essential language which is created the application easier simpler, with attractive. JavaScript is a programming language used mainly by Web browsers, creating real-time apps an effective and collective action for the user. As if JS is in the web-based project so we can call that Most of the methods and applications that make the Internet basic to modern life are coded in some form of JavaScript.

JavaScript is what is known as a client-side script and also used in the developer site. Most of the Web applications, such as a search engine, work because of a communication in the user's device (e.g. computer, phone or tablet) and a remote server and progressive apps. The software on the remote server sends data to the user (i.e. the user's machine) and the software on the client-side reads the information and renders a Web page on the screen which provides a lot of functionality [9].

4.3.4 Vue Js

The following are the advantages of using Vue.js technology in web development.

1. **Very Small Size:** Vue js is a framework of javascript. As if javascript is ourselves language so it can optimize its framework. So its size very low. About 18k to 21kb is taken its download size. And it's so useful because of loading time it takes a low size net. As a result, it will be ready in a short time. This does not mean that it has a low speed because of the small size. Instead, it beats all the small frameworks like React.js, Angular.js, and Ember.js.
2. **Easy to Understand and Develop Applications with VUE:** One of the reasons for the popularity of this framework is that it is quite easy to understand and making useful because of its similarity with javascript. The user can easily add Vue.js to his web project because of its simple architecture and development.
3. **Simple Integration with integration:** Vue Js is a javascript framework language. It is built by JAVASCRIPT. So Which work is done by JS this work also can be done with the

Vue Js. We can do a lot of work by using Javascript. Integration is another part of javascript so we can also be manipulating some integrating problem with Vue js

4. **Detailed Documentation VUE js:** Developers always like to use the framework with brief documentation because it is always easy for them to write their first application. The documentation with Vue.js is so broad that any user who knows a tiny about JavaScript and HTML can develop his own application or web page.
5. **Flexibility:** A great deal of resilience is another advantage of Vue.js Which is made by javascript. It allows the user to write his template in HTML file also change operation, JavaScript file, and pure JavaScript file using virtual nodes.
6. **Two-Way Communication:** And last but not least we can say that Vue.js also facilitates two-way connection because of its Model–view–ViewModel programming architecture which makes it quite easy to handle HTML blocks with a stylish item. In this respect, it is like a very close to Angular.js which also speeds up HTML blocks [10].

4.4 Front-End Design

4.4.1 Home page

Here is the homepage of our website. Here users can search for products and compare them. On the left side, there is a sidebar. it contains a list of Main Categories, Subcategories, and categories. All of them are nicely organized with an expandable nested list. In the middle, there is a four image slider. They will show a slideshow of images with the contents of four different websites. Under the image sliders, a section will show the random products sorted by less price and the highest discount. Shown in Fig: 4.1

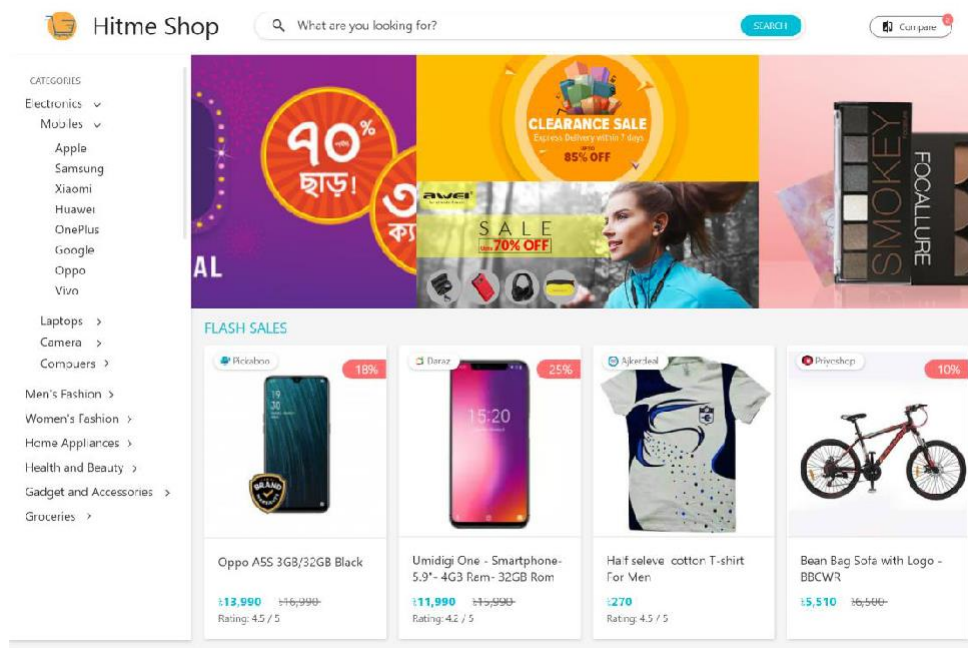


Fig: 4.1 Home page

This homepage represent product category. Under product category its represent also many random products on dashboard.

4.5 Admin Panel Design

4.5.1 Category Management

We have made a category list that represents all the categories of our four e-commerce website. Every eCommerce website have their own category list with own pattern. So we have made our own category list that contains all of the possible categories and we have made an algorithm to detect the name of the category from the title of the product. Each category has a bunch of keywords. Our algorithm matches the keywords with the title of the products and detects the name of the category. In our category management system, we can show, add, delete and update all of our categories. Shown in Fig: 4.2

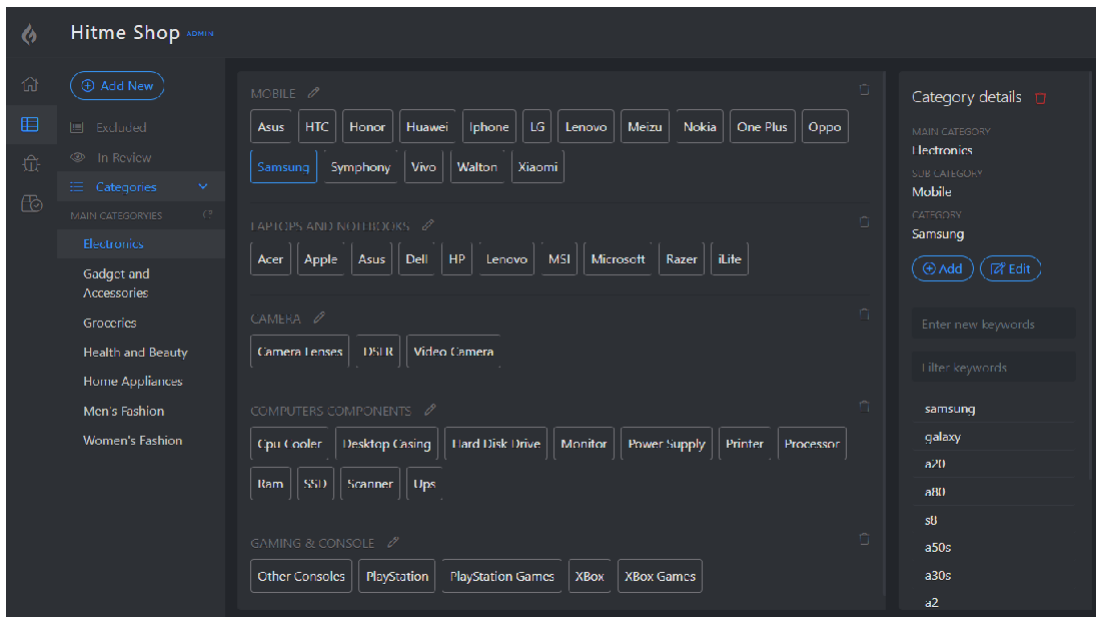


Fig: 4.2 Category management

4.5.2 In review category keywords

In the keywords review section we can review the keywords are generated by our category detection algorithm. Shown in Fig: 4.3

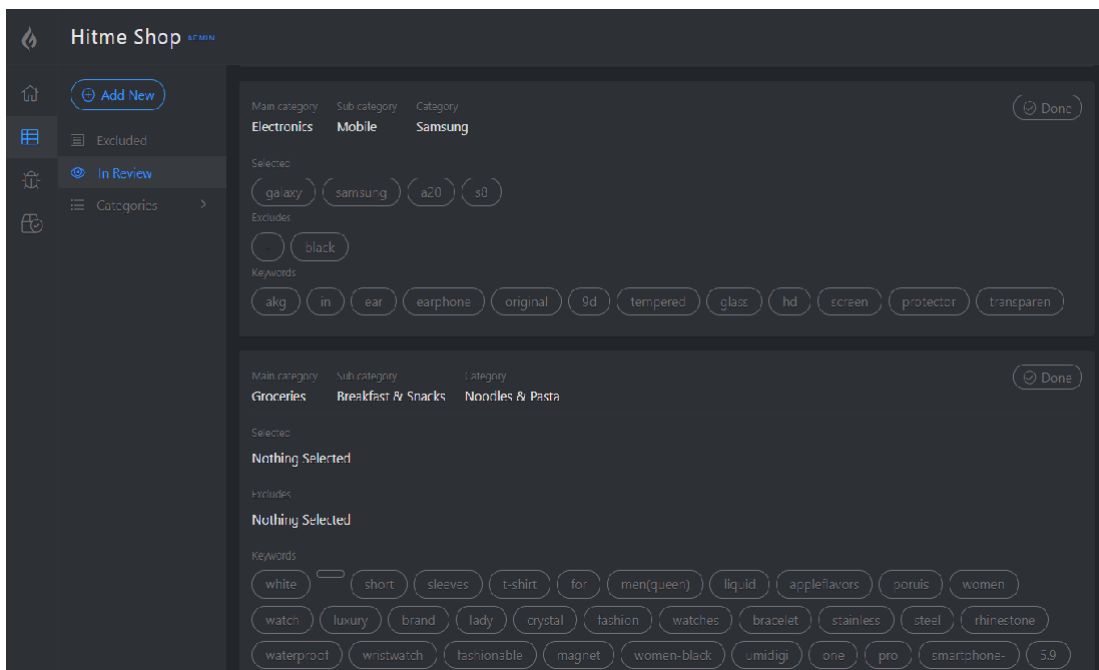


Fig: 4.3 Review category keyword

4.5.3 Add a new category

Here we can add category to an existing main category and subcategory or we can create a fresh and new category. Shown in Fig: 4.4

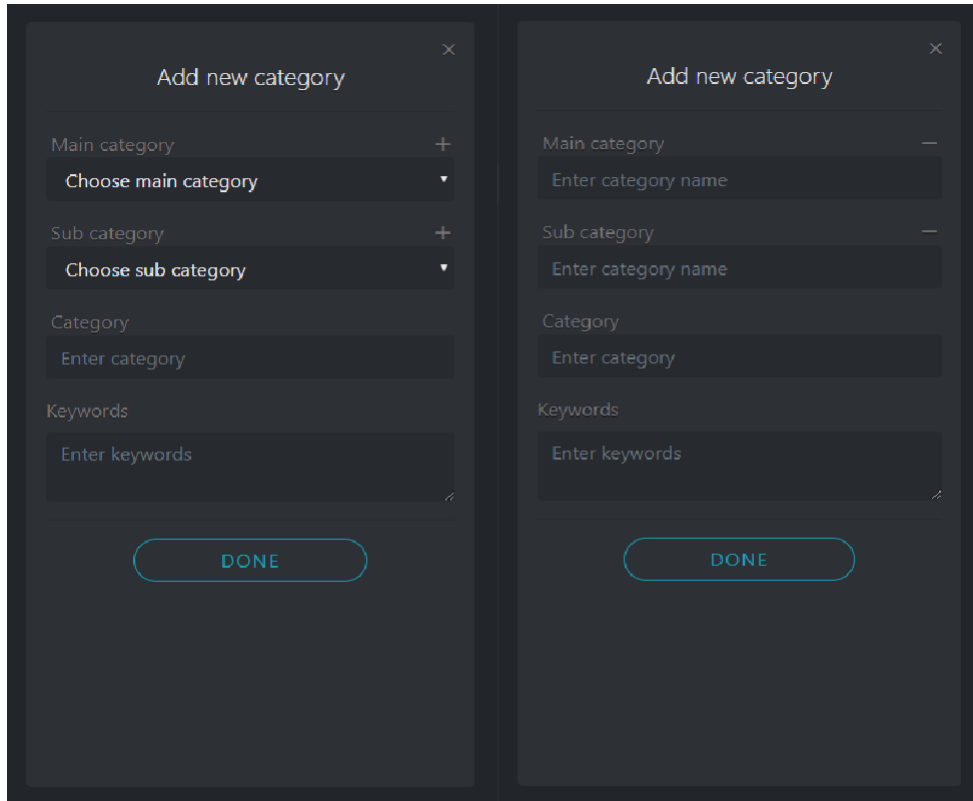


Figure: 4.4 Add new category

4.5.4 Products in review

Although we have implemented an algorithm to detect category automatically if it fails to detect the category or detect more than one category then the product will be queued to be reviewed by the admin. Admin will review the product and will select the category or just select one category from the detected list. After adding categories new product that has a similar title keyword will add to categories automatically. By this review system, our algorithm can be able to detect the category of the product more accurately. Shown in Fig: 4.5

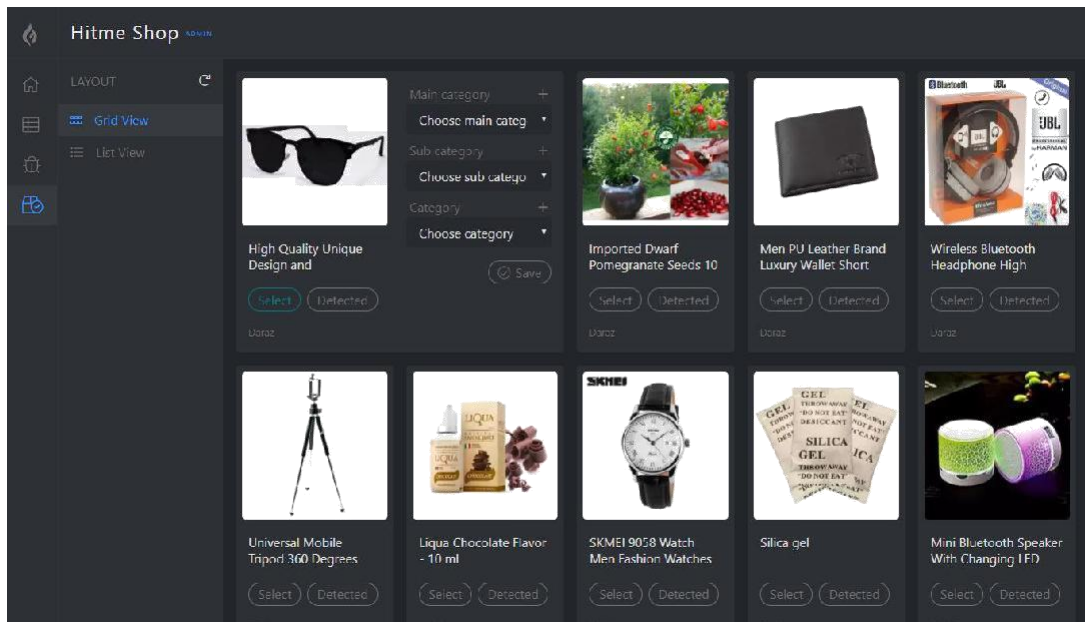


Figure: 4.5 Products in review grid view

When our algorithm detects more than one category then we can simply select a category from them and save it to the database. Shown in Fig: 4.6

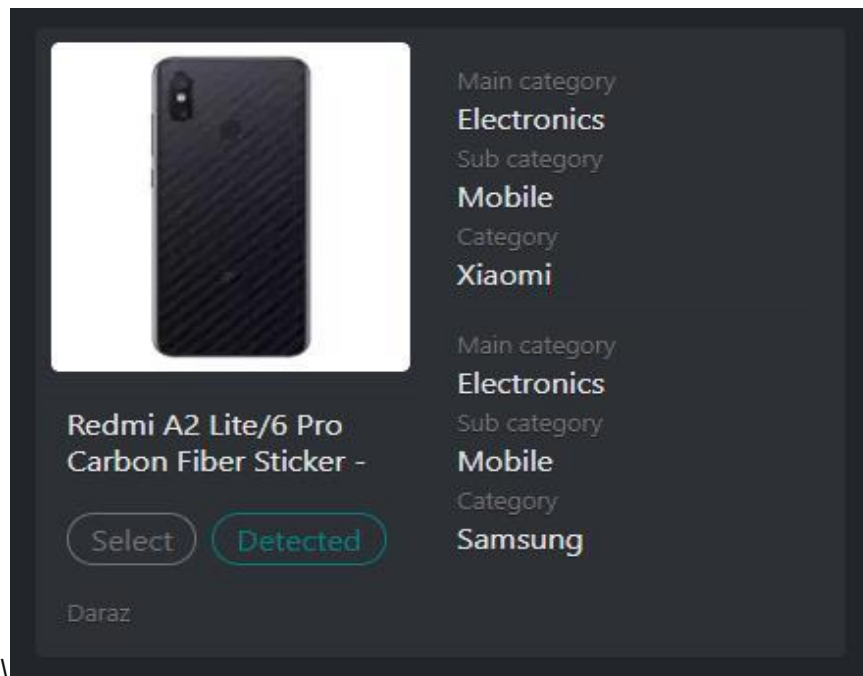
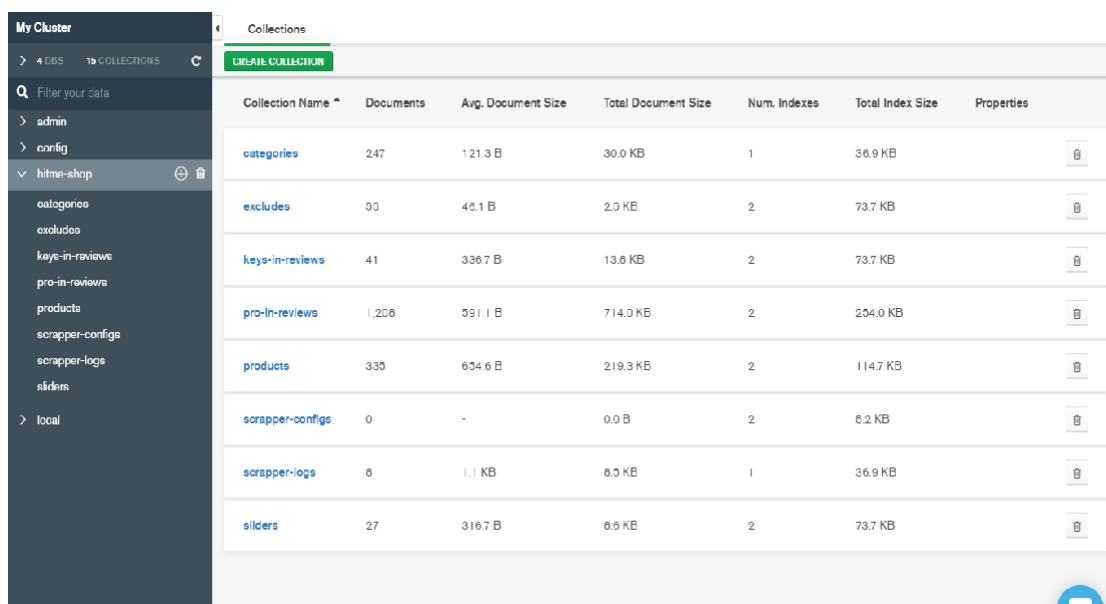


Figure: 4.6 Products in review details

4.6 Database collections

Here is the list of our collections in the MongoDB database. In Categories collection, we are storing all the categories. Excludes collection contains the keywords which will be ignored by our algorithm while detecting category from the title. Keys-in-review has the keywords which are in the review. Pro-in-reviews contains the products which are in the review. Products collection has all the products scrapped from different websites and automatically detected or reviewed category by the admin. Sliders collection have all the image sliders are scrapped from different websites. Shown in Fig: 4.7



The screenshot shows the MongoDB Collections page for a cluster named 'My Cluster'. The left sidebar lists the database 'hitme-shrp' and its collections: categories, excludes, keys-in-reviews, pro-in-reviews, products, scraper-configs, scraper-logs, and sliders. The main table displays the following data:

Collection Name	Documents	Avg. Document Size	Total Document Size	Num. Indexes	Total Index Size	Properties
categories	247	121.3 B	30.0 KB	1	36.9 KB	
excludes	53	46.1 B	2.9 KB	2	73.7 KB	
keys-in-reviews	41	336.7 B	13.8 KB	2	73.7 KB	
pro-in-reviews	1,208	591.1 B	714.0 KB	2	234.0 KB	
products	333	654.6 B	219.3 KB	2	114.7 KB	
scraper-configs	0	-	0.0 B	2	6.2 KB	
scraper-logs	6	1.1 KB	6.5 KB	1	36.9 KB	
sliders	27	316.7 B	8.5 KB	2	73.7 KB	

Figure: 4.7 Mongo DB collection

4.6.1 Product schema

Here is the main schema of our products. Url is indexed by *unique* because we are not storing any duplicate products in our database. Shown in Fig: 4.8

```
JS products.js X
hitme-shop-api > src > models > JS products.js > ...
1 const mongoose = require('mongoose')
2 const productSchema = new mongoose.Schema({
3   title: String,
4   tags: Array,
5   src: String,
6   url: {
7     type: String,
8     required: [true, "An url is required!"],
9     unique: true
10  },
11  sPrice: Number,
12  oPrice: Number,
13  rating: { type: Number, default: 0 },
14  ratingCount: { type: Number, default: 0 },
15  discount: Number,
16  flag: String,
17  website: String,
18  mCat: String,
19  sCat: String,
20  cat: String,
21  compared: {
22    type: Array,
23    default: []
24  },
25  createdAt: { type: Date, default: Date.now },
26  updatedAt: { type: Date, default: Date.now }
27 })
28 const Products = mongoose.model('products', productSchema)
29 module.exports = Products
30
```

Figure: 4.8 Products schema

4.7 Testing and Integration

Software testing is an important phase before software deployment. Software testing represent how the program will work in future. Integrating software focus software definition part by part. That's result every part of software are testing very sensitively. In our software we developed database, ui design, backend, frontend. So many parts of this software need to work properly. If any of the parts crush then full parts of software will damage then its quite so bad for the software development. Again software testing also can understand what will be the occurred if hacker can try to hack this software. Though every software testing is not perfect. Al software having few bugs. That's because the software visualize some error suddenly. Software error occurred for some reasons these are

1. Syntax problem.

2. Data handling.

The following are the various stages in the testing process.

Black Box Testing:

In black box testing its mainly focus we give some input on software and test the output. The result is proper work or not. By this system we can understand proper variable working or not. Interval some variable represent interval result. Some time out of range the variable will view some bad output or wrong output. So that's cause also make a bug. Here also check the data type of the variable. We input it from our frontend and its work on backend. After all worked its visualize on frontend.

White Box Testing:

White Box testing is another part of software testing. Like black box testing it's also an important part of software. In this part its checking output of the software. By this techniques analyze the internal structures the used data structures, internal design of software Code structure and the working functionality also included in software testing. It is also called glass box testing or clear box testing or structural testing.

Stress Testing:

The purpose of stress testing is to improve that the candidate system does not malfunction during peak loads. We subject a high volume of data during a very short period of time. This simulates an online environment where a high volume of activities occurs in spurts.

Cross-Browser Compatibility Testing:

This is done to provide that the web system works and how looks similar on different browsers. The testing is done on the most popular browsers which are:

- Mozilla Firefox
- Microsoft internet Explorer Version 8
- Chrome

- Microsoft Internet Explorer Version 9
- Netscape
- Opera
- Safari

These provide quite good visualize our software.

This is the table of various functionalities of this program. Which is provide the output.

Table: 1 Software testing

Condition	Proposed Outcome	Actual Outcome	Error
Category Data	By clicking this data will be shown	Perfectly data shown by category click	No error occurred
Search	Any product searching, this related product will be shown.	By clicking search any product this will be shown	No error occurred
Compare	Compare provide from difference websites products.	Compare shown other product.	No error occurred

CHAPTER 5

CONCLUSION AND FUTURE SCOPE

5.1 Conclusion

The design of developing the web application we are using HTML, CSS, JavaScript, JQuery, MongoDB for database, Express JS for API, and VUE JS for frontend design. In this application, our main target is a customer can view or browse different website product at a time in a single site. Customers can search for any kind of product. Customers can compare the same product on different sites. At this result, customers can make a decision in which E-Commerce sites are more suitable or comfortable for the user. Finally, we can say that if the customer buys a product in that system its will benefit time, money and can get good products using see view rating.

5.2 Future Scope

In this web application, we describe what's we want and why. But for a short time interval, we can't add more features. Like, buy the product from this site. The seller can add which product he wants to sell. Customers can give a post and the seller can participate in this post. In that case, customers can buy the most benefited product. If we work on this product we will try to upgrade this system. And we hope people can receive it happily.

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