IBM – NALAIYA THIRAN PROJECT

SMART FASHION RECOMMENDATION SYSTEM

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ABSTRACT

Fashion is perceived as a meaningful way of self-expressing that people use for different purposes. It seems to be an integral part of every person in modern societies, from everyday life to exceptional events and occasions. Fashionable products are highly demanded, and consequently, fashion is perceived as a desirable and profitable industry. Although this massive demand for fashion products provides an excellent opportunity for companies to invest in fashion-related sectors, it also faces different challenges in answering their customer needs. Fashion recommender systems have been introduced to address these needs. This thesis aims to provide deeper insight into the fashion recommender system domain by conducting a comprehensive literature review on more than 100 papers in this field focusing on image-based fashion recommender systems considering computer vision advancements. Justifying fashion domain-specific characteristics, the subtle notions of this domain and their relevancy have been conceptualized. Four main tasks in image-based fashion recommender systems have been recognized, including cloth-item retrievals, Complementary item recommendation, Outfit recommendation, and Capsule wardrobes. An evolvement trajectory of context-based fashion recommender systems concerning computer data mining advancements has been illustrated consists of three main eras and the most recent developments. Finally, a comparison between traditional computer data clustering techniques and deep learning-based has been made. Although the main objective of this literature review was to perform a comprehensive, integrated overview of researches in this field, there is still a need for conducting further studies considering context-based fashion recommender systems from a more practical perspective.

CHAPTER 1

INTRODUCTION

The evolution of multiple data collection techniques and storage systems has encouraged various platforms to collect and store data into their servers more efficiently. With this data they are now capable of suggesting more user-friendly techniques and relatable content to various users. Companies are using the user generated content to give the users a more personalised experience on their platforms.

The users like choices choose from for their next lifestyle, and often get confused to choose from among the vast variety of choices available to them. Using the research discipline based on recommendation systems, various companies can give more importance to conveying information to the users rather than raw data. The users would get recommended much more precisely relevant information made available to them further than a huge inflow of all the random data available on the website.

Typical recommendation systems work on the model of user- item matrix, where set of all possible user are paired against set of all possible items. The model then calculates a utility function that measures the likelihood of recommending a particular item to a particular user. An accurate model has a utility function that gives more fine-tuned results to the user or the item. The more personalised the recommendations the user gets, the better is the overall performance of the recommendation system and better does it work for the organisation implementing it.

In most of the readings, the recommendation systems are based on only one criterion to recommend the ratings to a new user. In recent studies based on previous implementations of the techniques, the concept of taking into account more than one criterion is used. Users might base their overall utility function on not just the overall rating of a particular item but sub category wise distribution the ratings. This enables the system to recommend more personalised content to the users.

The general classification of recommendation systems is as:

- Content based recommendation systems
- Collaborative filtering-based recommendation systems
- Knowledge based recommendation systems
- User based recommendation systems
- Hybrid recommendation systems, that combine one or of the above criteria.

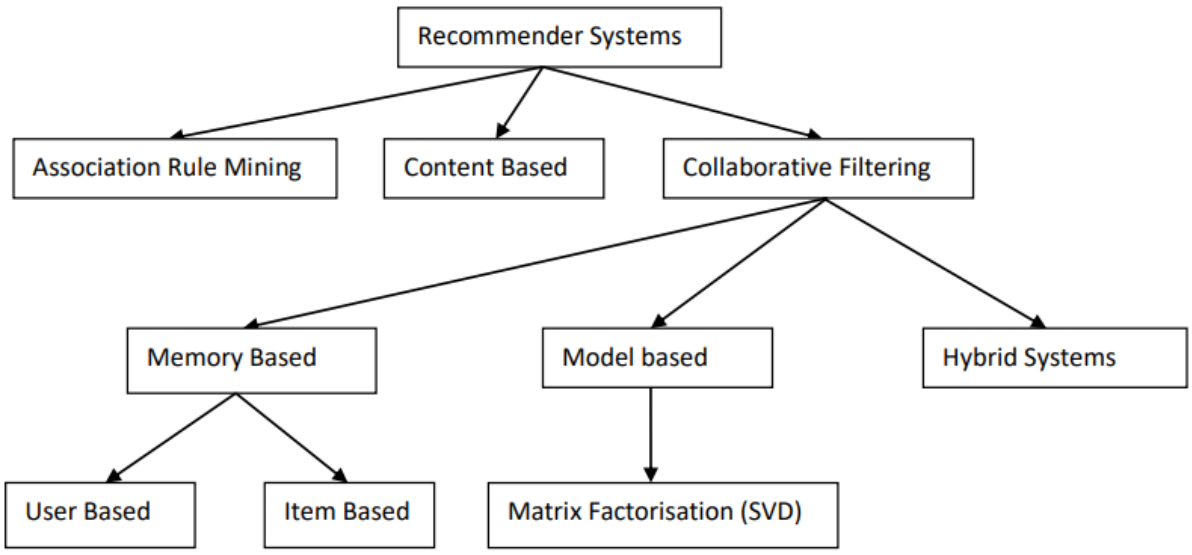

Fig 1.1: Techniques used in Recommendation systems

APPLICATIONS

Recommendation System is a vast area which is used everywhere in every field. People use recommendations as it saves time, so it plays a vital role in various areas. It is used in many real-life applications like Entertainment, E-Commerce, Services, Social Media etc. [6]. In Entertainment area recommendation system is widely used in watching movies or listening music or any TV program. When we talk about E-Commerce field, Amazon is the world's largest shopping site. Some use it for purchasing books, for buying any household products or any products, some use it for clothing. So, this way whole world is dependent on these E-commerce sites for one or the other work. Some other E-Commerce sites like Flip cart, E bay, Myntra, Shop clues etc. also provides recommendations. Some other applications of recommendation system are listed below:

- Movie Recommendation: Netflix uses algorithm for recommending movies according to their interest. Other such platforms that provide recommendations include hotstar, sonyLIV, voot, ALTBalaji etc.
- Music Recommendation: Pandora generates a radio station. It uses the properties of songs to recommend other songs. Other medium in this field that suggest music recommendation are Spotify, JioSavan, Gaana etc.
- News: Various applications that provide news recommendation can be Google News, Apple News(integrated into IOS and macOS), Flip board, Feedly, Tweet Deck, Pocket, Mix, Zig, News360. All these suggest news, articles, blog post, content from top publishers etc.
- Fashion: People can buy various clothing items of their choice. This section include various shopping sites like Myntra, Amazon, Club Factory, SHEIN, Lime Road, Flip cart and others.

- Travel service: Recommendation helps here to suggest various travelling sites to safeguard journey. This includes Road trippers which leads you plan any road trip with ease. Using Hooper, users can input their travel plans, and the app will tell them when is the best time to book their flight.

Content-based filtering methods depend on the item description and user preference profile. These methods are better suited to situations where there is known data in an object (name, location, description, etc.), but not the user. Content-based treat recommendation as a specific user problem and learns the likes and dislikes of a person based on item features. The algorithms try to recommend items that are similar to the user's preferences in the past, or are currently evaluating. It does not rely on a user login machine to generate this temporary profile. In particular, various candidate items are compared to user-rated items and are highly recommended. This approach has its roots in information retrieval and data filtering research.

The aim of the project is to build a model capable of doing fashion recommendation by just looking at its image. The model accepts a image and first determines whether the image contains a fashion product or not and recommend it accordingly. The main objective of this work is to:

- Develop a fashion recommendation system which answers the queries related to fashion shopping.
- To identify the fashion type of given input image.
- If the given fashion image is valid then similar set of clothing will be recommended.
- Retrieving the similar search query products from different e-commerce websites.

RELATED WORK

As there is an enormous information can be accessible from the internet and a tremendous rise in the electronic content, the people may possibly face a challenge to access the overloaded digital information and retrieve the useful and relevant data from the ocean of information available on the Internet. The problem of tracing and accessing the relevant and useful data has been partially solved by information retrieval systems but there is a lack of user's preferences and priorities of the data.Thus, there is a demand for a system that filters the information and can solve the problem of accessing personalized content from overloaded information available on the internet. Online sales applications make use of Recommender Systems to display the products or items based on customer interests. This has led to the discovery of Recommender Systems with an ability to predict and suggest particular product or item based on customer preferences and priorities.

EVOLUTION OF APPAREL RECOMMENDATION SYSTEM

There is a magnificent development in the Apparel consumer market since the past few decades with a progressive challenging issue in the market. In order to resolve the challenging issues in Apparel retail industry has concentrated on apparel recommendation system. Apparel consumer market with the help of the intelligent recommendation system could have more benefits economically.

HISTORY OF APPAREL CONSUMER MARKET

Prior to the discussion of how e commerce applications for apparel industry havecome into existence with apparel recommendation systems, there is a need to understand the history of Apparel Consumer Market. A brief history of Apparel Consumer Market has a great relation with the history of Britain in the late 17th century. The role of Urbanization and

industrialization in the Great Britain has introduced the customers to buy the clothes as per their preferences. Thus, the demand for Apparel Consumer Market has begun to rise as the customer group were interested to buy readymade clothes. Likewise, the Apparel Consumer Market has changed supply demand chain from raw cotton exports to readymade clothes. Eventually the raise in fashion technology and globalization of the apparel consumer market, the products were made available for the customerthrough e commerce applications, so that customers can buy the clothes without visiting apparel retail store. This has led to store lot of digital information on the internet which throws some challenges for the customer to pick the clothes of their preferences within a short time. To overcome those challenges and help the customer to show the products of their interest Apparel Recommendation Technology has come into existence to filter the digital data by using some intelligent algorithms as per the customer preferences to increase the product sales and to attain customer satisfaction.

HISTORY OF APPAREL RECOMMENDATION TECHNOLOGY

The history of recommendation technology has been introduced fairly with the history of computing itself. The first automatic recommender Technology has been introduced as a computer-based librarian, to generate recommendations on book preferences given by the user, by grouping users into "stereotypes" depending on the results obtained after conducting a short interview with the user. Later in 1990s, in order to handle huge amount of information available online, collaborative filtering, a type of recommendation system has been introduced to deal with the data. The first collaborative filtering recommendation system called Tapestry, a manual collaborative filtering system, allowed users to select the items needed by giving recommendations as a result of queries that a user quote for selection of items from a large domain of information available. Later another type of recommendation system namely Automated collaborative filtering system has been introduced to give recommendations as a

result of relevant reactions given by the users. This technique has been introduced by Group Lens, to understand the interest a specific user about the Usenet articles. The past decades have renewed the importance and achievements of Recommendation system in apparel consumer market. To promote a customer to select an apparel without wearing it, an apparatus has been introduced by Lam in 2003, for personalized apparel selection by the customer. As the apparatus did not give successful results as expected, a color planning method has been proposed by kobayashi in 2004, for coordinating with apparel colors. This method helped the customers to select the apparel depending on their color of their preferences for their outfit. Later in 2009, an expert system namely fashion mix- and-match method has been proposed by Wongetal. This expert system automatically recommends the customer and facilitate their preferences for a mix and match apparel fashion. This method mainly focusses on collecting the data and evaluating the decisions from the fashion designers, and help the customers in apparel coordination. This expert system could be able to store the captured data in the form of information on the web. Thus, recent developments in apparel recommendation technology has shown that the system has been evolved with a variety of intelligent algorithm used and apparel recommendation technology has turned as intelligent apparel recommendation technology.

CHAPTER 2

LITERATURE SURVEY

2.1. EXISTING SYSTEM

The work that occurs neglects consumer remarks on mode things that have proven successful in delivering interpretations and improved suggestion outcomes. The existing suggest a \\coevolutionary neural network with a reciprocal focus function to derive visual characteristics to complement the costume. The visual characteristics are then decoded for the estimation in a rate score. We propose a closed, repeating neural network with a multimodality care framework in order to turn the visual features into a succinct sentence for abstractive comment output. Do not suggest a profound learning system called NOR which can concurrently produceoutfit suggestions and abstract commentaries of good linguistic quality that mimic public sentiments. We extend collective concern to model the compatibility of fashion and cross-modality the graphic and textual space transition model.

2.2.1 DISADVANTAGES OF EXISTING SYSTEM

- Less number of product analysis
- Recommendation of product showing is less
- Low accuracy

2.3. REFERENCES

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2.3 PROBLEM STATEMENT DEFINITION

Date	19 September 2022
Team ID	PNT2022TMID50252
Project Name	Smart Fashion Recommender Application
Maximum Mark	2

Customer Problem Statement:

Smart Fashion Recommender Application:

Problem Statement (PS)	I am	I'm trying to	But	Because	Which makes me feel
PS-1	customer	See the trending collections	The searching technique is not good	Of the app didn't use efficient search technique	Irritating
PS-2	customer	Explore the application	The UI is not good when I try to access through mobile	The design of UI is not reliable and the back-end is also bad	Frustrated

CHAPTER 3

3.1 EMPATHY MAP CANVAS

Ideation Phase

Empathize&Discover

Date	19 September 2022
Team ID	PNT2022TMID50252
Project Name	SmartFashionRecommenderApplication
Maximum Mark	4

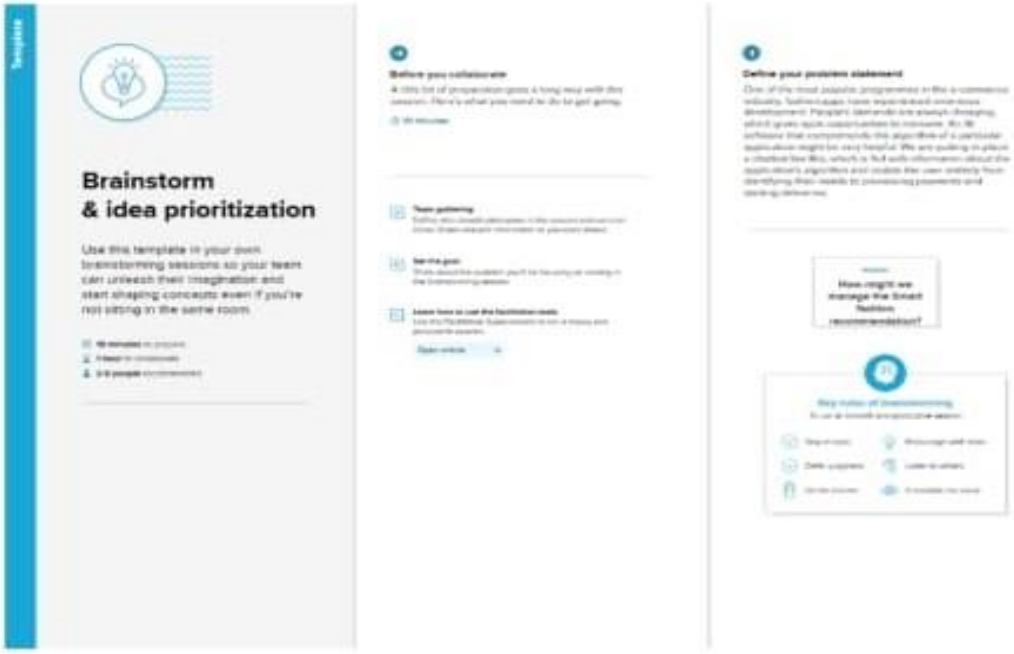
3.2 IDEATION & BRAIN STORMING

Brainstorm & Idea Prioritization

Date	19 September 2022
Team ID	PNT2022TMID50252
Project Name	Smart Fashion Recommender Application
Maximum Mark	4

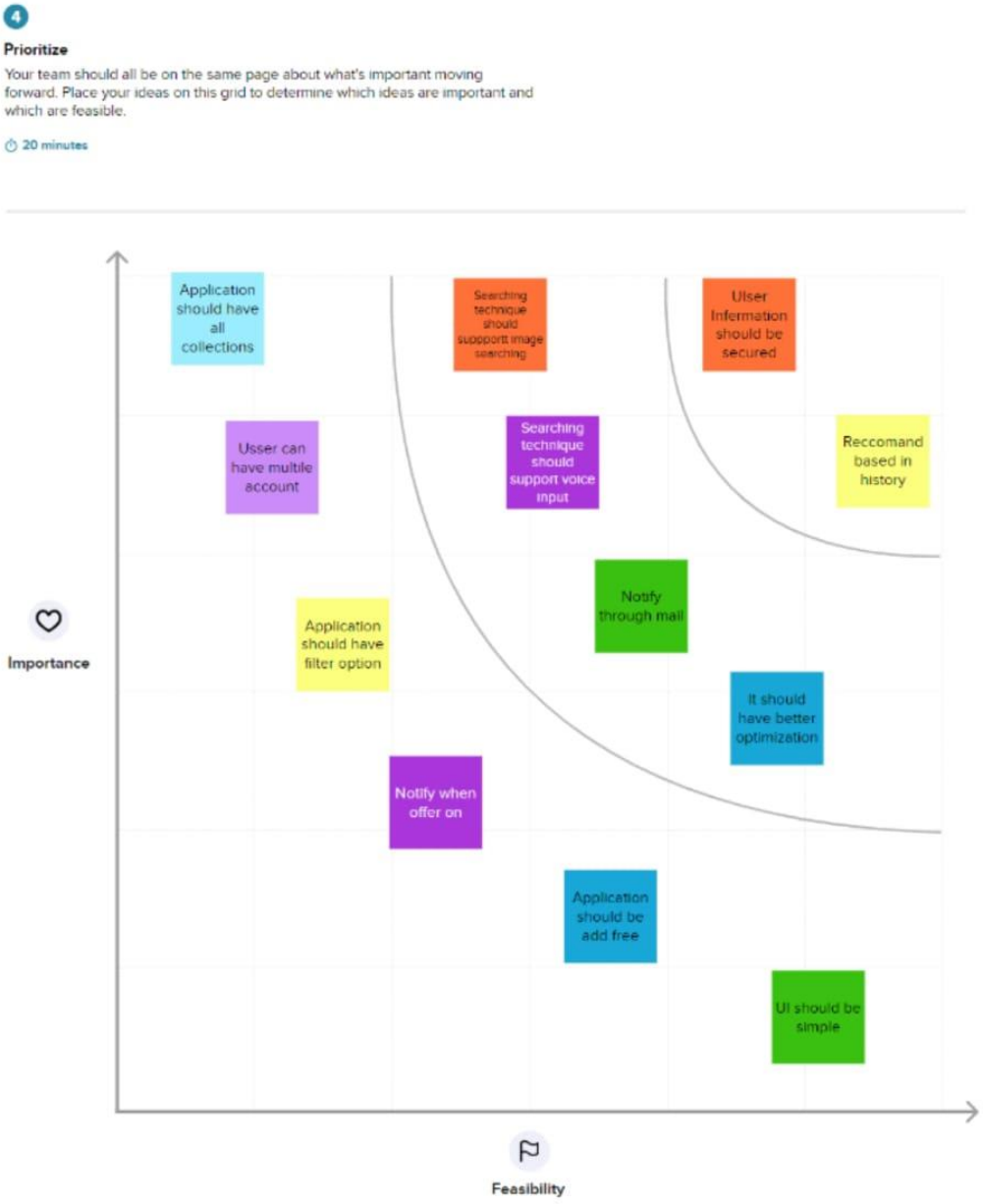
Brainstorm & Idea Prioritization:

Step-1: Team Gathering, Collaboration and Select the Problem Statement



Step-2: Brainstorm, Idea Listing and Grouping

Step-3: Idea Prioritization



3.3 PROPOSED SOLUTION

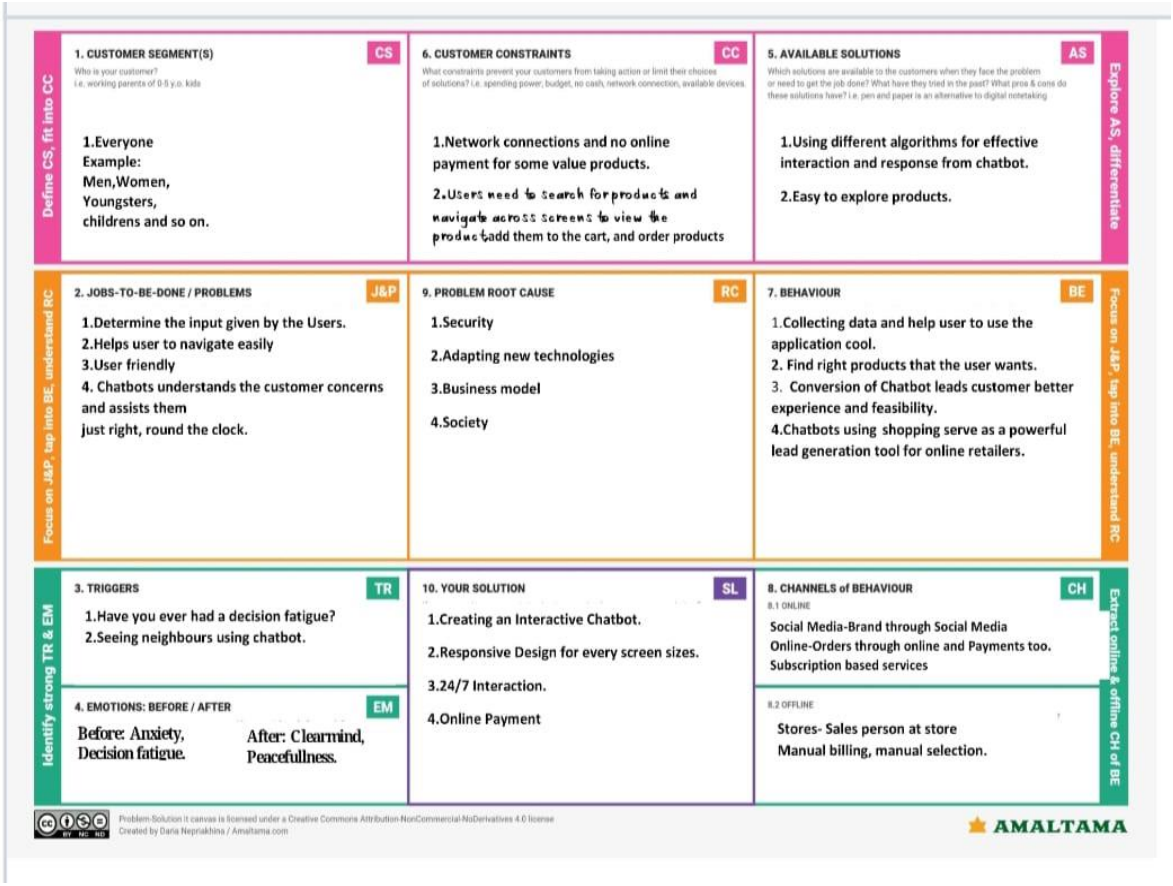
Date	31September 2022
Team ID	PNT2022TMID50252
Project Name	Smart Fashion Recommender Application

Maximum Mark	2

PROPOSED SOLUTION TEMPLATE:

S.NO	Parameter	Description
1	Problem Statement (Problem to be solved)	Customers feels difficult when search many websites to find Fashion clothes and accessories.
2	Idea / Solution description	Customers directly make online shopping based on customer choice without any search.
3	Novelty / Uniquenes	The customer will talk to Chat Bot regarding the products. Get the recommendations based on information provided by the user
4	Social Impact / Customer Satisfaction	The customer will talk to Chat Bot regarding the products. Get the recommendations based on information provided by the user
5	Business Model (Revenue Model)	The chat bot sells our products to customer. Customers buy our products and generate revenue.
6	Scalability of the Solution	We can easily scalable our applications by increases the items and products.

3.4 PROBLEM SOLUTION FIT



CHAPTER 4

REQUIREMENT ANALYSIS

Date	31September 2022
Team ID	PNT2022TMID50252
Project Name	Smart Fashion Recommender Application
Maximum Mark	4

4.1 FUNCTIONAL REQUIREMENTS

Following are the functional requirements of the proposed solution.

FR.NO	Functional Requirements(Epic)	Sub Requirements(Story/Sub-Task)

FR-1	User Registration	Registration through Form
FR-2	User Interaction	Interact through the Chat Bot
FR-3	Buying Products	Through the chat Bot Recommendation
FR-4	Track Products	Ask the Chat Bot to Track my Orders
FR-5	Return Products	Through the Chat Bot
FR-6	New Collections	Recommended from chat Bot

4.2 NON-FUNCTIONAL REQUIREMENTS

Following are the non-functional requirements of the proposed solution.

FR N0.	**Non-functional Requirements**	**Description**
NFR-1	Usability	Using Android or IOS or windows applications
NFR-2	Security	The user data is stored securely in IBM cloud.
NFR-3	Reliability	The Quality of the services are trusted.
NFR-4	Performance	Its Provide smooth user experience.
NFR-5	Availability	The services are available for 24/7.
NFR-6	Scalability	Its easy to scalable size of users and products

CHAPTER 5

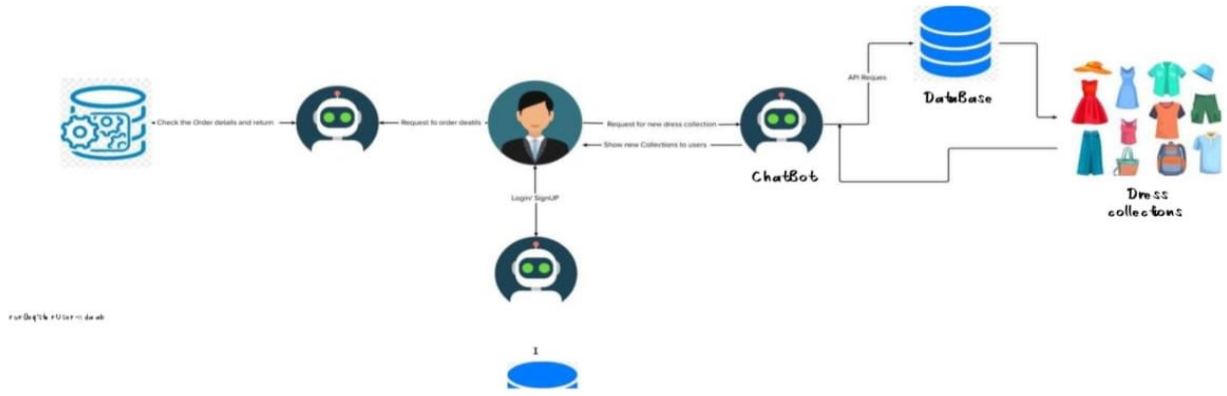
PROJECT DESIGN

5.1 DATA FLOW DIAGRAM

Date	31 October 2022

Team ID	PNT2022TMID50252
Project Name	Smart Fashion Recommender Application
Maximum Mark	4

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



5.2 SOLUTION ARCHITECTURE

Date	31 October 2022
Team ID	PNT2022TMID50252
Project Name	Smart Fashion Recommender Application
Maximum Mark	4

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

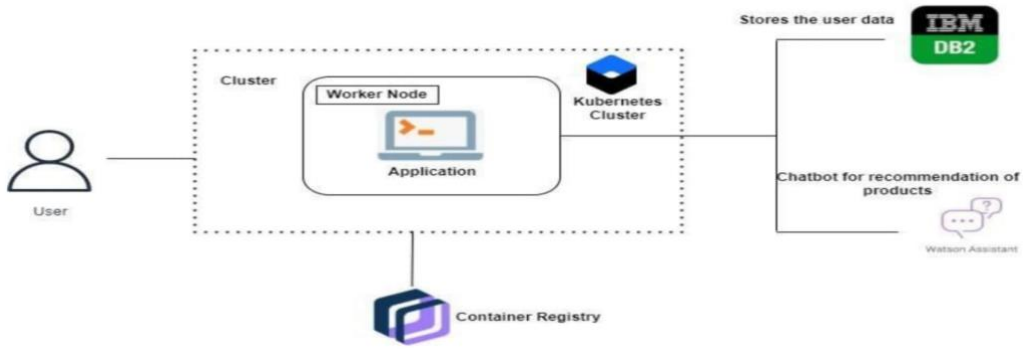
• Find the best tech solution to solve existing business problems.

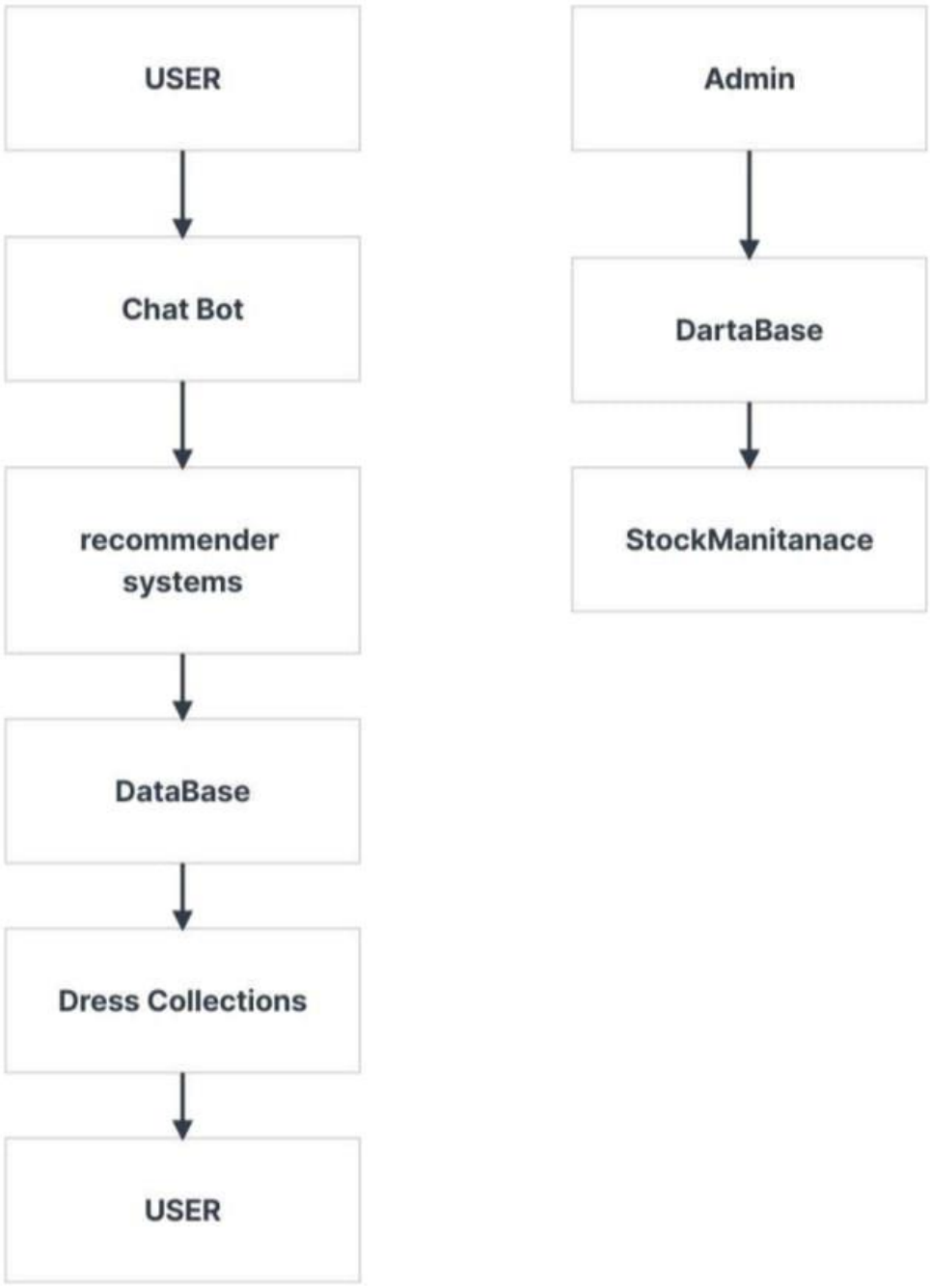
• Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.

• Define features, development phases, and solution requirements.

• Provide specifications according to which the solution is defined, managed, and delivered.

Solution Architecture Diagram:





5.3 USER STORIES

User type	Functional Requirements(Epic)	User Story Number	User Story/Task	Acceptance criteria	Priority	Release

Customer	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint 1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint 2
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint 2
		USN-4	As a user, I can register for the application through Gmail		Medium	Sprint 1
	Login	USN-5	As a user, I can log into the application by entering email & password	I can access my data by login	High	Sprint 1
	Dashboard	USN-6	As a user , I can view the dashboard and by products		High	Sprint 2
Customer (Web user)	Registration/Login	USN-7	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard		Sprint 1
Customer Care Executive	Contact with Customers	USN-8	As a Customer customers care executive, I solve the customer	I can receive calls from customers	High	Sprint 1

			Requirements and feedback			
Administrator	Check stock and Price , orders	USN-9	As a Administrator , I can Check the database And stock details and buying and selling prices	I am the administrator of the company	High	Sprint 2

CHAPTER 6

PROJECT PLANNING & SCHEDULING

6.1 SPRINT PLANNING & ESTIMATION

Date	3 November 2022
Team ID	PNT2022TMID50252
Project Name	Smart Fashion Recommender Application

Title	Description	Date
Literature Survey and Information Gathering	Gathering Information by referring the technical papers, research publications	18 SEPTEMBER 2022
Prepare Empathy Map	Capture user pain and gains Prepare List of Problem Statement	19 SEPTEMBER 2022
Ideation	Prioritise a top 3 ideas based on feasibility and Importance	19 SEPTEMBER 2022
Proposed Solution	Solution include novelty, feasibility, business model, social impact and scalability of solution	31 OCTOBER 2022
Problem Solution Fit	Solution fit document	31 OCTOBER 2022
Solution Architecture	Solution Architecture	31 OCTOBER 2022
Customer Journey	Understanding User Interactions and experiences with application	31 OCTOBER 2022
Functional Requirement	Prepare functional Requirement	31 OCTOBER 2022
Data flow Diagrams	Data flow diagram	31 OCTOBER 2022
Technology Architecture	Technology Architecture diagram	31 OCTOBER 2022
Milestone & sprint delivery plan	Activity what we done &further plans	4 OCTOBER 2022
Project Development Delivery of sprint 1,2,3 & 4	Develop and submit the developed code by testing it	30 OCTOBER 2022 – 20 NOVEMBER 2022

6.2 SPRINT DELIVERY SCHEDULE

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority
Sprint-1	User Panel	USN-1	The user will login into the website and go through the products available on the website	20	High
Sprint-2	Admin panel	USN-2	The role of the admin is to check out the database about the stock and have a track of all the things that the users are purchasing.	20	High
Sprint-3	Chat Bot	USN-3	The user can directly talk to Chatbot regarding the products. Get the recommendations based on information provided by the user.	20	High
Sprint-4	final delivery	USN-4	Container of applications using docker kubernetes and deployment the application. Create the documentation and final submit the application	20	High

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022		29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022		05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022		12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022		19 Nov 2022

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{sprint\ duration}{velocity} = \frac{20}{10} = 2$$

CHAPTER 7

7.1 FEATURES

```
<script>
        window.watsonAssistantChatOptions = {
         integrationID: "aa99a301-b475-445f-abd0-fdd24aaaa3ba", // The ID of this integration.
        region: "au-syd", // The region your integration is hosted in.
           serviceInstanceID: "ee939ca8-d347-49ac-b265-1de85a2c8769", // The ID of your service instance.
           onLoad: function(instance) { instance.render(); }
          };
         setTimeout(function(){
           const t=document.createElement('script');
           t.src="https://web-chat.global.assistant.watson.appdomain.cloud/versions/" + (window.watsonAssistantChatOptions.clientVersion || 'latest') + "/WatsonAssistantChatEntry.js";
           document.head.appendChild(t);
```

```
        });
    </script>
```

7.2 FEATURES

```
import
configparse
r
        import ssl
        ssl._create_default_https_context = ssl._create_unverified_context
        from sendgrid import SendGridAPIClient
        from sendgrid.helpers.mail import Mail]
        /
        config = configparser.ConfigParser()
        config.read("config.ini")
        def
        sendMailUsingSendGrid(API,from_email,to_emails,subject,html_content)
        :
            if API!=None and from_email!= None and len(to_emails)>0:
                message = Mail(from_email,to_emails,subject,html_content)
                try:
                    sg = SendGridAPIClient(API)
                    response = sg.send(message)
                    print(response.status_code)
                    print(response.body)
                    print(response.headers)
                except Exception as e:
                    print(e.message)
        try:
            settings = config["SETTINGS"]
        except:
            settings = {}

        API = settings.get("APIKEY",None)
        from_email = settings.get("FROM",None)
        subject = "TEAM ID PNT2022TMID50252"
        html_content = "Welcome To SRIFIL FASHION Family, You Have
        Successfully Registered :) "
```

CHAPTER 8

CONCLUSION

Using a mobile phone App, people can easily take of photo of the appealing clothes they saw on magazine, web page or even street, then get the recommended clothing with similar fashion

and style in seconds. People can even directly link to the online shopping website to purchase if they like it. When people find a clothes they like but don't know where to buy it or how to find more similar clothing, the Clothing Fashion Style Recommendation System provides a convenient way to help find that. What's more, designed under the concept of Model-View-Presenter, the Clothing Fashion Style Recommendation System provides a highly flexible and extensible framework. For example, the GUI can easily extended to Android or Windows Phone platform and do not need to rewrite the logic and algorithm parts. Also, if we want to significant improve the system in the future, we can let people who good at programming and aesthetic designing work on improve the view (i.e. the GUI), and let others who good at algorithm and researching work on the model (i.e. the Matlab code). In this way, people who develop GUI don't need to know the underlying research and algorithm, and the one who develop the model don't need know the programming for GUI, and also don't need redesign or rewrite their code accordingly if the view changed or added a new view. Thus, this is a well-designed framework for long term maintaining and upgrading.

CHAPTER 9

APPENDIX

SOURCE CODE

```
<!DOCTYPE
html>
                    <html lang="en">
                    <head>
                       <meta charset="UTF-8">
                       <meta http-equiv="X-UA-Compatible" content="IE=edge">
                       <meta name="viewport" content="width=device-width, initial-
                    scale=1.0">
                       <title>SRIFIL</title>
                       <link rel="stylesheet"
                    href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-
                    awesome.min.css">
                       <link rel="stylesheet" href="https://unik.s3.jp-tok.cloud-object-
                    storage.appdomain.cloud/style.css">
                    </head>
```

```
<body>

    <section id="header">


        <div>
            <ul id="navbar">
                <li><a class="active" href="/index">Home</a></li>
                <li><a href="/products">Products</a></li>
                <li><a href="/blog">Blog</a></li>
                <li><a href="/about">About</a></li>
                <li><a href="/contact">Contact</a></li>
                <li><a href="/cart"><i class="fa fa-shopping-
bag"></i></a></li>
                <li><a href="/register"><i class="fa fa-user-
secret"></i></a></li>
            </ul>
    </section>

    <section id="hero">
        <h4>Trade-in-offer</h4>
        <h2>Smart Fashion Recommender</h2>
        <h1>Application</h1>
        <p>Chat with FIND to get personalized products</p>
        <a href="/products"><button class="normal">Shop
now</button></a>
    </section>

    <section id="feature" class="section-p1">
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-
storage.appdomain.cloud/freeship.png" alt="" width="100"
height="100">
            <h6>Free Shipping</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-
storage.appdomain.cloud/orderonline.jpg" alt="" width="100"
height="100">
            <h6>Online Order</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-
storage.appdomain.cloud/savemoney.jpg" alt="" width="100"
height="100">
            <h6>Save Money</h6>
```

```
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-
storage.appdomain.cloud/promotion.jpg" alt="" width="100"
height="100">
            <h6>Promotions</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-
storage.appdomain.cloud/happysell.jpg" alt="" width="100"
height="100">
            <h6>Happy Sell</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-
storage.appdomain.cloud/support.jpg" alt="" width="100" height="100">
            <h6>F24/7 Support</h6>
        </div>
    </section>

    <section id="product1" class="section-p1">
        <h2>Featured Product</h2>
        <p>New Collections New Modern Designs</p>
        <div class="pro-container">
            <div class="pro">
                <img src="https://unik.s3.jp-tok.cloud-object-
storage.appdomain.cloud/shopshirt1.jpg" alt="" >
                <div class="des">
                    <span>adidas</span>
                    <h5>Blue n Brown T-Shirts</h5>
                    <div class="star">
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                    </div>
                    <h4>?1500</h4>
                </div>
                <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
            </div>
             <div class="pro">
                 <img src="https://unik.s3.jp-tok.cloud-object-
storage.appdomain.cloud/shopshirt2.jpg" alt="">
                 <div class="des">
                     <span>adidas</span>
```

```
                    <h5>Blue strip T-Shirts</h5>
                    <div class="star">
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                    </div>
                    <h4>?1570</h4>
                </div>
                <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
            </div>
            <div class="pro">
                <img src="https://unik.s3.jp-tok.cloud-object-
storage.appdomain.cloud/shopshirt3.jpg" alt="">
                <div class="des">
                    <span>adidas</span>
                    <h5>Plain T-Shirts</h5>
                    <div class="star">
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                    </div>
                    <h4>?1400</h4>
                </div>
                <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
            </div>
            <div class="pro">
                <img src="https://unik.s3.jp-tok.cloud-object-
storage.appdomain.cloud/home5.jpg" alt="">
                <div class="des">
                    <span>adidas</span>
                    <h5>Checked T-Shirts</h5>
                    <div class="star">
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                    </div>
                    <h4>?2000</h4>
                </div>
                <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
            </div>
```

```
            <div class="pro">
               <img src="https://s3.jp-tok.cloud-object-
storage.appdomain.cloud/unik/saree.jpg" alt="">
               <div class="des">
                  <span>Banarasi</span>
                  <h5>Georgette Bandhani Rama Blue & Olive Green
Saree</h5>
                  <div class="star">
                     <i class="fa fa-star"></i>
                     <i class="fa fa-star"></i>
                     <i class="fa fa-star"></i>
                     <i class="fa fa-star"></i>
                     <i class="fa fa-star"></i>
                  </div>
                  <h4>?10,000</h4>
               </div>
               <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
            </div>
            <div class="pro">
               <img src="https://s3.jp-tok.cloud-object-
storage.appdomain.cloud/unik/saree1.jpg" alt="">
               <div class="des">
                  <span>Banarasi</span>
                  <h5>Banarasi Silk Jaal Dark Maroon Saree</h5>
                  <div class="star">
                     <i class="fa fa-star"></i>
                     <i class="fa fa-star"></i>
                     <i class="fa fa-star"></i>
                     <i class="fa fa-star"></i>
                     <i class="fa fa-star"></i>
                  </div>
                  <h4>?9000</h4>
               </div>
               <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
            </div>
            <div class="pro">
               <img src="https://s3.jp-tok.cloud-object-
storage.appdomain.cloud/unik/saree2.jpg" alt="">
               <div class="des">
                  <span>Banarasi</span>
                  <h5>Banarasi Silk Buttis Yellow Saree</h5><br>
                  <div class="star">
                     <i class="fa fa-star"></i>
                     <i class="fa fa-star"></i>
                     <i class="fa fa-star"></i>
                     <i class="fa fa-star"></i>
```

```
                        <i class="fa fa-star"></i>
                    </div>
                    <h4>?8000</h4>
                </div>
                <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
            </div>
            <div class="pro">
                <img src="https://s3.jp-tok.cloud-object-
storage.appdomain.cloud/unik/saree3.jpg" alt="">
                <div class="des">
                    <span>Banarasi</span>
                    <h5>Banarasi Silk Jaal Purple Saree</h5><br>
                    <div class="star">
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                    </div>
                    <h4>?6000</h4>
                </div>
                <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
            </div>
        </div>
    </section>

    <section id="banner" class="section-m1">
        <h4>Repair Services</h4>
        <h2>Up to <span>70% off</span> All t-Shirts & Accessories</h2>
        <a href="/products"><button class="normal">Explore
More</button></a>
    </section>

    <section id="product1" class="section-p1">
        <h2>New Arrivals</h2>
        <p>Branded shoe's and T-shirts </p>
        <div class="pro-container">
            <div class="pro">
                <img src="https://s3.jp-tok.cloud-object-
storage.appdomain.cloud/unik/shoe.jpg" height="400" alt="" >
                <div class="des">
                    <span>adidas</span>
                    <h5>Blue Shoe</h5>
                    <div class="star">
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
```

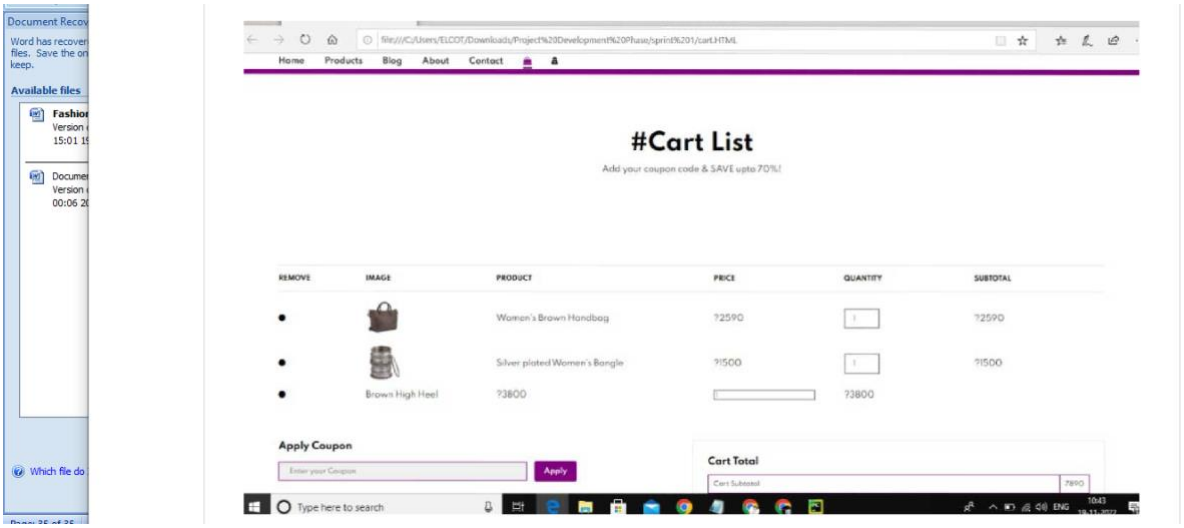
```
                    <i class="fa fa-star"></i>
                    <i class="fa fa-star"></i>
                    <i class="fa fa-star"></i>
                  </div>
                  <h4>?6000</h4>
                </div>
                <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
              </div>
              <div class="pro">
                <img src="https://s3.jp-tok.cloud-object-
storage.appdomain.cloud/unik/shoe1.jpg" height="400" alt="">
                <div class="des">
                  <span>adidas</span>
                  <h5>Brown leather shoe</h5>
                  <div class="star">
                    <i class="fa fa-star"></i>
                    <i class="fa fa-star"></i>
                    <i class="fa fa-star"></i>
                    <i class="fa fa-star"></i>
                    <i class="fa fa-star"></i>
                  </div>
                  <h4>?8000</h4>
                </div>
                <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
              </div>
              <div class="pro">
                <img src="https://s3.jp-tok.cloud-object-
storage.appdomain.cloud/unik/shoe2.jpg" height="400" alt="">
                <div class="des">
                  <span>adidas</span>
                  <h5>Sandle High Heel</h5>
                  <div class="star">
                    <i class="fa fa-star"></i>
                    <i class="fa fa-star"></i>
                    <i class="fa fa-star"></i>
                    <i class="fa fa-star"></i>
                    <i class="fa fa-star"></i>
                  </div>
                  <h4>?6600</h4>
                </div>
                <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
              </div>
              <div class="pro">
                <img src="https://s3.jp-tok.cloud-object-
storage.appdomain.cloud/unik/shoe3.jpg" height="400" alt="">
                <div class="des">
```

```
                    <span>adidas</span>
                    <h5>Brown High Heel</h5>
                    <div class="star">
                       <i class="fa fa-star"></i>
                       <i class="fa fa-star"></i>
                       <i class="fa fa-star"></i>
                       <i class="fa fa-star"></i>
                       <i class="fa fa-star"></i>
                    </div>
                    <h4>?7800</h4>
                 </div>
                 <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
              </div>
              <div class="pro">
                 <img src="https://s3.jp-tok.cloud-object-
storage.appdomain.cloud/unik/tops.jpg" alt="">
                 <div class="des">
                    <span>adidas</span>
                    <h5>Black Smile T-Shirts</h5>
                    <div class="star">
                       <i class="fa fa-star"></i>
                       <i class="fa fa-star"></i>
                       <i class="fa fa-star"></i>
                       <i class="fa fa-star"></i>
                       <i class="fa fa-star"></i>
                    </div>
                    <h4>?900</h4>
                 </div>
                 <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
              </div>
              <div class="pro">
                 <img src="https://s3.jp-tok.cloud-object-
storage.appdomain.cloud/unik/tops1.jpg" alt="">
                 <div class="des">
                    <span>adidas</span>
                    <h5>Pink dog T-Shirts</h5>
                    <div class="star">
                       <i class="fa fa-star"></i>
                       <i class="fa fa-star"></i>
                       <i class="fa fa-star"></i>
                       <i class="fa fa-star"></i>
                       <i class="fa fa-star"></i>
                    </div>
                    <h4>?900</h4>
                 </div>
                 <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
```

```
            </div>
            <div class="pro">
                <img src="https://s3.jp-tok.cloud-object-
storage.appdomain.cloud/unik/tops2.jpg" alt="">
                <div class="des">
                    <span>adidas</span>
                    <h5>Black and White Trendy Shirt</h5>
                    <div class="star">
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                    </div>
                    <h4>?1500</h4>
                </div>
                <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
            </div>
            <div class="pro">
                <img src="https://s3.jp-tok.cloud-object-
storage.appdomain.cloud/unik/tops3.jpg" alt="">
                <div class="des">
                    <span>adidas</span>
                    <h5>Green Panda Shirt</h5>
                    <div class="star">
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                        <i class="fa fa-star"></i>
                    </div>
                    <h4>?600</h4>
                </div>
                <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
            </div>
        </div>
    </section>

    <section id="sm-banner" class="section-p1">
        <div class="banner-box">
            <h4>Crazy Deals</h4>
            <h2>Buy 1 get 1 free</h2>
            <span>The best classic dress is on sale at U Nik</span>
            <a href="/products"><button class="white">Learn More
</button></a>
        </div>
```

```
        <div class="banner-box banner-box2">
            <h4>spring/summer</h4>
            <h2>upcommig seasons</h2>
            <span>The best classic dress is on sale at U Nik</span>
            <a href="/blog"><button class="white">Collection</button></a>
        </div >
    </section>

    <section id="banner3">
        <div class="banner-box">
            <h2>SEASONAL SALE</h2>
            <h3>Winter collection 50% off</h3>
        </div >
        <div class="banner-box banner-box2">
            <h2>SEASONAL SALE</h2>
            <h3>Winter collection 50% off</h3>
        </div >
        <div class="banner-box banner-box3">
            <h2>SEASONAL SALE</h2>
            <h3>Winter collection 50% off</h3>
        </div >
    </section>

    <section id="newsletter" class="section-p1">
        <div class="newstext">
            <h4>Sign up for NewsLetters</h4>
            <p>Get Email updates about our latest shop and <span>special
offer</span>
            </p>
        </div>
        <div class="form">
            <input type="text" placeholder="Your E-mail Address">
            <button class="normal">Sign Up</button>
        </div>
    </section>

    <footer class="section-p1">
        <div class="col">

            <h4>Contact</h4>
            <p><strong>E-Mail: </strong>srifil@gmail.com</p>
            <p><strong>Phone: </strong>1234567890</p>
            <div class="follow">
                <h4>Follow us</h4>
                <div class="icon">
                    <i class="fa fa-facebook-f"></i>
```

```
                <i class="fa fa-twitter"></i>
                <i class="fa fa-instagram"></i>
                <i class="fa fa-pinterest-p"></i>
                <i class="fa fa-youtube"></i>
              </div>
            </div>
          </div>

          <div class="col">
            <h4>About</h4>
            <a href="#">About us</a>
            <a href="#">Delivery Information</a>
            <a href="#">Privacy Policy</a>
            <a href="#">Tearms & Conditions</a>
            <a href="#">Contact us</a>
          </div>

          <div class="col">
            <h4>My Account</h4>
            <a href="#">Sign In</a>
            <a href="#">View Cart</a>
            <a href="#">My Wishlist</a>
            <a href="#">Track my order</a>
            <a href="#">Help</a>
          </div>

      </footer>
          <div class="copyright">
            <center><p> C 2022, PNT2022TMID50252 - Smart Fashion
Recommender Application </p></center>
          </div>




<script src="script.js"></script>

</body>
</html>
```



GITHUB & PROJECT DEMO LINK

https://drive.google.com/file/d/1Si0sPz8aLTLXeYNDAwCH9m5sfEYck9T-/view?usp=drivesdk