

# **ST.JOSEPH'S INSTITUTE OF TECHNOLOGY**



## **Smart Fashion Recommender Application**

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## **CHAPTER – 1**

### **INTRODUCTION**

Fashion is a form of self-expression and autonomy at a particular period and place and in a specific context, of clothing, footwear, lifestyle, accessories, makeup, hairstyle, and body posture. Everything that is defined by the fashion industry as that which is trending. Everything that is considered fashion is available and popularized by the fashion system which is the industry and the media.

Apps are meant to ease the experience of finding items But, oftentimes, getting your purchases in a timely manner is still a problem. Shopping online is meant to be hassle free, but with all the payment and shipping details needed at checkout, the process can be a little tiresome.

The smart fashion recommender application leverages the use of a chat bot to interact with the users, gather information about their preferences, and recommend suitable products to the users. This application has two predefined

roles assigned to the users. Instead of searching products in the search bar and navigating to individual products to find required preferences, this project leverages the use of chat bots to gather all required preferences and recommend products to the user. The solution is implemented in such a way as to improve the interactivity between customers and applications.

## 1.1 OVERVIEW

Fashion applications have seen tremendous growth and are now one of the most used programs in the e-commerce field. The needs of people are continuously evolving, creating room for innovation among the applications. One of the tedious processes and presumably the main activities is choosing what you want to wear. The application also has two main user interfaces - the user and the admin. The users can interact with the chat bot, search for products, order them from the manufacturer or distributor, make payment transactions, track the delivery, and so on. The admin interface enables the user to upload products, find how many products have been bought, supervise the stock availability and interact with the buyer regarding the product as reviews.

## 1.2 PURPOSE

The purpose of a fashion recommendation system is an application that either recommends fashion products such as clothes or allows users to find information and access fashion-related services. Fashion recommendation apps that enable users to browse products from several merchants, add them into one cart, and make a single payment. Crucially, each retailer's inventory must be synced to ensure each item is available. Letting users search for the latest online fashion

trends and making them available to purchase in one place. By reducing the number of online destinations required to browse different products, this type of app can make it less likely for shoppers to abandon their cart midway through their purchase journey.

Most of the time users are confused on what fashion choices to make and what to buy. That is one of the main reasons why users don't proceed further on buying the clothes after picking up a few and adding them to the shopping cart. But a fashion recommendation system can help the user by suggesting what they can go with by analysing their style and taste on fashion, and also with the latest fashion trends trending at the moment. This helps the user to gain confidence in making choices and get a better idea.

## **CHAPTER – 2**

### **LITERATURE SURVEY**

#### **Fashion Recommendation Systems, Models and Methods**

Clothing is a kind of symbol that represents people's internal perceptions through their outer appearance. It conveys information about their choices, faith, personality, profession, social status, and attitude towards life. Therefore, clothing is believed to be a nonverbal way of communicating and a major part of people's outer appearance. Recent technological advancements have enabled consumers to track current fashion trends around the globe, which influence their choices. The fashion choices of consumers depend on many factors, such as demographics, geographic location, individual preferences, interpersonal influences, age, gender, season, and culture. Moreover, previous fashion recommendation research shows that fashion preferences vary not only from country to country but also from city to city. The combination of fashion preferences and the abovementioned factors associated with clothing choices could transmit the image features for a better understanding of consumers' preferences. Therefore, analysing consumers' choices and recommendations is valuable to fashion designers and retailers. Additionally, consumers' clothing choices and product preference data have become available on the Internet in the form of text or opinions and images or pictures. Since these images contain information about people from all around the world, both online and offline fashion retailers are using these platforms to reach billions of users who are active on the Internet. Therefore, e-commerce has become the predominant channel for shopping in recent years. The ability of recommendation systems to provide personalized recommendations and respond quickly to the consumer's choices has contributed significantly to the expansion of e-commerce sales.

This paper presented a review of the fashion recommendation systems, algorithmic models and filtering techniques based on the academic articles related to this topic. The technical aspects, strengths and weaknesses of the filtering techniques have been discussed elaborately, which will help future researchers gain an in-depth understanding of fashion recommender systems. However, the proposed prototypes should be tested in commercial applications to understand their feasibility and accuracy in the retail market, because inaccurate recommendations can produce a negative impact on a customer. Moreover, future research should concentrate on including time series analysis and accurate categorization of product images based on the variation in colour, trend and clothing style in order to develop an effective recommendation system.

### **A Comprehensive review on image based style prediction and online fashion recommendation**

Image analysis, processing, classification, and segmentation have become pivotal in style prediction and fashion recommendation. Fashion retailers have shown an increasingly growing interest in adopting this branch of artificial intelligence in their supply chains. Computer scientists and engineers have published several scholarly works on this topic since the last decade. Based on the previous studies, this is the first academic paper that has presented a comprehensive review on this topic. These scholarly articles are related to image. based style prediction and online fashion recommendation. This is a form of method paper that illustrates research designs of the selected articles and research methods used by the researchers. Both style prediction and online fashion recommendation have been reviewed together in this paper, because study on recommendation systems can facilitate an easy understanding of fashion style prediction and vice versa. Finally, the study will be helpful for fashion retailers and future researchers to understand the nature of style prediction and online fashion recommendation using image



processing techniques. The scientific contribution of this paper is that it has proposed a novel approach of reviewing research methods used in style prediction and fashion recommendation systems. Additionally, the article has also proposed a personalized recommendation model for the image-based fashion recommendation system.

Most image analysis research is mostly based on quantitative approaches and involves developing an experimental model based on convolutional neural networks (CNN). However, researchers that considered both image and text contents used mixed method research design, where researchers conducted qualitative research for text content analysis and quantitative research for image content analysis. Therefore, further research on users' social media should include images containing both texts and facial expressions to make the recommendation system more effective. Future research should concentrate on including time series analysis and accurate categorization of products and images based on variety of colour, trend and style, which would be beneficial to develop an effective recommendation system. More research should be conducted on social media photos, as these photos vary in resolution and technical features compared to celebrity photos with high pixel and brightened background.

### **An Intelligent Personalized Fashion Recommendation System**

It seems every one of us looks forward to knowing the most suitable and fashionable clothing matching in current mass fashion information. The core to develop a fashion clothing matching recommender for clients is fashion multimedia mining. The paper says toughness lies in there is no proper method developed for fashion multimedia mining in the virtual space. The proposed system still faces some technical challenges, such as refined contour extraction of the fashion model in dynamic and complex scenes and mass fashion

multimedia information filter in the virtual space. In this paper it shows the apparent dilemma can be relieved to some extent by an appropriate scheme. In mass fashion multimedia mining, they build an Evolutionary Hierarchical structure for multimedia filters, which reduce the noise information before detailed analysis of the content. Then we integrate soft matting and optical flow to gain the refined contour of the fashion model in dynamic and complex scenes of videos. Based on the refined contour of the fashion model, we analyse skin colour and main colour tone of clothing. Then we take these two features and source the company of video as index to store the fashionable clothing in our fashion library, Cool Change. For the recommender, they employ an interaction model to gain the client's colour and style preference. Then we analyse skin through photos of clients and corresponding company style to personal preference. Finally, they collect three features gained from client interaction as an index to retrieve in Cool Change for recommendation of the most suitable and fashionable clothing matching for clients. The three features are selected style features, clients' skin colour and colour preference.

The proposed system opens the door to extensive future theoretical and empirical research of the fashion industry, not just bringing diversified and personalized recommendations of fashion multimedia information , but also offering a novel platform for the fashion information processing itself in general. Though in this paper we have optimized the methods for mass clothing analysis, there are still room for improvement as to efficiency and accuracy. As the library is not self-renewing, overdue information still remained in the library which might bring negative influence to the recommender.

## 2.1 EXISTING PROBLEM

Most of the fashion apps in the current time are used for purchasing clothes from the available stock. But most of the customers are confused about making a choice

on what to buy. They end up putting a lot of items in the cart, but hesitate to proceed further and buy the product. Sometimes users are not aware of what is available or find it difficult to search the fashion trend they want. Hence this lack of guidance leads to customer dissatisfaction.

## 2.2 REFERENCES

- [1] AbdelFattah, M., Galal, D., Hassan, N., El Zanfaly, D., & Tallent, G. (2017). A sentiment analysis tool for determining the promotional success of fashion images on Instagram. *International Journal of Interactive Mobile Technologies (IJIM)*, 11 (2), 66-73.
- [2] Agarwal, P., Vempati, S., & Borar, S. (2018). Personalizing similar product recommendations in fashion E-commerce. arXiv preprint arXiv:1806.11371.
- [3] Al-Halah, Z., Stiefelhagen, R., & Grauman, K. (2017). Fashion forward: Forecasting visual style in fashion. Paper presented at the Proceedings of the IEEE International Conference on Computer Vision.
- [4] Chen, J.-C., & Liu, C.-F. (2017). Deep net architectures for visual-based clothing image recognition on large databases. *Soft Computing*, 21 (11), 2923-2939.
- [5] Grauman, K. (2020). Computer vision for fashion: From individual recommendations to world-wide trends. Paper presented at the Proceedings of the 13th International Conference on Web Search and Data Mining.

## 2.3 PROBLEM STATEMENT DEFINITION

In most e-commerce applications, there are no proper recommendations and there is a lack of personalized suggestions which leads to a bad user experience. This results in negative feedback and reviews from the public and ultimately to the failure of the application. Sometimes these applications are not updated with the latest trends and styles which the user expects to see on the website. This is a huge contributing factor for user dissatisfaction

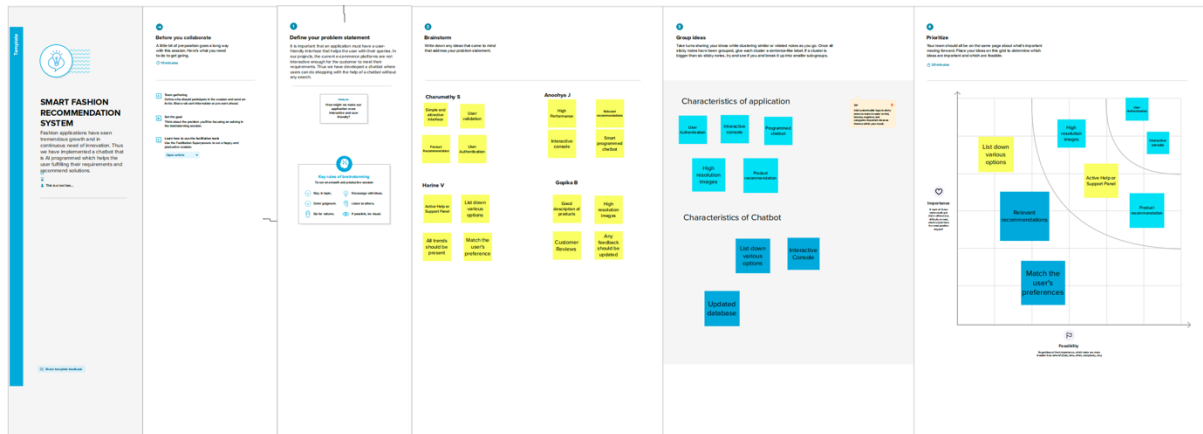
## CHAPTER-3

### IDEATION & PROPOSED SOLUTION

#### 3.1 EMPATHY MAP CANVAS



## 3.2 IDEATION BRAINSTORMING



## 3.3 PROPOSED SOLUTION

Due to the lack of fashion recommendation in online clothing applications, we develop a chatbot application to recommend fashion ideas to the users. The chatbot application is maintained up to date with the upcoming trends to provide unique and fresh clothing options. Customers are provided with more accurate and personalized suggestions which lead to customer satisfaction. Luxury and premium brands can be promoted on this application to generate more revenue. This application is highly scalable. It can also provide many related suggestions along with the requested ones.

### 3.4 PROPOSED SOLUTION FIT

Project Title: Smart Fashion Recommendation System			Project Design Phase-I - Solution Fit			Team ID: PNT2022TMID28063		
Define CS, fit into CC	<b>1. CUSTOMER SEGMENT(S)</b> <span>CS</span>  Who is your customer?  All age group people including teenagers and adults.	<b>6. CUSTOMER CONSTRAINTS</b> <span>CC</span>  What constraints prevent your customers from taking action or limit their choices of solutions?  Due to synonymy, the system might get confused on providing suggestions.	<b>5. AVAILABLE SOLUTIONS</b> <span>AS</span>  Which solutions are available to customers when they face a problem or need to get the job done? What are the pros and cons of the solution?  They can use chatbot whenever they feel stuck or the application shows irrelevant suggestions.	Explore AS, differentiate				
	<b>2. JOBS-TO-BE-DONE / PROBLEMS</b> <span>J&amp;P</span>  Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides. Customers are provided with more accurate and personalized suggestions which lead to customer satisfaction.	<b>9. PROBLEM ROOT CAUSE</b> <span>RC</span>  What is the real reason that this problem exists? What is the back story behind the need to do this job? Sometimes the personalized recommendation system might get confused with using same words for different products.	<b>7. BEHAVIOUR</b> <span>BE</span>  What does your customer do to address the problem and get the job done? Customers can provide feedback when they want a special feature or new addition. They can approach HELP option when want guidance for the application.		Focus on J&P, fit into BE, understand RC			
	<b>3. TRIGGERS</b> <span>TR</span> What triggers customers to act? Seeing their friends and acquaintances following the latest trends offers in popular luxury brands and improving their fashion style.  <b>4. EMOTIONS: BEFORE / AFTER</b> <span>EM</span> How do customers feel when they face a problem or a job afterward?  Customers will feel low and disturbed than feeling confident and motivated.	<b>10. YOUR SOLUTION</b> <span>SL</span> If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality. If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behavior  Can give the options to the customers and make them select on the product they specified.	<b>8. CHANNELS of BEHAVIOUR</b> <span>CH</span> <b>8.1 ONLINE</b> What kind of actions do customers take online? Extract online channels from #7 Customers can precisely mention whatever products they need. <b>8.2 OFFLINE</b> What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development. Customers can get help from the people working in the store.					

## CHAPTER – 4

### REQUIREMENT ANALYSIS

#### 4.1 FUNCTIONAL REQUIREMENT

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement	Sub Requirement( Story / Sub-Task)
FR - 1	User Registration	Registration through form
Fr - 2	User Confirmation	Confirmation via OTP
FR - 3	User Interaction	Using chatbot
FR - 4	Scrolling through products and buying products	Using form
FR - 5	Track and return products	Using chatbot
FR - 6	New Collections	Recommendation using chatbot

#### 4.2 NON-FUNCTIONAL REQUIREMENT

FR No.	Non-Functional Requirement	Description
NFR - 1	Usability	Using android app
NFR - 2	Security	User confirmation is done using OTP verification and data is securely stored in cloud
NFR - 3	Reliability	Completely defect free, does not create downtime
NFR - 4	Performance	Provides user friendly experience
NFR - 5	Availability	Available all day and night
NFR - 6	Scalability	Handles growing user base smoothly

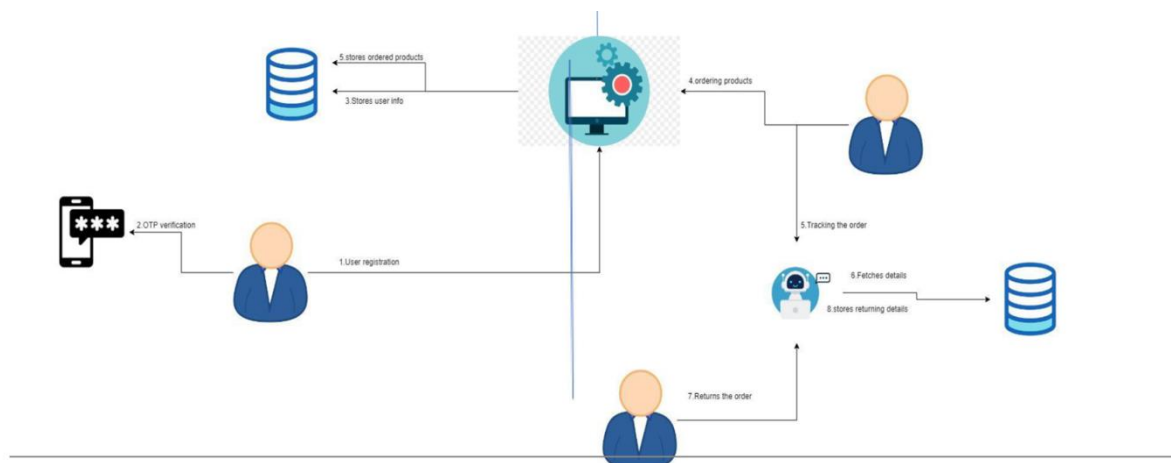


## CHAPTER-5

### PROJECT DESIGN

#### 5.1 DATA FLOW DIAGRAMS

The classic visual representation of how information moves through a system is a data flow diagram (DFD). A tidy and understandable DFD can graphically represent the appropriate quantity of the system demand. It demonstrate how information enters and exits the system, what modifies the data, and where information is kept.



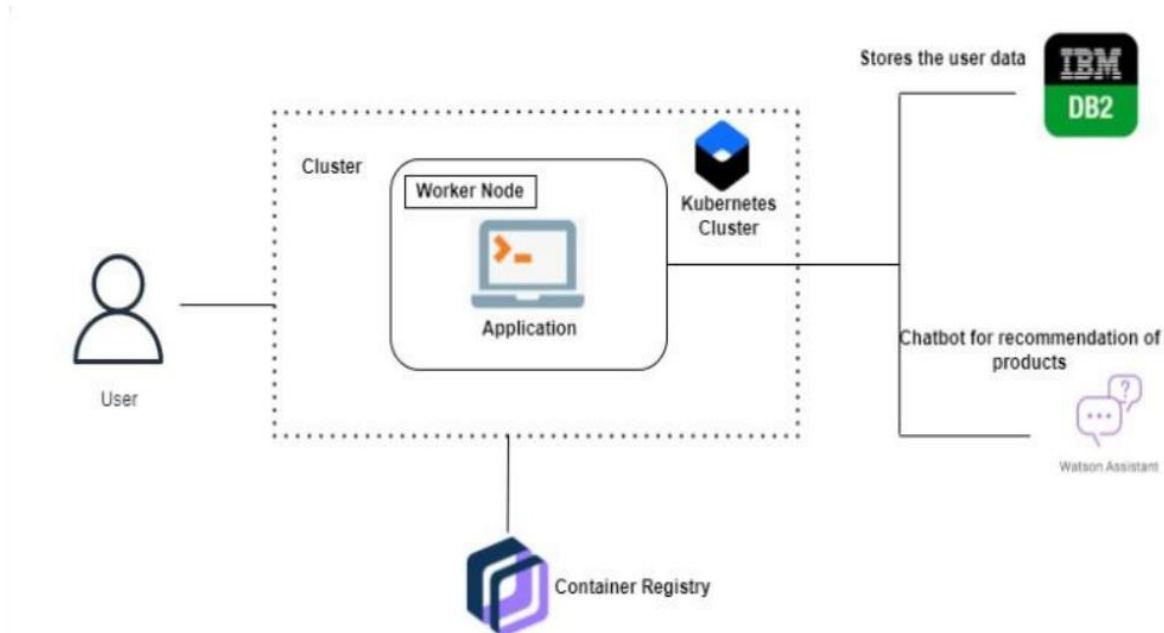
#### 5.2 SOLUTION & TECHNICAL ARCHITECTURE

We have developed a new innovative solution through which you can directly do your online shopping based on your choice without any search. It can be done by using the chatbot. In this project you will be working on two modules:

- Admin
- User

Instead of searching for products in the search bar and navigating to individual products to find required preferences, this project leverages the use of chatbots to gather all required preferences and recommend products to the user.

The solution is implemented in such a way as to improve the interactivity between customers and applications. The chatbot sends messages periodically to notify offers and preferences. For security concerns, this application uses a token to authenticate and authorize users securely. The token has encoded user id and role. Based on the encoded information, access to the resources is restricted to specific users.



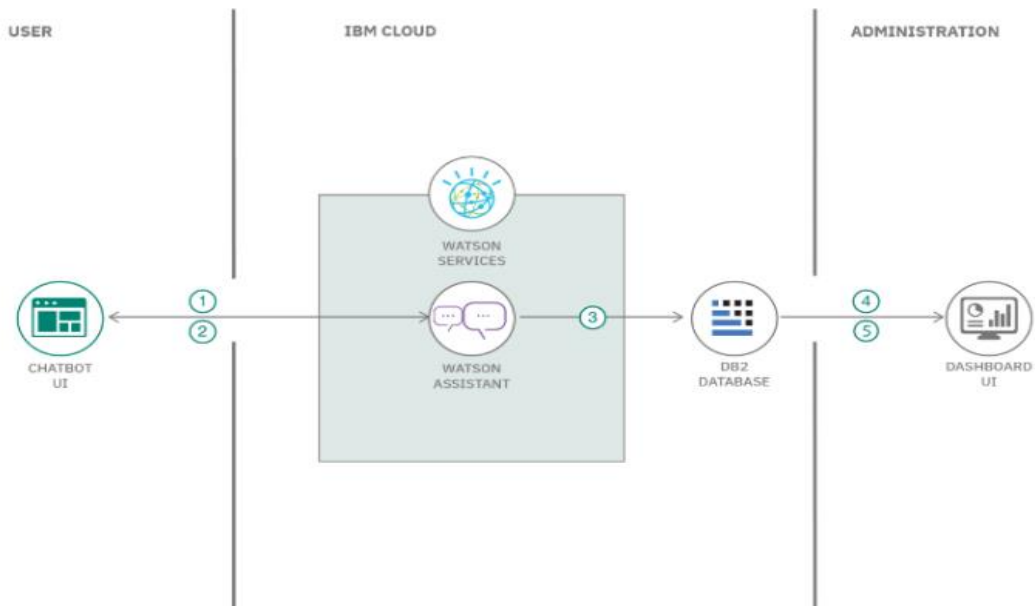
**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface	How the user interacts with application e.g. Web UI, App, Chatbot, etc.	HTML, CSS, JavaScript
2.	Application logic – 1	Login for a process in the application	Python
3.	Application Logic - 2	Login for a process in the application	IBM Watson STT service
4.	Application Logic - 3	Login for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configuration etc.	MySQL
6.	Cloud Database	Database Service on Cloud	IBM DB2
7.	File Storage	File Storage requirements	IBM Block Storage or Local FileSystem
8.	External AP-1	Purpose of External API used in the application	IBM Weather API, etc

9.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration:	Local, Cloud Foundry, Kubernetes, etc.

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask	Python
2.	Security Implementations	User Authentication	e.g. SHA-256, Encryption, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Technology used
4.	Availability	24x7	IBM Cloud
5.	Performance	500 requests per sec	Watson studio



### 5.3 USER STORIES

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	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 SMS once I Have registered for the application	I can receive confirmation SMS & click confirm	High	Sprint-1
		USN-3	As a user, I will receive OTP once I have registered for the application	I can complete my verification process through OTP	High	Sprint-1
	Login	USN-4	As a user, I can log into the application by entering mobile no and OTP		High	Sprint-1
	Login	USN-5	As a user, I can view the dashboard	I can access my account	High	Sprint-2
	Dashboard	USN-6	As a user,I can view the dashboard	I can access my dashboard	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		Medium	Sprint-2
Customer Care Executive	Interact with customer	USN-8	As a Customer care executive, I solve the customer Requirements and feedback	Interacting with customer through phone calls		Sprint-2
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 admin all the database and stock details		Sprint-1

## CHAPTER-6

### PROJECT PLANNING & SCHEDULING

#### 6.1 SPRINT PLANNING & ESTIMATION

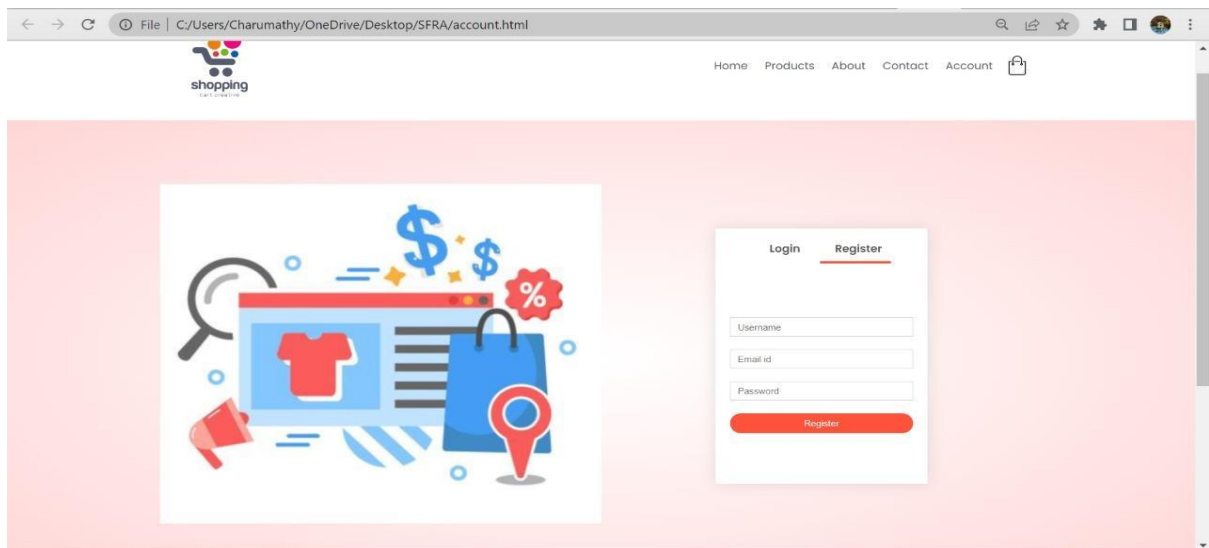
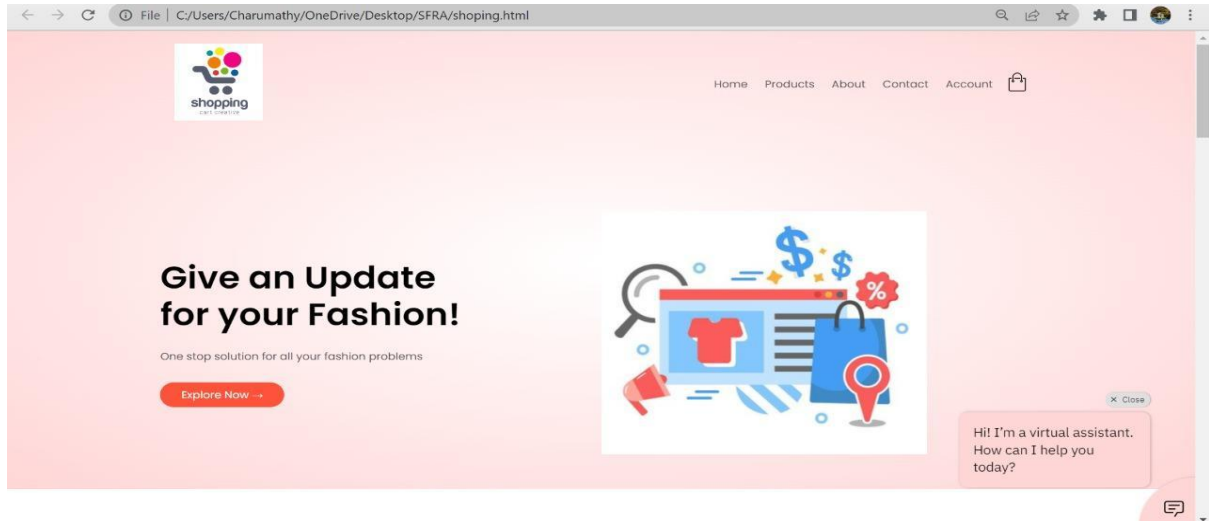
Sprint	Functional Requirements (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	User Registration	USN-1	Users can register for the application by entering their email, and password, and confirming their password.	2	High	Charumathy S Anoohya J Harine V Gopika B
Sprint-1	User Login	USN-1	Users will login to the website by entering their registered email and password	1	High	Charumathy S Anoohya J Harine V Gopika B
Sprint-2	Administration	USN-2	The role of the admin is to check out the database about the stock and have track of all the things that the users are purchasing	2	Low	Charumathy S Anoohya J Harine V Gopika B
Sprint-3	ChatBot	USN-3	The user can directly talk to Chatbot regarding the products. Get the recommendations based on information provided by the user	2	Medium	Charumathy S Anoohya J Harine V Gopika B
Sprint-4	Final Deliverables	USN-4	Container of applications using Kubernetes and Docker deployment of the application. Create the documentation and finally submits the application	1	High	Charumathy S Anoohya J Harine V Gopika B

## 6.2 SPRINT DELIVERY SCHEDULE

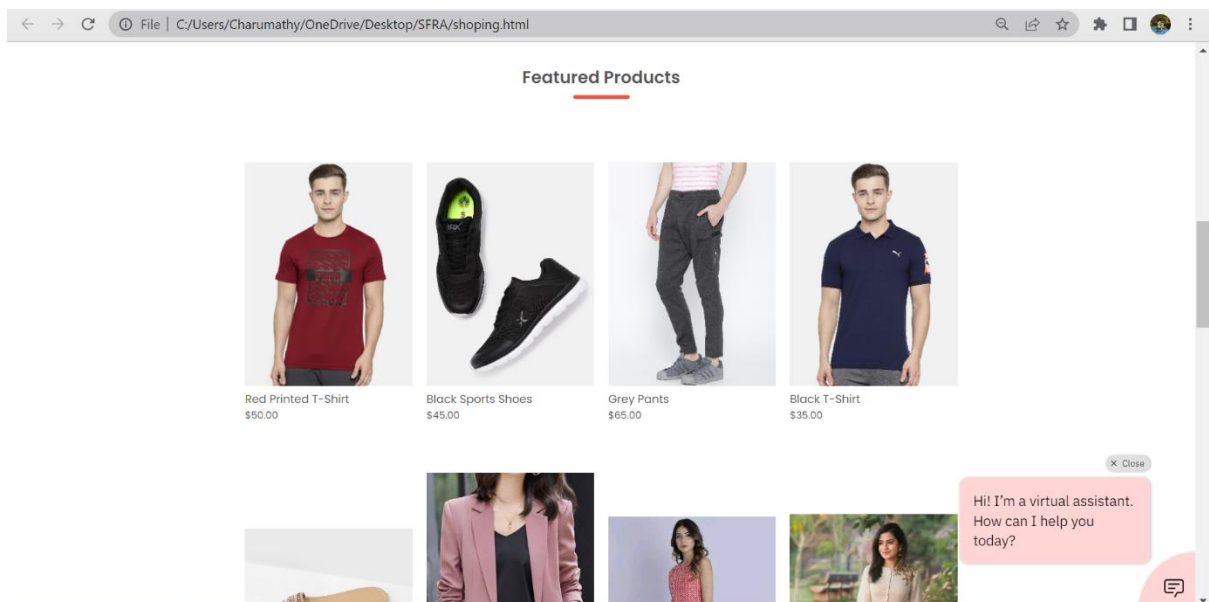
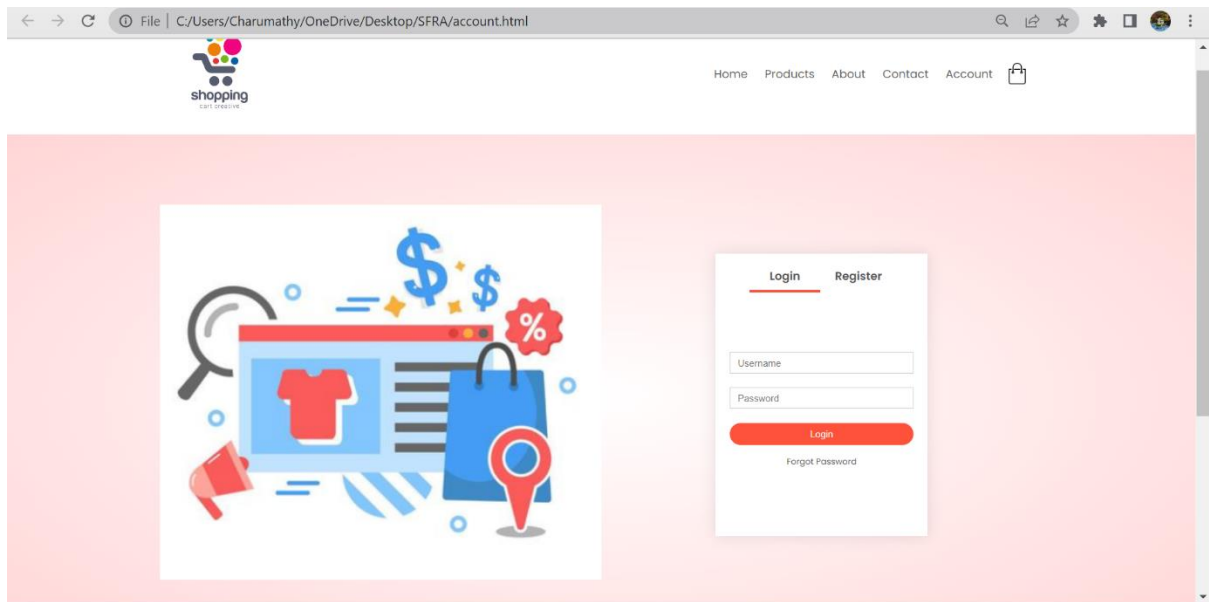
Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (planned)	Story Points Completed (as on Planned End Date)	Sprint Released Date (Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 oct 2022		29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022		
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022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

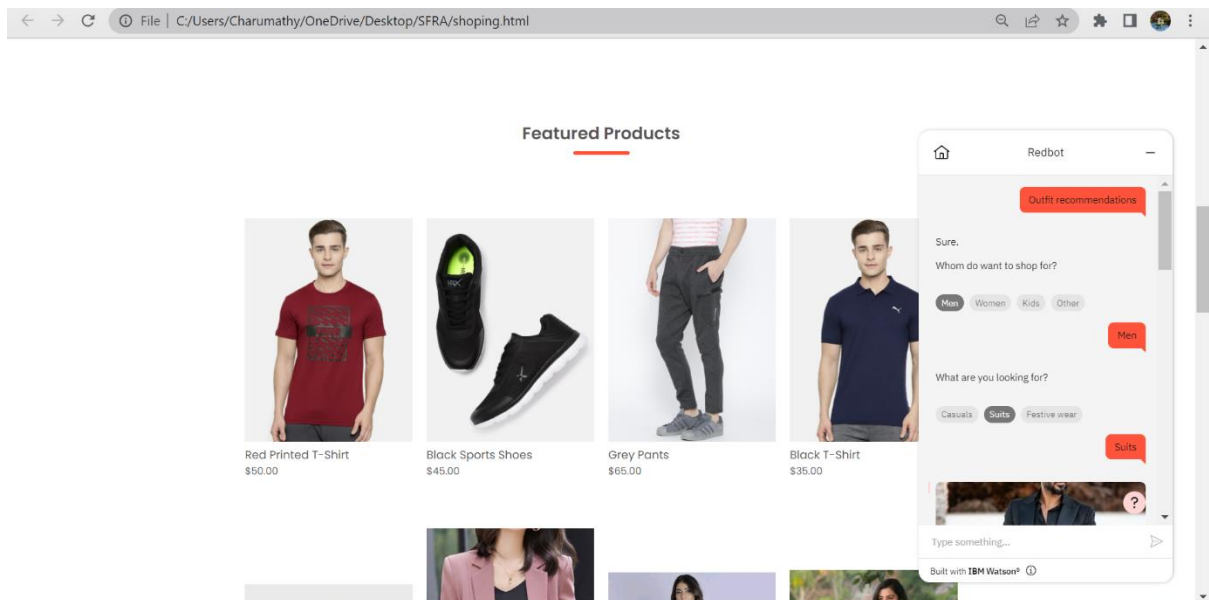
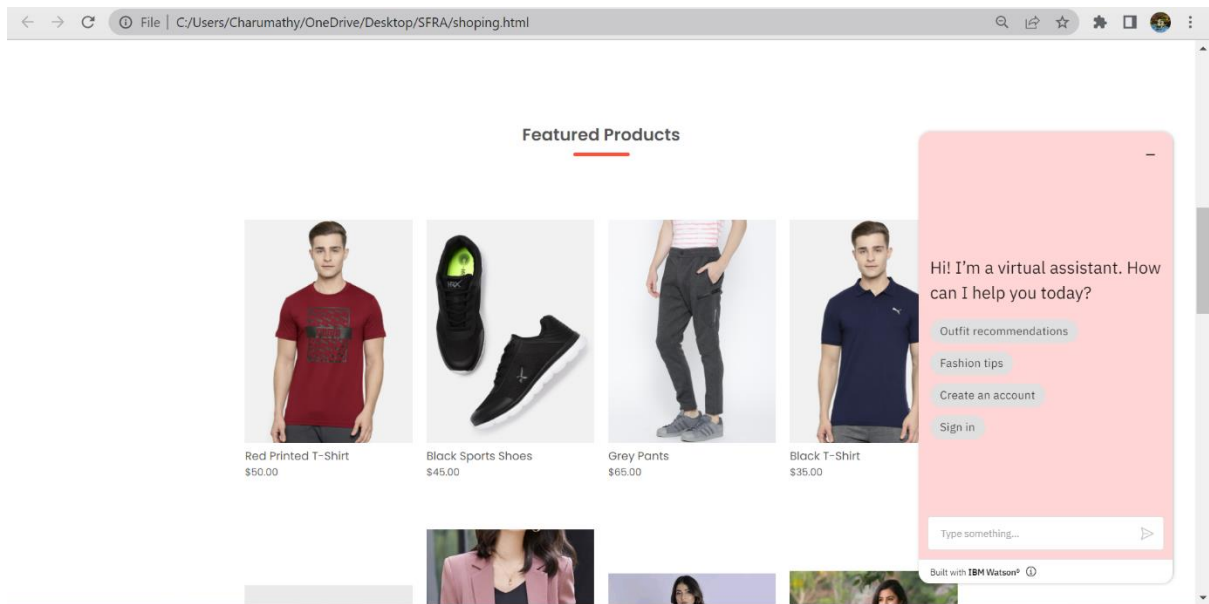
## CHAPTER 7

### OUTPUT











← → ↻ ⓘ File | C:/Users/Charumathy/OneDrive/Desktop/SFRA/shoping.html 🔍 📁 ☆ ⚙️ 🖨️ 🌐


### Featured Products




Red Printed T-Shirt  
\$50.00




Black Sports Shoes  
\$45.00




Grey Pants  
\$65.00



Black T-Shirt  
\$35.00



file:///C:/Users/Charumathy/OneDrive/Desktop/SFRA/product-details.html



Redbot

Type something...

Built with IBM Watson® ⓘ


← → ↻ ⓘ File | C:/Users/Charumathy/OneDrive/Desktop/SFRA/shoping.html 🔍 📁 ☆ ⚙️ 🖨️ 🌐

Red Printed T-Shirt  
\$50.00


Black Sports Shoes  
\$45.00

Grey Pants  
\$65.00


Black T-Shirt  
\$35.00




Beaded Sandals  
\$30.00



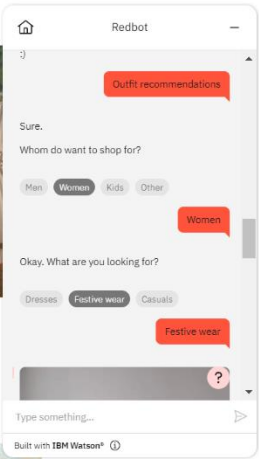
Pink Blazer for Women  
\$80.00



Casual Kurti Set  
\$150.00



White Anarkali Top  
\$60.00



Redbot

Outfit recommendations

Sure.

Whom do want to shop for?

Man **Woman** Kids Other

Women

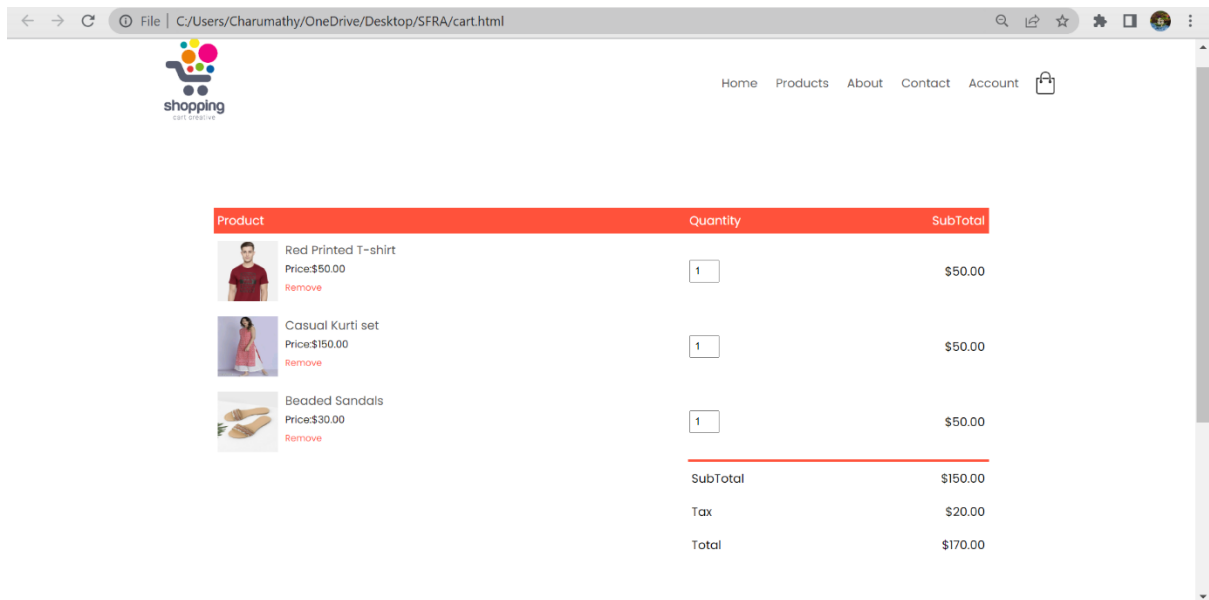
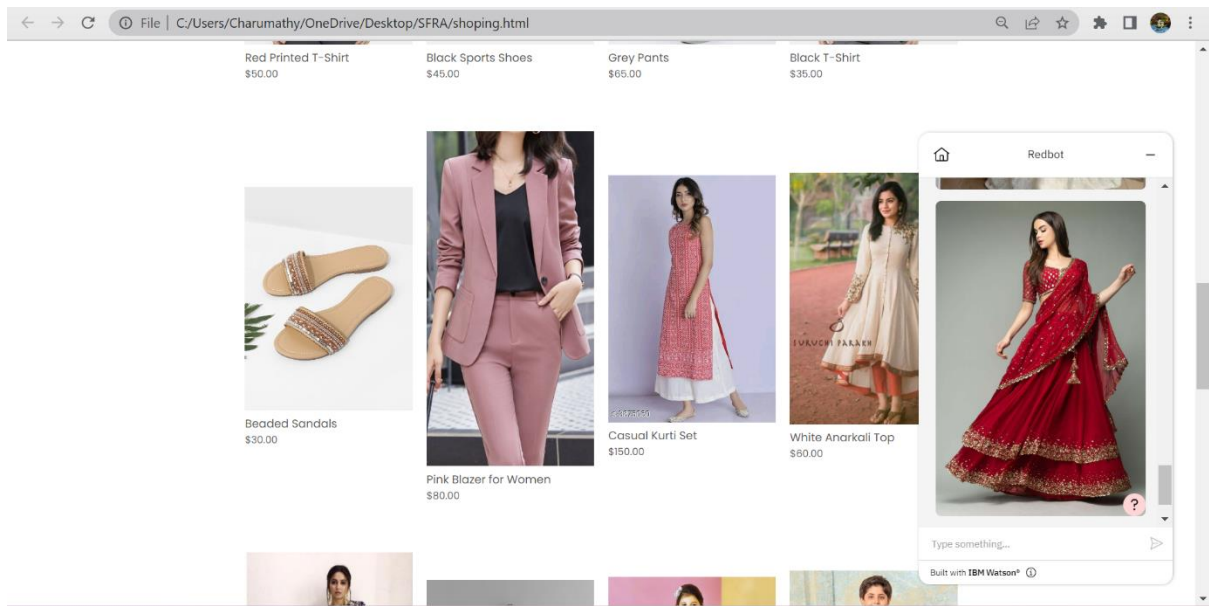
Okay. What are you looking for?

Dresses **Festive wear** Casuals

Festive wear

Type something...

Built with IBM Watson® ⓘ



## **CHAPTER 8**

### **ADVANTAGES AND DISADVANTAGES**

The fashion recommendation system application is very user-friendly and provides its service with ease using the chatbot. It provides recommendations to users and helps them to make choices while shopping which provides them comfort during the process. It is also very easy to search for the desired products in this application.

Even though it is beneficial in multiple ways, still there are slight chances for the customer to be not satisfied with the recommendations provided to them. There are rare chances for a glitch to occur during the process which can irritate the customer

## **CHAPTER 9**

### **CONCLUSION**

Most of the fashion applications online are only for shopping, but our fashion recommendation system application helps the customer during the purchase by providing recommendations based on their style and choices using an user friendly chatbot. It also provides user authentication to protect the personal information provided during registration and checkout. The chatbot is multi-functional as it helps to create an account, sign in, provides fashion tips and gives outfit recommendations. It helps customers to make choices faster without confusion.

## **CHAPTER 10**

### **FUTURE SCOPE**

This model is an user friendly application that helps customers with fashion tips and fashion recommendations using a chatbot. The application can be further enhanced by adding voice recognition to provide more authentication and also be used for chatting with the chatbot. Realtime offers on international brands can be provided to grow the application on a larger scale. The model can also let famous designers use this platform to sell and promote their products to everyone globally.

## APPENDIX

### SOURCE CODE

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>RedStore | Onestop Solution</title>
    <link rel="stylesheet" href="shopping.css">
    <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@300;400;500;6
00&display=swap" rel="stylesheet">
    <link rel="stylesheet"
href="https://cdn.jsdelivr.net/npm/@fortawesome/fontawesome-
free@6.2.0/css/fontawesome.min.css">
  </head>
  <body>

    <div class="header">
      <div class="container">
        <div class="navbar">
          <div class="logo">
            <a href="shopping.html"></a>
          </div>
          <nav>
            <ul id="MenuItems">
              <li><a href="shopping.html">Home</a></li>
              <li><a href="product.html">Products</a></li>
              <li><a href="">About</a></li>
              <li><a href="">Contact</a></li>
              <li><a href="account.html">Account</a></li>
            </ul>
          </nav>
          <a href="cart.html"></a>
          
        </div>
      </div>
    </div>
  </body>
</html>
```



```

    <div class="row">
      <div class="col-2">
        <h1> Give an Update <br> for your Fashion!</h1>
        <p>One stop solution for all your fashion problems</p>
        <a href="" class="btn">Explore Now &#8594;</a>
      </div>
      <div class="col-2">
        
      </div>
    </div>
  </div>
</div>
<!--categories-->
<div class="categories">
  <div class="small-container">
    <div class="row">
      <div class="col-3">
        
      </div>
      <div class="col-3">
        
      </div>
      <div class="col-3">
        
      </div>
    </div>
  </div>
</div>
</div>

<!--featured categories-->
<div class="small-container">
  <h2 class="title">Featured Products</h2>
  <div class="row">
    <div class="col-4">
      <a href="product-details.html"></a>
      <a href="product-details.html"><h4>Red Printed T-Shirt</h4></a>
      <p>$50.00</p>
    </div>
    <div class="col-4">
      
      <h4>Black Sports Shoes</h4>
      <p>$45.00</p>
    </div>
  </div>
</div>

```

```
</div>
<div class="col-4">
  
  <h4>Grey Pants</h4>
  <p>$65.00</p>
</div>
<div class="col-4">
  
  <h4>Black T-Shirt</h4>
  <p>$35.00</p>
</div>
<div class="col-4">
  
  <h4>Beaded Sandals</h4>
  <p>$30.00</p>
</div>
<div class="col-4">
  
  <h4>Pink Blazer for Women</h4>
  <p>$80.00</p>
</div>
<div class="col-4">
  
  <h4>Casual Kurti Set</h4>
  <p>$150.00</p>
</div>
<div class="col-4">
  
  <h4>White Anarkali Top</h4>
  <p>$60.00</p>
</div>
<div class="col-4">
  
  <h4>Festive Wear Lehenga</h4>
  <p>$1000.00</p>
</div>
<div class="col-4">
  
  <h4>White CropTop</h4>
  <p>$50.00</p>
</div>
<div class="col-4">
  
```

```

        <h4>Kids Frock</h4>
        <p>$100.00</p>
    </div>
    <div class="col-4">
        
        <h4>Festive wear for Boys</h4>
        <p>$90.00</p>
    </div>
    <div class="col-4">
        
        <h4>Nude Heels</h4>
        <p>$100.00</p>
    </div>

</div>
</div>
<!-------brandds-->
<div class="brands">
    <div class="small-container">
        <div class="row">
            <div class="col-5">
                
            </div>
            <div class="col-5">
                
            </div>
            <div class="col-5">
                
            </div>
            <div class="col-5">
                
            </div>
            <div class="col-5">
                
            </div>
        </div>
    </div>
</div>
</div>

<!-------footer----->
<div class="footer">
    <div class="container">

```

```

<div class="row">
  <div class="footer-col-1">
    <h3>Download our app</h3>
    <div class="app-logo">
      
      
    </div>
  </div>
  <div class="footer-col-2">
    
    <p>Our Purpose is to make everyone fashionable</p>
  </div>
  <div class="footer-col-3">
    <h3>Useful links</h3>
    <ul>
      <li>Coupons</li>
      <li>BLogs</li>
      <li>Return Policy</li>
      <li>Join Affliate</li>
    </ul>
  </div>
  <div class="footer-col-4">
    <h3>Follow us</h3>
    <ul>
      <li>Facebook</li>
      <li>Twitter</li>
      <li>Instagram</li>
      <li>Youtube</li>
    </ul>
  </div>
</div>
<hr>
</div>
</div>
<!------->
<script>
  var MenuItems=document.getElementById("MenuItems");
  MenuItems.style.maxHeight="0px";

  function menutoggle(){
    if(MenuItems.style.maxHeight=="0px"){
      MenuItems.style.maxHeight="200px"
    }
  }
</script>

```

```

    }
    else{
        MenuItems.style.maxHeight="0px"
    }
}
</script>
<!------->
<script>
    window.watsonAssistantChatOptions = {
        integrationID: "065329ed-e0c8-4387-a856-78690c8b7377", // The ID
of this integration.
        region: "au-syd", // The region your integration is hosted in.
        serviceInstanceID: "7a3f2784-5997-4397-af18-142a67d5f008", // 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>

</body>
</html>

*{
    margin: 0;
    padding: 0;
    box-sizing: border-box;

}
body{
    font-family: 'Poppins', sans-serif;
}

```

```
.navbar{
  display: flex;
  align-items: center;
  padding: 20px;
}
nav{
  flex: 1;
  text-align: right;
}
nav ul{
  display:inline-block;
  list-style-type: none;
}
nav ul li{
  display: inline-block;
  margin-right: 20px;
}
a{
  text-decoration: none;
  color:#555;
}
p{
  color:#555;
}

.container{
  max-width: 1300px;
  margin:auto;
  padding-left: 25px;
  padding-right: 25px;
}
.row{
  display: flex;
  align-items: center;
  flex-wrap: wrap;
  justify-content: space-around;
}
.col-2{
  flex-basis:50%;
  min-width: 300px;
}
```

```
.col-2 img{
    max-width: 100%;
    padding: 50px 0;
}
.col-2 h1{
    font-size: 50px;
    line-height: 60px;
    margin: 25px 0;
}
.btn{
    display:inline-block;
    background:#ff523b;
    color:#fff;
    padding: 8px 30px;
    margin: 30px 0;
    border-radius: 30px;
    transition: background 0.5s;
}
.btn:hover{
    background: #563434;
}

.header{
    background: radial-gradient(#fff,#ffd6d6);
}

.header .row{
    margin-top: 70px;
}
.categories{
    margin: 70px;
}
.col-3{
    flex-basis: 30%;
    min-width: 250px;
    margin-bottom: 30px;
}
.col-3 img{
    width: 100%;
}
.small-container{
    max-width: 1080px;
```

```
    margin: auto;
    padding-left: 25px;
    padding-right: 25px;
}

.col-4{
    flex-basis: 25%;
    padding: 10px;
    min-width: 200px;
    margin-bottom: 50px;
    transition: tranform 0.5s;
}
.col-4 img{
    width: 100%;
}
.title{
    text-align: center;
    margin: 0 auto 80px;
    position: relative;
    line-height: 60px;
    color: #555;
}

.title::after{
    content: ";
    background: #ff523b;
    width: 80px;
    height: 5px;
    border-radius: 5px;
    position: absolute;
    bottom: 0;
    left: 50%;
    transform: translateX(-50%);
}
h4{
    color: #555;
    font-weight: normal;
}
.col-4 p{
    font-size: 14px;
}
.col-4: hover{
    transform: translateY(-5px);
```



```
}
.brands{
    margin: 100px auto;

}
.col-5{
    width: 160px;
}
.col-5 img{
    width: 100%;
    cursor: pointer;
    filter: grayscale(100%);
}
.col-5 img:hover{
    filter: grayscale(0);
}

.footer{
    background: #555;
    color: #8a8a8a;
    font-size: 14px;
    padding: 60px 0 20px;
}
.footer p{
    color:#8a8a8a
}
.footer h3{
    color: #fff;
    margin-bottom: 20px;
}

.footer-col-1,.footer-col-2,.footer-col-3,.footer-col-4{
    min-width: 250px;
    margin-bottom: 20px;
}
.footer-col-1{
    flex-basis: 30%;
}
.footer-col-2{
    flex:1;
    text-align: center;
}
```

```

.footer-col-2 img{
    width: 180px;
    margin-bottom: 20px;
}

.footer-col-3,.footer-col-4{
    flex-basis: 12%;
    text-align: center;
}
ul{
    list-style-type: none;
}

.app-logo{
    margin-top: 20px;
}
.app-logo img{
    width: 140px;
}
.menu-icon{
    width: 28px;
    margin-left: 20px;
    display: none;
}
/*-----*/
.row-2{
    justify-content: space-between;
    margin: 100px auto 50px;

}
select{
    border: 1px solid #1b0705;
    padding: 5px;
}
select:focus{
    outline: none;
}
.page-btn{
    margin:auto 0 auto 80px;
}
.page-btn span{
    display: inline-block;
    border: 1px solid #ff523b;

```

```

    margin-left:10px;
    width: 40px;
    height: 40px;
    text-align: center;
    line-height: 40px;
    cursor: pointer;
}
.page-btn span:hover{
    background: #ff523b;
    color: #fff;
}
/*-----*/
.single-product{
    margin-top: 80px;
}
.single-product .col-2 img{
    padding: 0;
}
.single-product .col-2
{
    padding: 20px;
}
.single-product h4{
    margin: 20px 0;
    font-size: 22px;
    font-weight: bold;
}
.single-product select{
    display: block;
    padding: 10px;
    margin-top: 20px;
}
.single-product input{
    width: 50px;
    height: 40px;
    padding-left: 10px;
    font-size: 20px;
    margin-right: 10px;
    border: 1px solid #ff523b;
}
input:focus{
    outline:none;
}

```

```
.small-img-row{
  display: flex;
  justify-content:space-between;
}
.small-img-col{
  flex-basis:24%;
  cursor: pointer;
}
```

```
/*-----*/
```

```
.cart-page{
  margin: 80px auto;
}
table{
  width: 100%;
  border-collapse:collapse;
}
.cart-info{
  display: flex;
  flex-wrap: wrap;
}
th{
  text-align: left;
  padding: 5px;
  color: #fff;
  background: #ff523b;
  font-weight: normal;
}
td{
  padding: 10px 5px;
}
td input{
  width: 40px;
  height: 30px;
  padding: 5px;
}
td a{
  color:#ff523b;
  font-size: 12px;
}
td img{
```

```

    width: 80px;
    height: 80px;
    margin-right: 10px;
}
.total-price{
    display: flex;
    justify-content: flex-end;
}
.total-price table{
    border-top:3px solid #ff523b;
    width:100%;
    max-width : 400px;
}
td:last-child{
    text-align: right;
}
th:last-child{
    text-align: right;
}

.account-page{
    padding: 50px 0;
    background: radial-gradient(#fff,#ffd6d6);
}

.form-container{
    background: #fff;
    width: 300px;
    height: 400px;
    position: relative;
    text-align: center;
    padding: 20px 0;
    margin: auto;
    box-shadow: 0 0 20px 0px rgba(0,0,0,0.1);
    overflow: hidden;
}
.form-container span{
    font-weight: bold;
    padding: 0 10px;
    color: #555;
    cursor: pointer;
    width: 100px;

```

```

    display: inline-block;
}
.form-btn{
    display: inline-block;
}

.form-container form{
    max-width: 300px;
    padding: 0 20px;
    position: absolute;
    top: 130px;
    transition: transform 1s;
}
form input{
    width: 100%;
    height:30px;
    margin: 10px 0;
    padding: 0 10px;
    border: 1px solid #ccc;
}
form .btn{
    width: 100%;
    border: none;
    cursor: pointer;
    margin:10px 0;
}
form .btn:focus{
    outline:none;
}
#LoginForm{
    left: -300px;
}
#RegisterForm{
    left: 0;
}
form a{
    font-size: 12px;
}
#Indicator{
    width: 100px;
    border: none;
    background:#ff523b;

```

```
height:3px;
margin-top:8px;
transform: translate(100px);
transition: transform 1s;
}
```

```
@media only screen and (max-width:800px){
  nav ul{
    position: absolute;
    top: 70px;
    left: 0;
    background:#333;
    width: 100%;
    overflow: hidden;
    transition: max-height 0.5s;
  }
  nav ul li{
    display: block;
    margin-right: 50px;
    margin-top: 10px;
    margin-bottom: 10px;
  }
  nav ul li a{
    color: #fff;
  }
  .menu-icon{
    display: block;
    cursor: pointer;
  }
  .cart-info p{
    display: none;
  }
}
```

## **FLASK-**

```
from flask import Flask, render_template
```

```

app = Flask(__name__)

@app.route("/signin")

def sign_in():
    return render_template("shoping.html")
@app.route('/signup')
def sign_up():
    return render_template("login.html")
@app.route('/')
def home():
    return render_template("shoping.html")
@app.route('/about')
def about():
    return render_template("shoping.html")
if __name__ == '__main__':
    app.run(debug=True)

```

## **DB-**

```
import ibm_db
```

```

dictionary={}
def printTableData(conn): sql = "SELECT * FROM
userdetails"
out = ibm_db.exec_immediate(conn, sql) document =
ibm_db.fetch_assoc(out) while document != False:

dictionary.update({ document['USERNAME']:document['PASSWORD']})
document =
ibm_db.fetch_assoc(out)

```



```
def insertTableData(conn,rollno,username,email,password):
```

```
    sql="INSERT INTO
    userdetails(rollno,username,email,password) VALUES
    ({},'{}','{}','{}')".format(rollno,username,email,password)
    out = ibm_db.exec_immediate(conn,sql)
    print('Number of affected rows : ',ibm_db.num_rows(out),"\\n")
```

```
def updateTableData(conn,rollno,username,email,password):
    sql = "UPDATE userdetails SET (username,email,password)=('{}','{}','{}'
    ) WHERE
    rollno={ }".format(username,email,password
    ,rollno)
    out = ibm_db.exec_immediate(conn, sql)
    print('Number of affected rows : ', ibm_db.num_rows(out), "\\n")
```

```
def
```

```
deleteTableData(conn,rollno):
    sql = "DELETE FROM userdetails WHERE rollno={ }".format(rollno)
    out = ibm_db.exec_immediate(conn, sql) print('Number
    of affected rows : ', ibm_db.num_rows(out), "\\n")
```

```
try:
```

```
conn=ibm_db.connect("DATABASE=bludb;HOSTNAME=0c77d6f2-5da9-
48a9-81f8- 86b520b87518.bs2io90l
08kqb1od8lcb.databases.appdomain.cloud;PORT=31198;SECURITY=SSL;SS
LServerCertificate=Dig iCertGlo
balRootCA.crt;PROTOCOL=TCPIP;UID=bjn03696;PWD=ef96tLJX2VjzaCP
X;", "", "")
```

```
print("Db connected")
```

```
except:
```

```
print("Error")
```

```
from flask import Flask,render_template,request,url_for,session app=Flask(
name )
```

```
@app.route("/")
```

```
@app.route("/login",methods=['POST','GET']) def login():
```

```
if
```

```
request.method=="POST":
```

```
printTableData(conn)
```

```
username=request.form['username'] password=request.form['password'] try:
```

```
if dictionary[username] == password and username in dictionary:
```

```
return "Logged in successfully" except:
```

```
return "Invalid
```

```
username or password" return
```

```
render_template('loginpage.html')
```

```
@app.route("/register",methods=['POST','GET'])
```

```
def register():
```

```
if request.method=="POST": rollno =
```

```
request.form['rollno']
```

```
username = request.form['username'] email =
```

```
request.form['email']
```

```
password = request.form['password']
```

```
insertTableData(conn, rollno, username, email, password) return  
render_template('loginpage.html')  
return render_template('registerpage.html')
```

```
if  
    name == " main ":
```

```
app.run(debug=True)q late,request,url_for,session app=Flask( name )  
@app.route("/&quo  
t;) @app.route("/login",methods=['POST','GET']) def login():  
if request.method=="POST":  
printTableData(conn)
```

```
username=request.form['username'] password=request.form['password'] try:
```

```
if dictionary[username] == password and username in dictionary:
```

```
return "Logged in successfully" except:  
return "Invalid  
username or password"  
return render_template('log')
```