SMART FASHION RECOMMENDER APPLICATION

NALAIYA THIRAN PROJECT BASED LEARNING

on

PROFESSIONAL READINESS FOR INNOVATION, EMPLOYABILITY AND ENTREPRENEURSHIP

A PROJECT REPORT

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INTRODUCTION

1.1 Project Overview

Recommendation system involves a decision-making approach for users under a multidimensional information environment . RS has also been defined as an e-commerce tool, which helps consumers search based on knowledge that is related to a consumer's choices and preferences . RS also assists in augmenting social processes by using the recommendations of other users when there is no abundant personal information or knowledge of the alternatives . RS handles the complication of information overload that consumers usually encounter by offering customized service, exclusive content, and personalized recommendations .There are multiple phases involved in the recommendation system that develop the foundation of any state-of-the-art recommendation system. These are defined as the information collection phase, the learning phase, and the recommendation phase. The interrelationship of these phases are involved in the recommendation process. It shows that information collection is the initial stage of RS, which is followed by the learning phase and the recommendation phase. The recommendation provided in the last phase can be generated based on information gathered during the information collection phase.

1.2 Purpose

On e-commerce platforms, where numerous choices are available, an efficient recommendation system is required to sort, order, and efficiently convey relevant product content or information to users. Image-based fashion recommendation systems (FRSs) have attracted a huge amount of attention from fast fashion retailers as they provide a personalized shopping experience to consumers. With the technological advancements, this branch of artificial intelligence exhibits a tremendous amount of potential in image processing, parsing, classification, and segmentation. Despite its huge potential, the number of academic articles on this topic is limited. The available studies do not provide a rigorous review of fashion recommendation systems and the corresponding filtering techniques. To the best of the authors' knowledge, this is the first scholarly article to review the state-of-the-art fashion recommendation systems and the corresponding filtering techniques. In addition, this review also explores various potential models that could be implemented to develop fashion recommendation systems in the future. This will help researchers, academics, and practitioners who are interested in machine learning, computer vision, and fashion retailing to understand the characteristics.

2.LITERATURE SURVEY

2.1 Existing problem

1. Mr. Samit Chakraborty and Mr. Saiful Hoque, in their paper titled “FASHION RECOMMENDATION SYSTEMS, MODELS ANF METHODS” in the year 2021 have presented a detailed explanation about fashion recommendation systems. The system implements a thorough logic on how to present the ideal fashion that satisfies the requirements of the user. The system takes in information from the user about the specifics on what is needed. The system then collects all the information provided by the user such as what type of material, style of clothing, brands if any, sizes, occasions, moods, personalities etc. and it dumps it all on the specific algorithm. The algorithm then calculates the result based on all the parameters provided. It generates a series of outputs or in other words suggestions or recommendations that suite the user’s needs. From that it then filters out the best possible fit that the user is looking for.

2. Mr. Malcolm Bernard, in his book titled “FASHION AS COMMUNICATION” in the year 2008, has talked about the social lifestyle part of fashion. He delves deep into the idea of fashion as being an international language for communities. In this fully revised and updated edition, Malcolm Barnard introduces fashion and clothing as ways of communicating and challenging class, gender, sexual and social identities. Drawing on a range of theoretical approaches from Barthes and Baudrillard to Marxist, psychoanalytic and feminist theory, Bernard addresses the ambivalent status of fashion in contemporary culture.

3. Ms. Jia Jia and Mr. Ke Gao, in their paper titled “TRIP OUTFITS ADVISOR: LOCATION ORIENTED CLOTHING RECOMMENDATION” in the year 2016, proposed a hybrid multilevel convolutional neural network that is combined with SVM (Support Vector Machine) that captures the complex relations between attributes of clothing and location collectively. The CNN architecture has been adapted by the author to the multi label learning and has fine-tuned it using each clothing item. The recognized items are being given as input to SVM in order to learn their correlations using which the outfits are recommended to the user. After conducting experiments using three fashion datasets with an ideal destination outfit dataset shows that the proposed method outperforms several baselines by over 10.52-16.38% in terms of the map for clothing item recognition when ranking clothing by appropriateness for travel destination.

4. Mr. T. H. Ying Huang, in his paper titled “OUTFIT RECOMMENDATION BASED ON DEEP LEARNING” in the year 2017, proposed an outfit Recommendation System based on deep learning. This methodology consists of two important parts as follows: Feature Extractor and Binary Classifier. In first step, the feature extractor is used to extract the information about the input like colour, pattern, etc. and then it is passed to the binary classifier to get the output as good or bad in the form of “1” and “0” respectively. As the network is huge for training, he made use of ResNet-50 as feature extractor in the model.

5. Mr. Gregory F. Cooper and Mr. Edward Hershkovits, in their paper titled “A BAYESIAN METHOD FOR THE INDUCTION OF PROBABILISTIC NETWORKS FROM DATA” in the year 1992, proposed a flexible method for modelling complex joint probability. Due to the flexible nature of a Bayesian network, it is appropriate to represent the complex relations between preferences given by user and context. According to them, a user owns clothing items according to her / his preference so that the number of clothing items will not be the same for each color and that they assume it to be desirable for users that the system recommends items suitable to the specified temperature, season and occasion and that every item is recommended with equal frequency. The author constructs the Modified Bayesian network with an extra node for the system by two steps so as to satisfy the above two requirements.

6. Mr. Wei Zhang and Mr. Bo Begole, in their paper titled “REAL TIME CLOTHES COMPARISON BASED ON MULTIVIEW VISION” in the year 2008, proposed a method that recommends clothing that is “similar” and “different” than the clothing that a person is trying on in the mirror. This responsive mirror provides the user with “self” and “social” clothes comparisons. This will suggest cloths based on “similar” and “different” terminologies. Key components of this system are “motion tracking” and “clothes recognition”. It uses a technique called “Linear regression” to predict similar clothes. As it uses responsive mirrors, that is there are two cameras, one in the front side and another in the ceiling. As users try some new clothes, he has to come to the room where these cameras are fixed. Motion tracking factor captures the movement and clothing recommendation factor will suggest clothes based on his movement. There are two mirrors, left mirror shows the user in previous garments and similar pose, this will help the user to compare new clothes with the previous one. Whereas the right side mirror gives people wearing similar styles or different styles, this enables the user to compare with social clothing. Although it allows self and

social comparison but will suggest clothes based on user's previous or other users choice, those suggestions may not be trendy and fashionable.

7. Mr. Yan Zhang and Mr. Xiang Liu, in their paper titled "Fashion Evaluation Method for Clothing Recommendation Based on Weak Appearance Feature" in the year 2017, proposed a method that evaluates the fashion level of an individual using weak appearance feature to evaluate fashion level. The proposed methodology put forward three major aspects of weak appearance feature to characterize fashion levels. It creates the first table as customer fashion level classification which characterized individuals based on the fashion level. The aim of this is to provide objective clothing recommendations to the customer. Then it creates the second table as a garment fashion level classification which is based on data from fashion designers, buyers, vendors, and producers. Then it extracts some features like the shape of the face, eyebrows placing, makeup, hair colour, accessories, etc. Finally, the customer's fashion level can be characterized by "support vendor product". It has great impact on clothing recommendation system, sometimes recommend lower level fashion.

8. Mrs. Qingqing Mao and Mr. Aihua Dong, in their paper titled "Intelligent Costume Recommendation System Based on Expert System" in the year 2018, proposed a method that recommends clothing based on an expert system. This methodology provides customer collocation solution. This system will first find how expert systems will solve a particular problem and then apply some artificial intelligence techniques to solve that problem, supported with vast knowledge and expert's experience. This system will firstly fetch specific physical information of the user such as body shape, face shape, etc. using manmachine interface. Then based on this physical information, the system will set up costume matching knowledgebased collected from experts and represents this knowledge with supporting production rules. And finally, they recommend the clothing to the customer with modified blackboard model reasoning. This system provides more personalized and professional clothing recommendations and costume matching knowledge from fashion experts. For this purpose, it uses serial blackboard model and index adding algorithm. With the use of these methodologies, the search rate can be improved. This system recommends cloths only based on physical traits like body shape, face shape, skin color, shoulder shape, etc. It will not consider any other factor for the recommendation.

Abstract:

In our daily life, the textile and fashion industries have witnessed always an enormous amount of growth in fast fashion. On e-commerce platforms, where numerous choices are available, an efficient recommendation system is required to sort, order, and efficiently convey relevant product content or information to users. Image-based fashion recommendation systems (FRSs) have attracted a huge amount of attention from fast fashion retailers as they provide a personalized shopping experience to consumers.

The rapid progress of computer vision, machine learning, and artificial intelligence combined with the current growing urge for online shopping systems opened an excellent opportunity for the fashion industry. As a result, many studies worldwide are dedicated to modern fashion-related applications such as virtual try-on and fashion synthesis. However, the accelerated evolution speed of the field makes it hard to track these many research branches in a structured framework.

Problem Statement:

In this project, we make use of cloud app development and to come up with a new innovation solution through which you can directly do your online shopping based on your choice without any search. The user will login into the website and go through the products available on the website. Instead of, navigate to several screen for booking products online, the user can directly talk to chatbot regarding the products. Get the recommendation based on information provided by the user.

Only in E-commerce websites, customers need to search for their desired products and navigate across screens to view the product, and also accessed to add them to the cart, also addition to order the products. This smart fashion recommender application mainly uses the chat bot to interact with the users, gather information about their preferences, and recommend suitable products to the users.

This application has two defined roles assigned to the users. The roles are customer and admin. Admin should be able to track the number of different products and admin should be assigned the responsibility to create products with appropriate categories. The user should be able to mention their preferences using interacting with chat bots. The user must receive a notification on order confirmation/failure. The chat bot must gather feedback from the user at the end of order

confirmation. The main objective of this application is to provide better interactivity with the user and to reduce navigating pages to find appropriate products.

Problem Describtion:

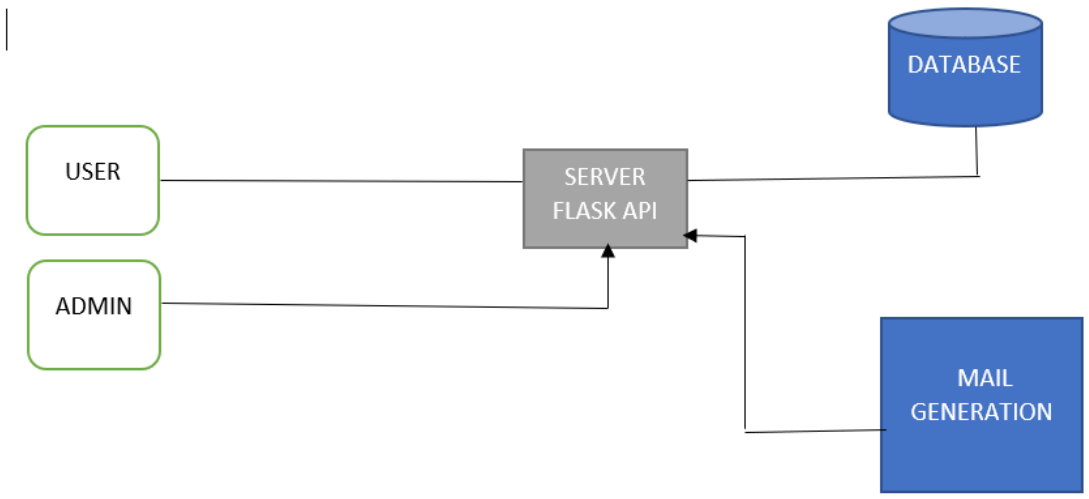
We have come up with a new innovative solution through which you can directly do your online shopping based on your choice without any search. It can be done by using the chatbot. In this project you will be working on two modules:

1. Admin
2. User

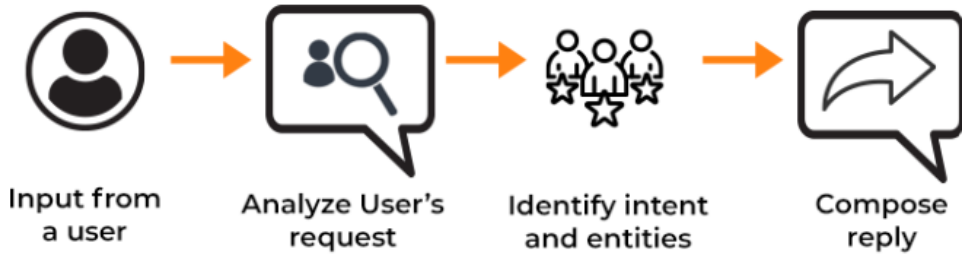
Methodology used in the solution:

To avoid searching of multiple products in the search bar, user can interact with the chatbots, the chatbots can easily identify what product the user wants to buy, so it will be easy for the admin to recommend the user satisfied product by the conversation with the chat bot. The chatbot send the messages periodically in order to recommend and offers a customer satisfied product. For the security purpose, this application uses a token to authenticate and authorize users securely. The token has encoded user id and the role. Based on the encoded information, access to the resources is restricted to the specific users.

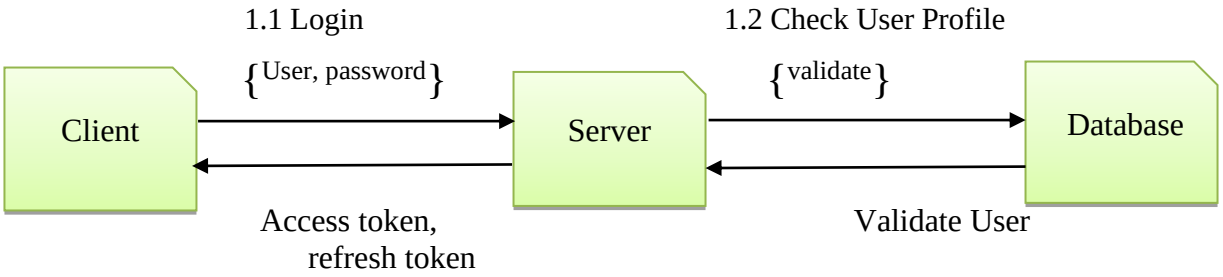
System Architecture



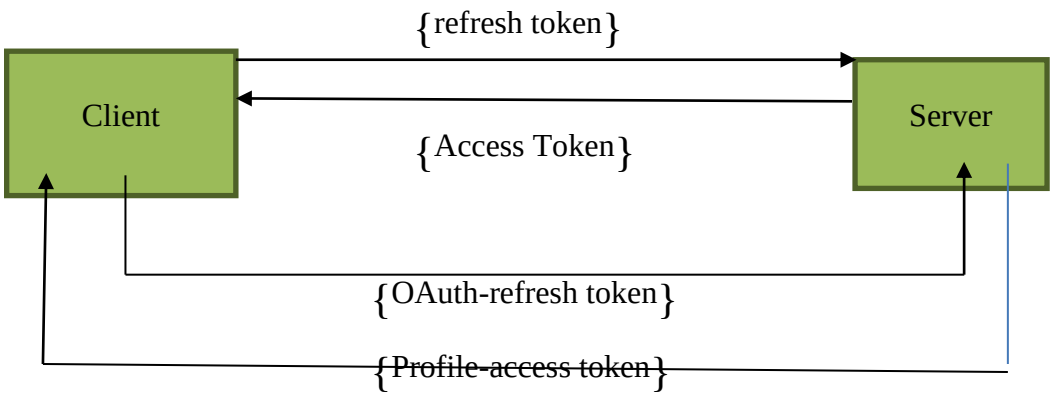
Chat Bot Working



Authentication



OAuth Generation



2.2 References

[1] TechTarget. "Im Bot." TechTarget. Last modified 2005. Accessed 11/07/2017, http://searchdomino.techtarget.com/definition/IM-bot.

[2] Sears, Andrew and Julie A Jacko. The Human-Computer Interaction Handbook: Fundamentals. Evolving Technologies and Emerging Applications: Lawrence Erlbaum Associates, 2002.

[3] Gupta S, Borkar D, De Mello C, Patil S. An E-Commerce Website based Chatbot. International Journal of Computer Science and Information Technologies. 2015;6(2):1483-5.

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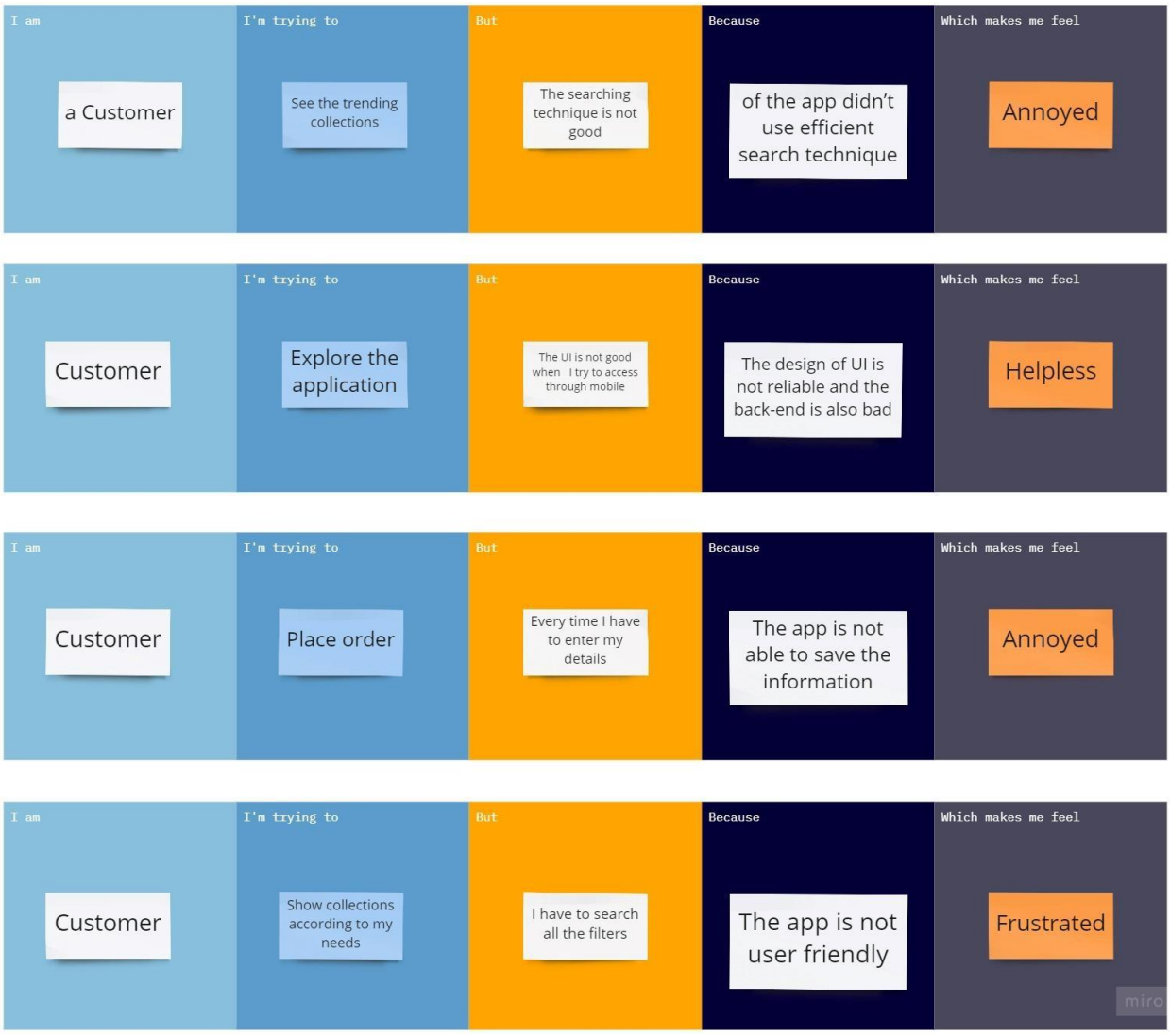
[7] Weizenbaum J. Computer power and human reason: From judgment to calculation. 1976. 8-MachindraCOMVIVA. Conversational Commerce The New Kid on the Block. Towards Tomorrows. 2017:36-7

2.3 Problem Statement Definition

Create a problem statement to understand your customer's point of view. The Customer Problem Statement template helps you focus on what matters to create experiences people will love.
A well-articulated customer problem statement allows you and your team to find the ideal

solution for the challenges your customers face. Throughout the process, you'll also be able to empathize with your customers, which helps you better understand how they perceive your product or service.



3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas

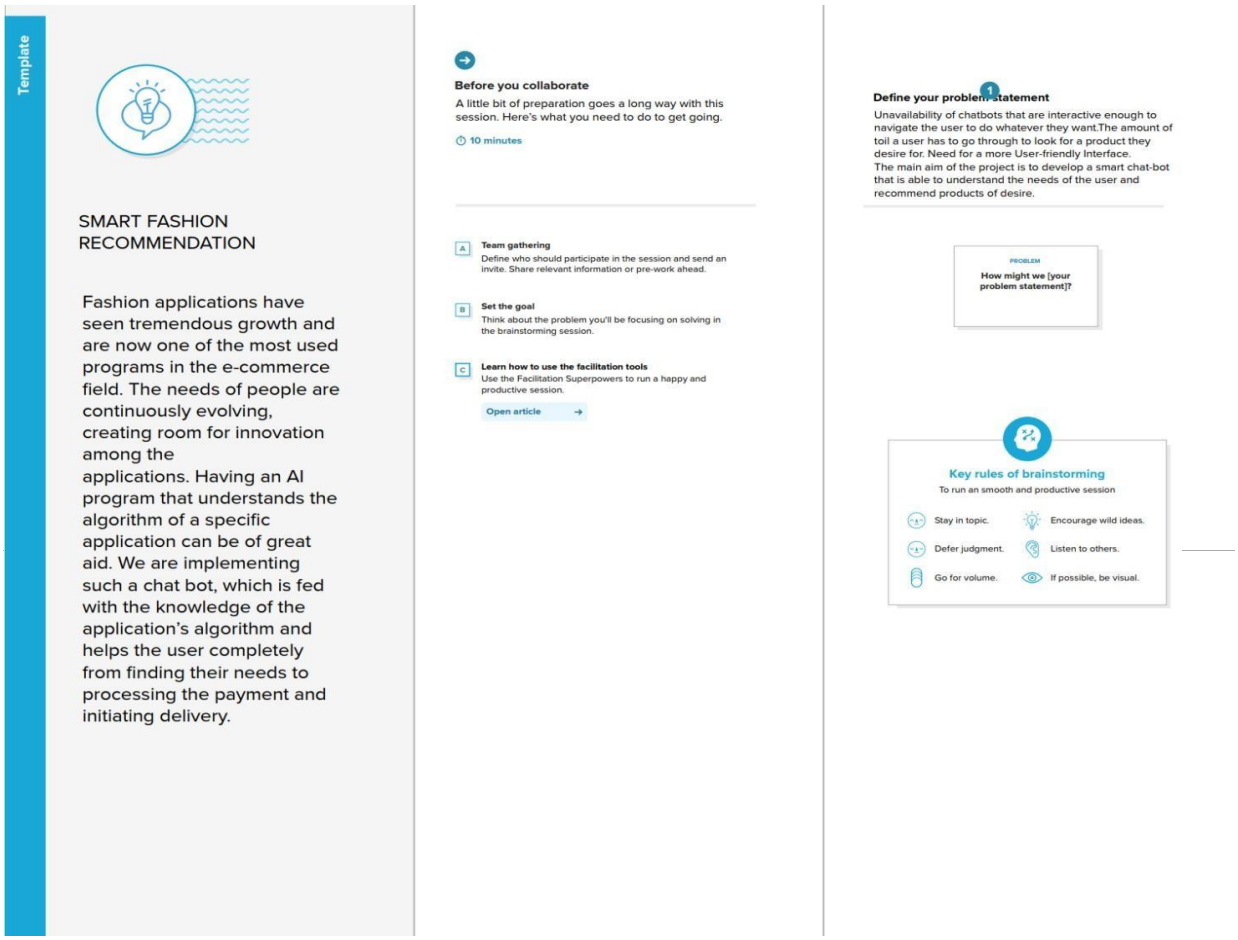
The core empathy map, which aids in identifying and describing the user's wants and pain points, is expanded upon in an empathy map canvas. Additionally, this data is useful for enhancing user experience. Teams employ user insights to map out what matters to, impacts, and how their target audience presents themselves. Using this data, personas are then developed to assist teams in visualizing and empathizing with users as people rather than just as a general marketing demographic or account number.

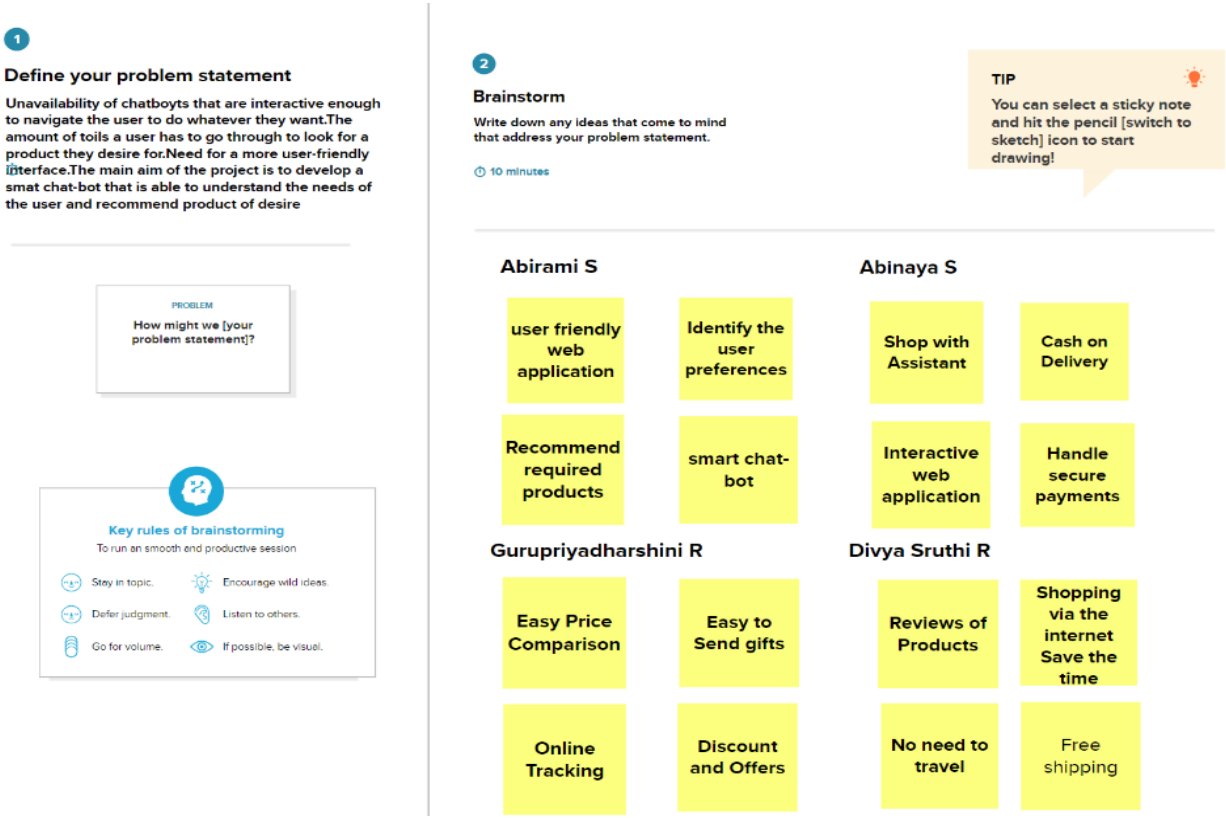
Empathy Map Canvas

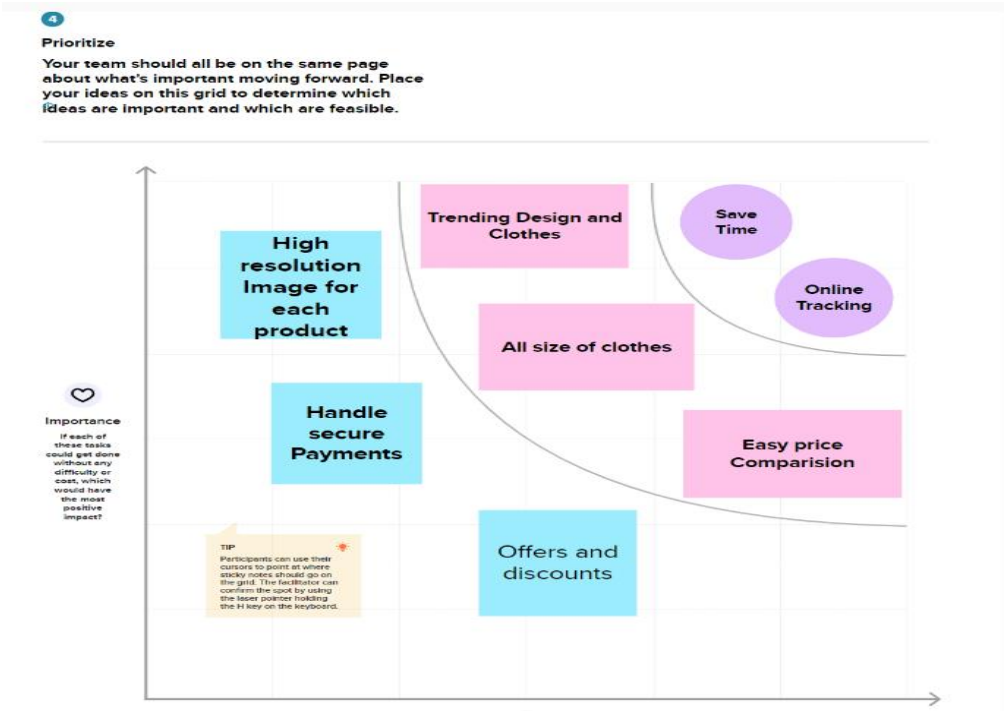
3.2 Ideation & Brainstorming

Ideation fundamentally refers to the entire creative process of coming up with and sharing new ideas. Ideation is creative thought that usually aims to solve a problem or offer a better way to do something. It includes coming up with new ideas, developing current ideas, and determining how to put new ideas into effect.

Ideation and brainstorming, a particular method for producing fresh ideas, are frequently closely related activities. When brainstorming, a group of people are usually brought together to generate either new, broad ideas or suggestions for how to handle a particular situation or problem.





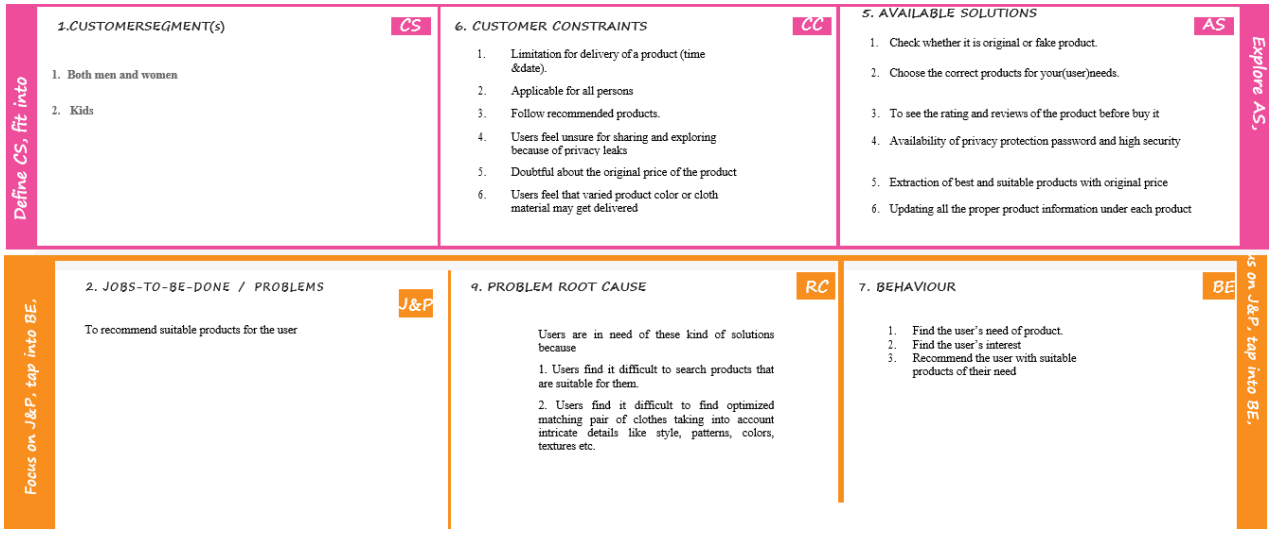


Ideation & Brainstorming

3.3 Proposed Solution

Traditional recommender systems such as Collaborative Filtering or Content-Based Filtering have difficulties in the fashion domain due to the sparsity of purchase data, or the insufficient detail about the visual appearance of the product in category names.Chatbots can bring innovation in online assistance and communication with customers. Due to the growth of e-commerce ,fashion brands have been adopting chatbots to provide personalized consumer experiences.Chatbot can provide personalized shopping experiences across physical and online channels and promote consumer well being. However ,the main challenge remains on the complexity of human language and the chatbot's effectiveness within this context. It focuses on helping the user to find optimized matching pair of clothes taking into account intricates details like style ,patterns, colors ,texture. Also keeping in mind users attributes like age, skin tone ,favorite color etc..It facilitate seamless live communication recommender system reduce stress for the consumer. By responding proactively from a customer, the consumer receives a feeling of confidence and satisfaction. Human like chatbots lead to greater satisfaction and trust among customers, leading to greater adoption of the chatbot and increase the purchase level of customer and usage.Recommendation system is a proven way to massively increase the sales .This varies from anywhere between 10%and 50%.depending on the accurate of the recommendation and the price point of product or service. By getting to know your customers through content-based approch you will ensure that they keep coming back to you. As you learn what does and doesn't sell, you can offer main target audience exactly what they need .This will quickly lead to more sales and more profit for you

3.4 Problem Solution fit



4. REQUIREMENT ANALYSIS

4.1 Functional requirement

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirements	Sub Registration
FR-1	Registration	Registration can be done using mobile number or gmail and needed some userinformation
FR-2	Login	User only log in by user id and password,Which is given during registration
FR-3	Delivery confirmation	Confirmation via email and phone number
FR-4	Assistance	Bot is integrated with the application to make the usability simple

4.2 Non-Functional requirements

Following are the functional requirements of the proposed solution.

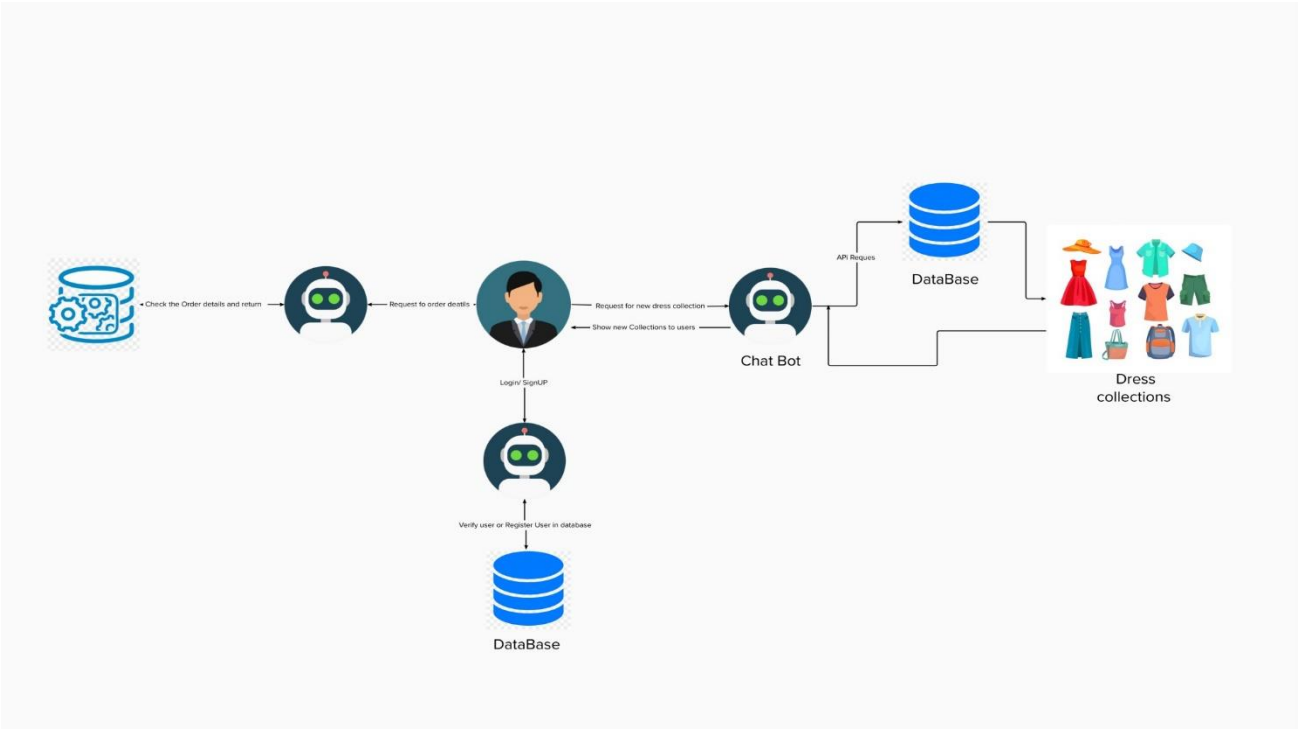
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	A user-friendly interface with chat bot to make usability efficient

NFR-2	Security	Secured connection HTTPS should be established for transmitting requests andresponses
NFR-3	Reliability	The system should handle excepted as well as unexpected errors and exceptions to avoid termination of the program
NFR-4	Performance	The system shall be able to handle multiple requests at any given point in time and generate an appropriate response.
NFR-5	Availability	It is a cloud based web application so user can access without any platform limitations ,just using a browsers with a internet connection is enough for use the application
NFR-6	Scalability	It has a quick request and response time, high throughput, enough network resources and soon.

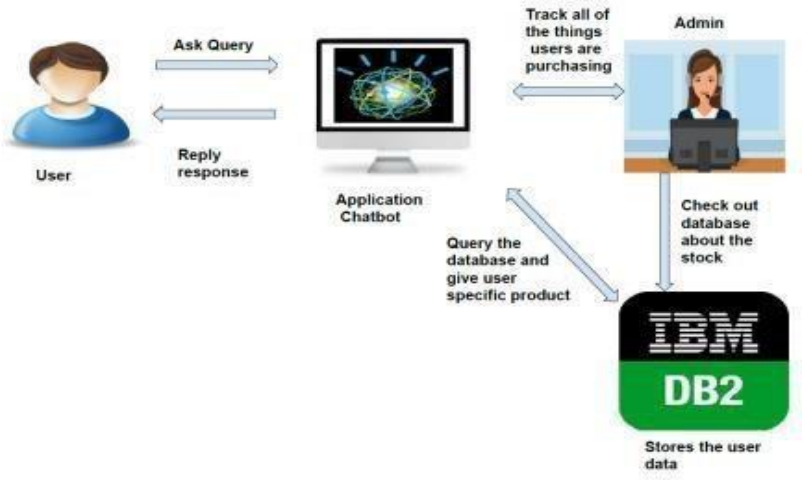
5. PROJECT DESIGN

5.1 Data Flow Diagrams

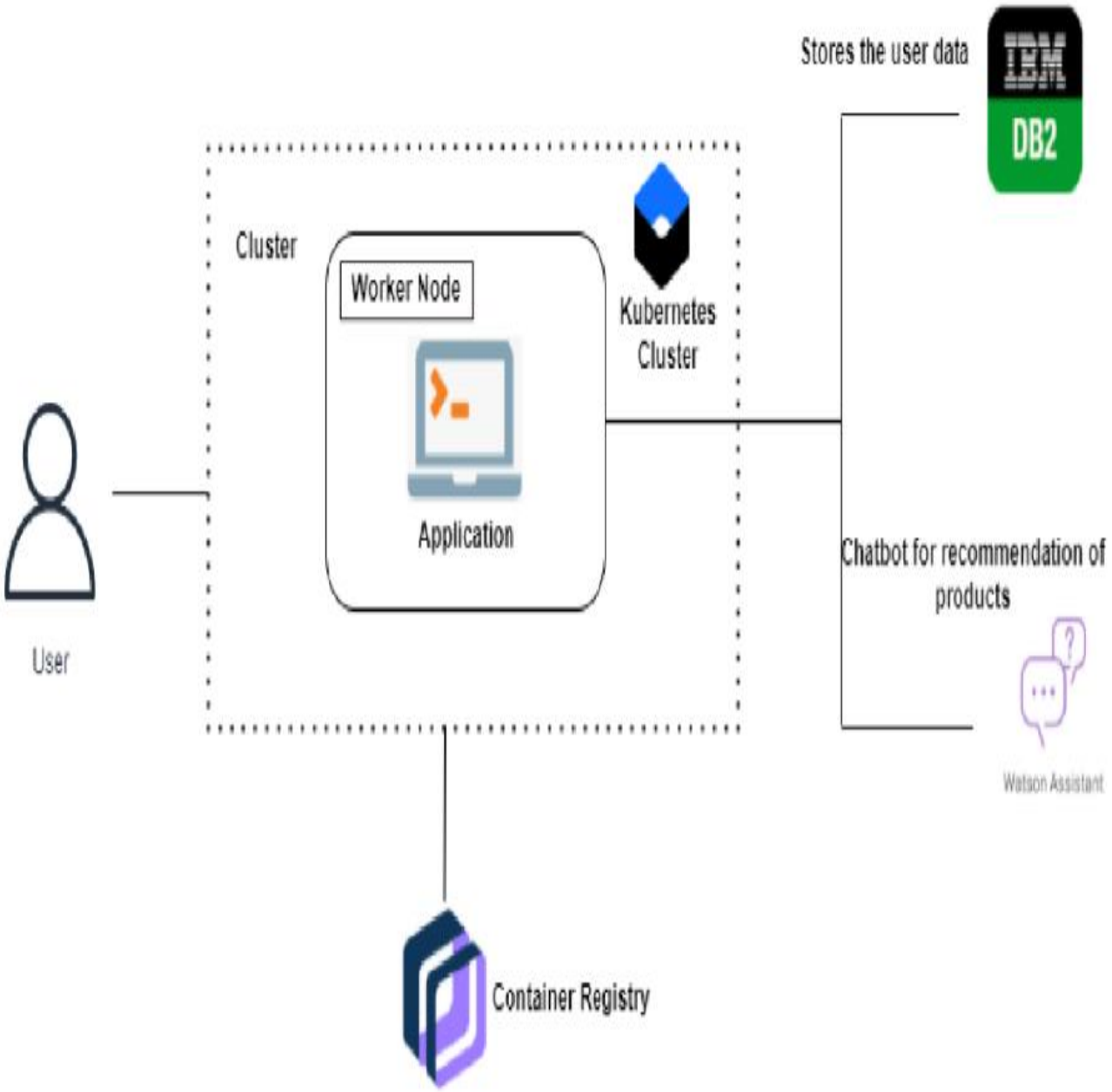
A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



Fashion Recommender: (Simplified)



5.2 Solution & Technical Architecture



5.3 User Stories

User Type	Functional Requi11ement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
	Dashboard	USN-5	As a user, I can log access the Dashboard by logging into the web-page	I can access the Dashboard by logging into the web page.	High	Sprint-1
Customer Care Executive	Login	USN-1	As a Customer Care IE executive, I can log into the application by entering my Executive email id & password	I can login into the application with Gmail Login	High	Sprint-1
	Dashboard	USN-1	As a Customer Care IE executive, I can access UI Dashboard of the application by logging into the application	I can access the Dashboard by logging into the application	High	Sprint-2
	Service	USN-1	As a Customer Care IE executive, I can access he Customer service page of the application by logging and accessing the page	I can access the Service page by logging & accessing the page	High	Sprint-1
Administrator	Login	USN-1	As a Administrator, I can log into the application by entering my Administer email id & password	I can login into the application with Gmail Log in	High	Sprint-1
	Dashboard	USN-1	As a Administrator, I can access the Dashboard of the application by logging into the application	I can access the Dashboard by logging into the application	High	Sprint-2
	Administration & Service	USN-1	As administrator, I can access Administration & service page of the application by logging & accessing the page	I can access the Administration & Service page by logging	High	Sprint-2

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Delivery Schedule

Product Backlog, Sprint Schedule, and Estimation

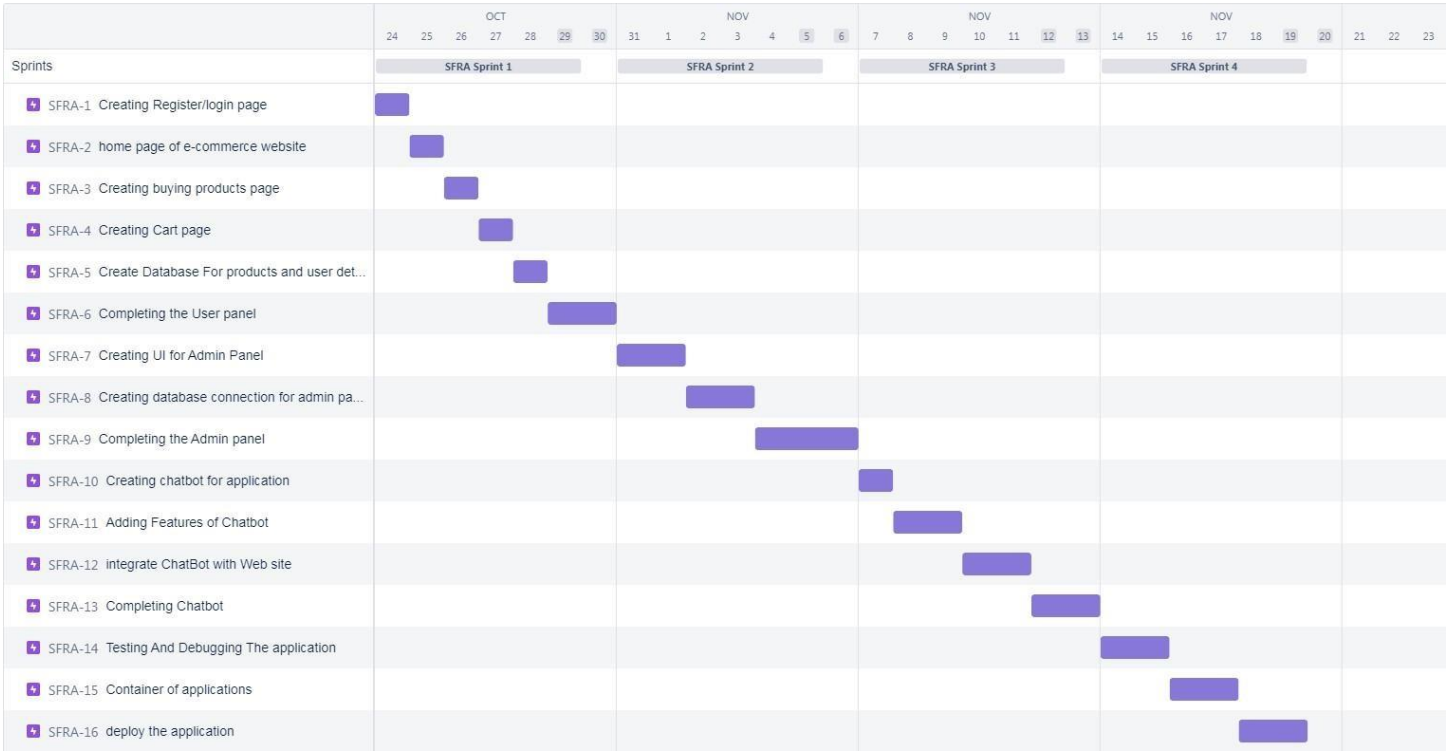
Use the below template to create product backlog and sprint schedule

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	Team Members
Sprint-1	User Panel	USN-1	The user will login into the website and go through the products available on the website	20	High	ABIRAMI S ABINAYA S GURUPRIYADHARSHINI R DIVYA SRUTHI R
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	ABIRAMI S ABINAYA S GURUPRIYADHARSHINI R DIVYA SRUTHI R
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	ABIRAMI S ABINAYA S GURUPRIYADHARSHINI R DIVYA SRUTHI R
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	ABIRAMI S ABINAYA S GURUPRIYADHARSHINI R DIVYA SRUTHI R

BURNDOWN CHART



6.2 Reports from JIRA

Project Tracker, Velocity:

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	20	29 Oct 2022
Sprint-2	20	6 Days	31 Oct 2022	05 Nov 2022	20	05 Nov 2022
Sprint-3	20	6 Days	07 Nov 2022	12 Nov 2022	20	12 Nov 2022
Sprint-4	20	6 Days	14 Nov 2022	19 Nov 2022	20	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)

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

7.CODING & SOLUTION

Features

- Using chatbot we can manage users' choices and orders.
- The chat bot can give recommendations to users based on their interests.
- It can promote the best deals and offers on that day.
- It will store the customer's details and orders in the database.
- The chat bot will send a notification to customers if the order is confirmed.
- Chat bots can also help in collecting customer feedback

Solution

Templates

Home.html

```
<!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>Document</title>
  </head>
  <body>
    WELCOME
<button><a href="/logout">LOGOUT</a></button>
  </body>
</html>
```

Login.html

```
<!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>Login</title>
  </head>
  <body>
```

```
    <h3>Login</h3>
    <form method="POST">
      <input type="email" name="email" placeholder="Email" required />
      <input type="password" name="password" placeholder="Password"
required />
      <button type="submit">Login</button>
    </form>
    <p>{{success}}</p>
    <p style="color: red">{{error}}</p>

    <a href="/register">Don't have an account? Register</a>
  </body>
</html>
```

Register.html

```
<!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>Register</title>
  </head>
  <body class="container">
    <h3>Register</h3>
    <form method="POST">
      <input type="email" name="email" placeholder="Email" required />
      <input type="text" name="username" placeholder="Username" required
/>
      <input type="text" name="rollNo" placeholder="RollNo" required />
      <input type="password" name="password" placeholder="Password"
required />
      <button type="submit">Register</button>
    </form>
    <p>{{success}}</p>
    <p style="color: red">{{error}}</p>

    <a href="/login">Already have an account? Login</a>
  </body>
</html>
```

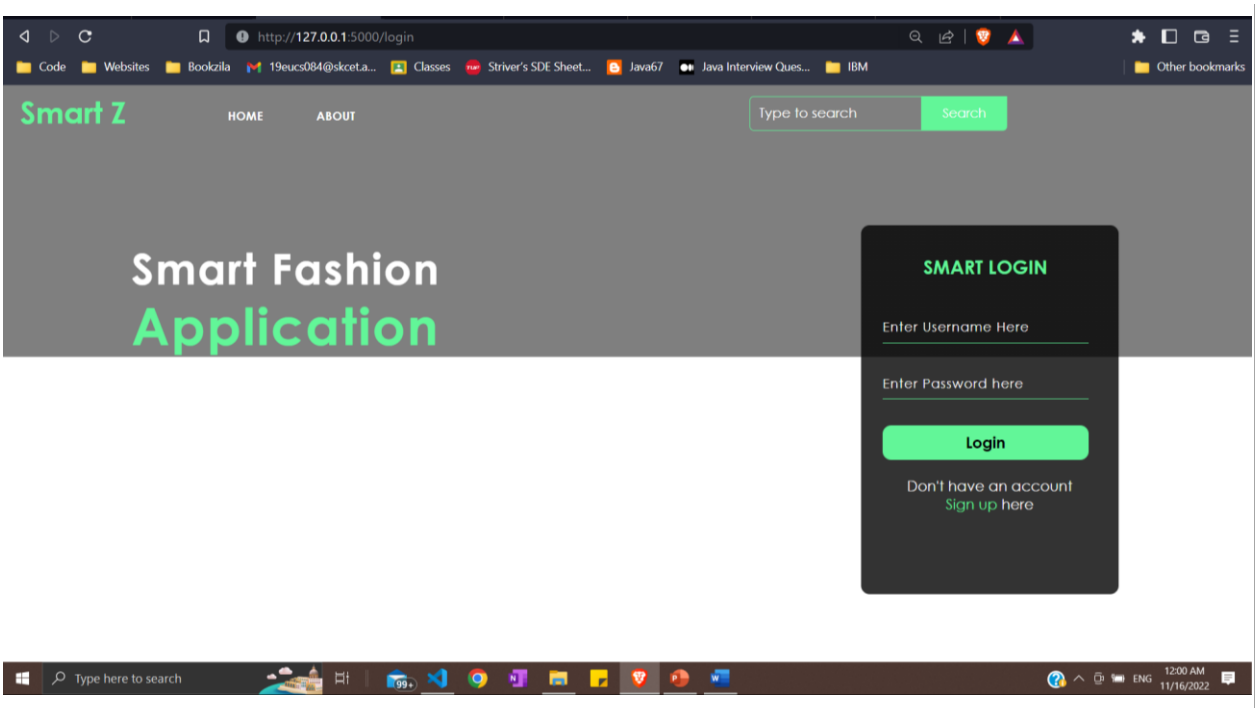
App.py

```
from flask import Flask, render_template, request, redirect, url_for,
session
import ibm_db
import bcrypt
conn =
ibm_db.connect("DATABASE=bludb;HOSTNAME=;PORT=;SECURITY=SSL;SSLServerCerti
ficate=DigiCertGlobalRootCA.crt;UID=;PWD=",'','')
# url_for('static', filename='style.css')
app = Flask(__name__)
app.secret_key = b'_5#y2L"F4Q8z\n\xec]/'
@app.route("/",methods=['GET'])
def home():
    if 'email' not in session:
      return redirect(url_for('login'))
    return render_template('home.html',name='Home')
@app.route("/register",methods=['GET','POST'])
def register():
  if request.method == 'POST':
    email = request.form['email']
    username = request.form['username']
   rollNo = request.form['rollNo']
    password = request.form['password']
    if not email or not username or not rollNo or not password:
    return render_template('register.html',error='Please fill all fields')
    hash=bcrypt.hashpw(password.encode('utf-8'),bcrypt.gensalt())
    query = "SELECT * FROM USER WHERE email=? OR rollNo=?"
    stmt = ibm_db.prepare(conn, query)
    ibm_db.bind_param(stmt,1,email)
    ibm_db.bind_param(stmt,2,rollNo)
    ibm_db.execute(stmt)
    isUser = ibm_db.fetch_assoc(stmt)
    if not isUser:
    insert_sql = "INSERT INTO User(username,email,PASSWORD,rollNo) VALUES
(?,?,?,?)"
      prep_stmt = ibm_db.prepare(conn, insert_sql)
      ibm_db.bind_param(prep_stmt, 1, username)
      ibm_db.bind_param(prep_stmt, 2, email)
      ibm_db.bind_param(prep_stmt, 3, hash)
      ibm_db.bind_param(prep_stmt, 4, rollNo)
      ibm_db.execute(prep_stmt)
      return render_template('register.html',success="You can login")
```

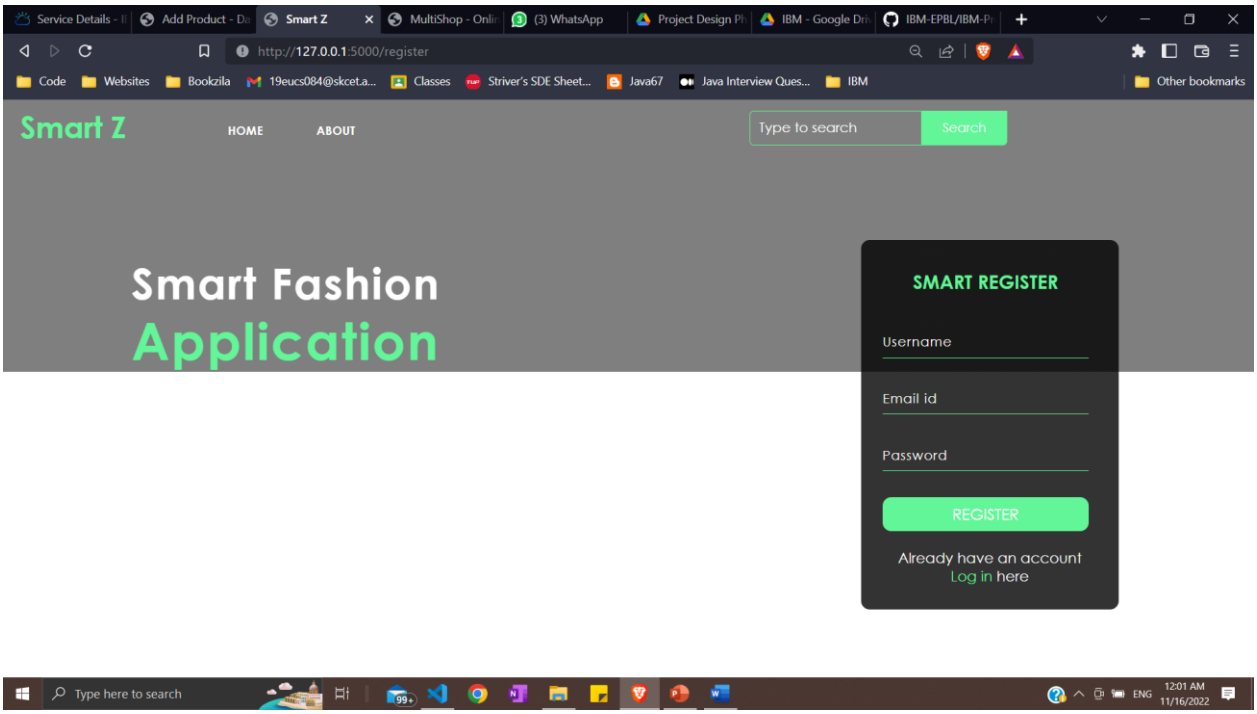
```
    else:
      return render_template('register.html',error='Invalid Credentials')
      return render_template('register.html',name='Home')
@app.route("/login",methods=['GET','POST'])
def login():
    if request.method == 'POST':
      email = request.form['email']
      password = request.form['password']

      if not email or not password:
        return render_template('login.html',error='Please fill all
fields')
      query = "SELECT * FROM USER WHERE email=?"
      stmt = ibm_db.prepare(conn, query)
      ibm_db.bind_param(stmt,1,email)
      ibm_db.execute(stmt)
      isUser = ibm_db.fetch_assoc(stmt)
      print(isUser,password)
 if not isUser:
 return render_template('login.html',error='Invalid Credentials')
  isPasswordMatch = bcrypt.checkpw(password.encode('utf-
8'),isUser['PASSWORD'].encode('utf-8'))
 if not isPasswordMatch:
        return render_template('login.html',error='Invalid Credentials')
      session['email'] = isUser['EMAIL']
      return redirect(url_for('home'))
return render_template('login.html',name='Home')
@app.route('/logout')
def logout():
    session.pop('email', None)
    return redirect(url_for('login'))
```

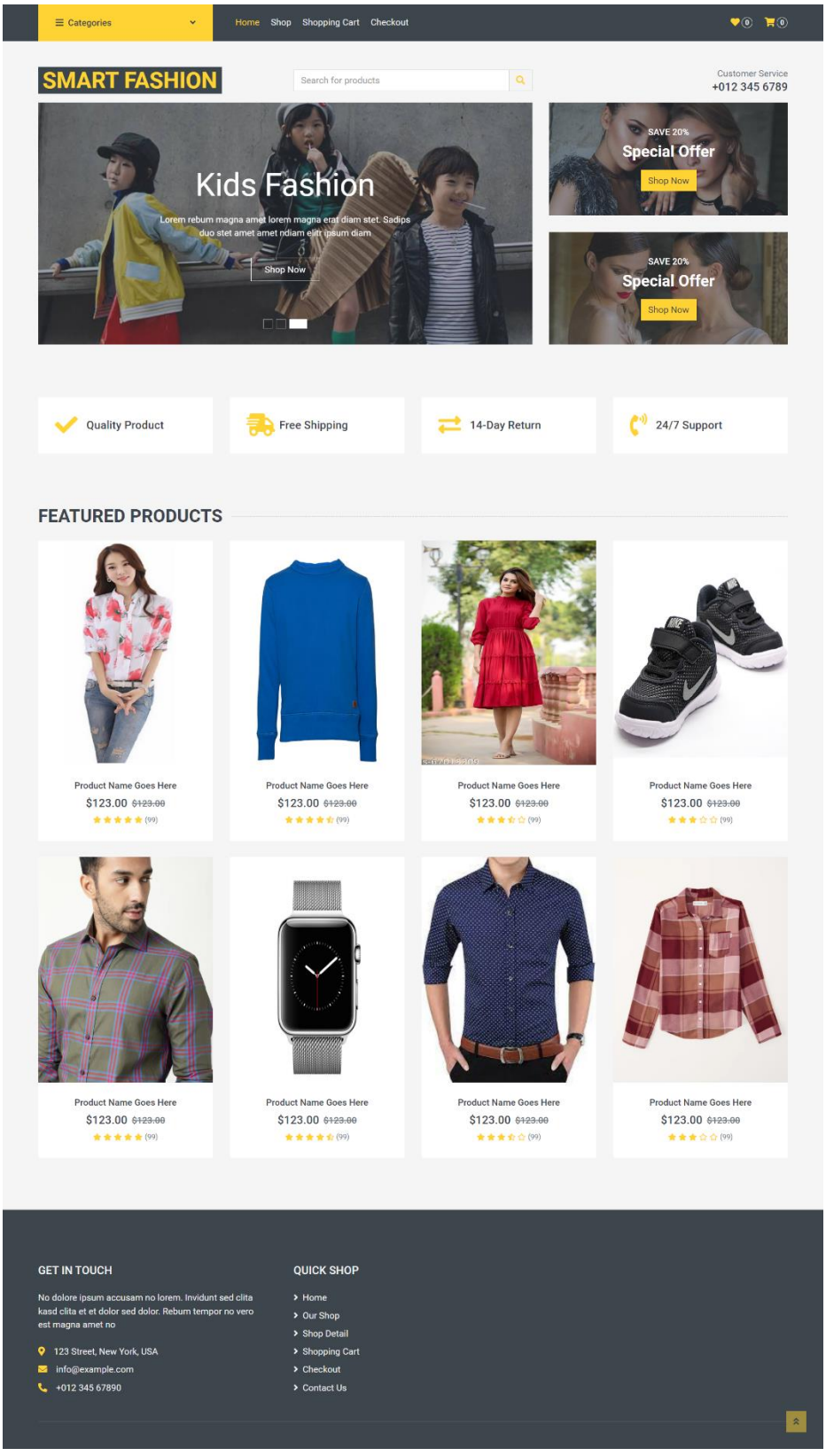
8. TESTING



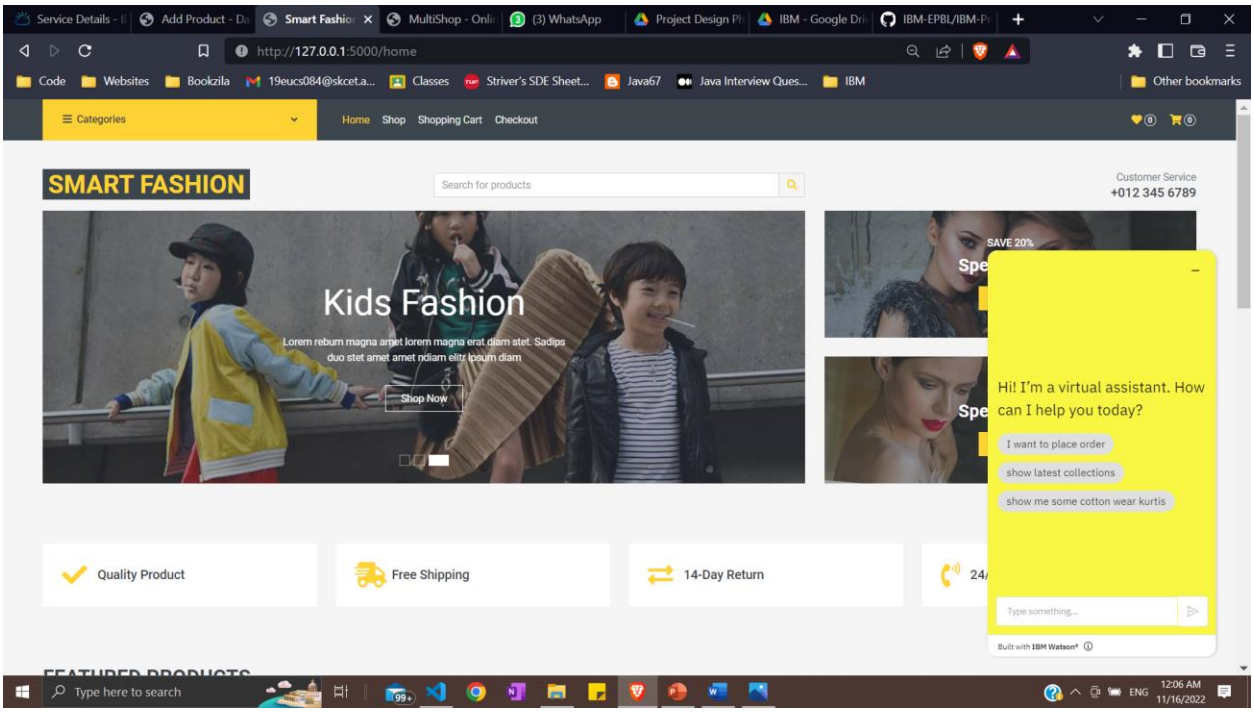
LOGIN PAGE



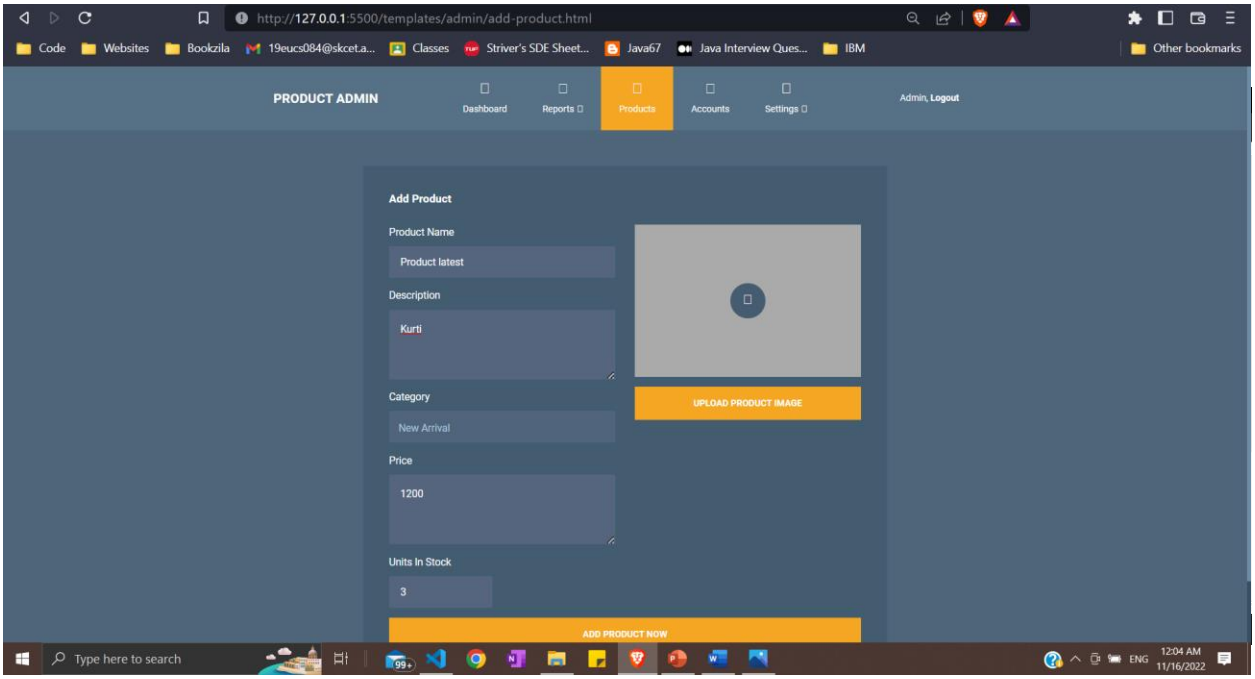
SIGNUP PAGE


Categories
Home
Shop
Shopping Cart
Checkout
SMART FASHION
Search for products
Customer Service
+012 345 6789
Kids Fashion
Lorem rebum magna amet lorem magna erat diam stet. Sadips duo stet amet amet ndiam elitr ipsum diam
Shop Now
SAVE 20%
Special Offer
Shop Now
SAVE 20%
Special Offer
Shop Now
Quality Product
Free Shipping
14-Day Return
24/7 Support
FEATURED PRODUCTS
Product Name Goes Here
$123.00 $123.00
Product Name Goes Here
$123.00 $123.00
Product Name Goes Here
$123.00 $123.00
Product Name Goes Here
$123.00 $123.00
Product Name Goes Here
$123.00 $123.00
Product Name Goes Here
$123.00 $123.00
Product Name Goes Here
$123.00 $123.00
Product Name Goes Here
$123.00 $123.00
GET IN TOUCH
No dolore ipsum accusam no lorem. Invidunt sed clita kasd clita et et dolor sed dolor. Rebum tempor no vero est magna amet no
123 Street, New York, USA
info@example.com
+012 345 67890
QUICK SHOP
Home
Our Shop
Shop Detail
Shopping Cart
Checkout
Contact Us

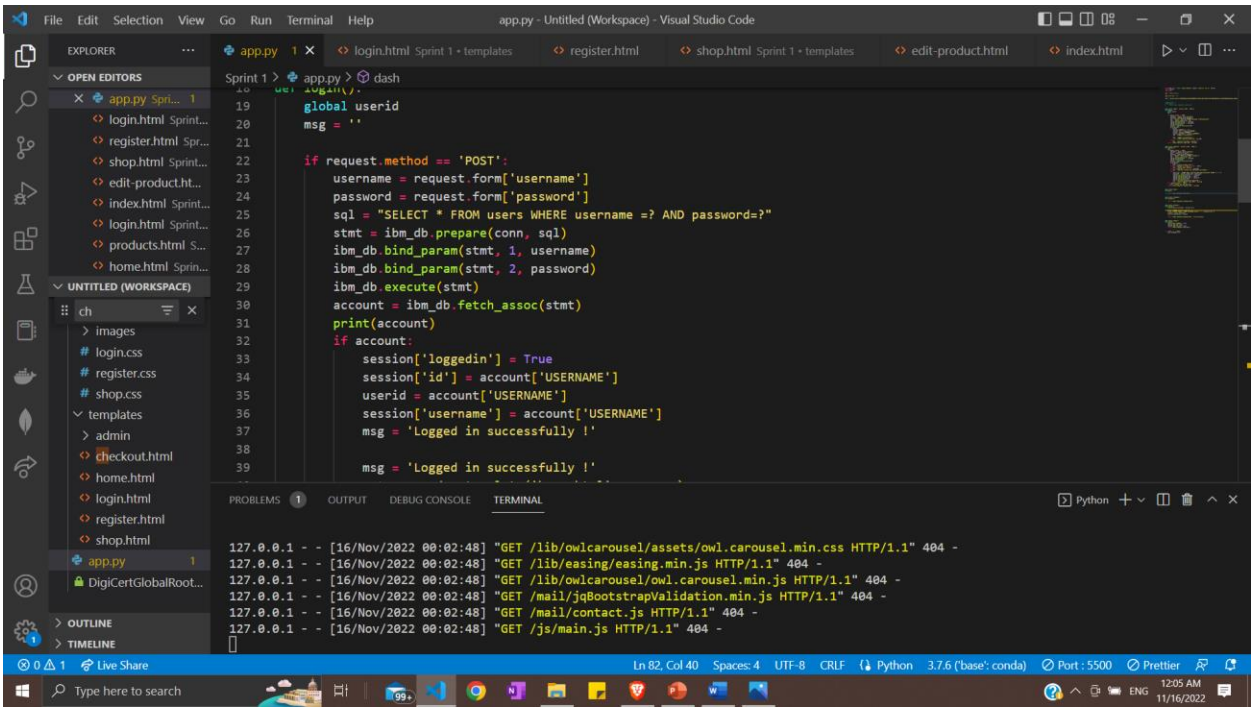
HOME PAGE



CHATBOT



ADD PRODUCT PAGE


File Edit Selection View Go Run Terminal Help
app.py - Untitled (Workspace) - Visual Studio Code
EXPLORER
OPEN EDITORS
app.py Sprint 1 • templates
login.html Sprint 1 • templates
register.html
shop.html Sprint 1 • templates
edit-product.html
index.html
Sprint 1 > app.py > dash
global userid
msg = ''
if request.method == 'POST':
username = request.form['username']
password = request.form['password']
sql = "SELECT * FROM users WHERE username =? AND password=?"
stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, username)
ibm_db.bind_param(stmt, 2, password)
ibm_db.execute(stmt)
account = ibm_db.fetch_assoc(stmt)
print(account)
if account:
session['loggedin'] = True
session['id'] = account['USERNAME']
userid = account['USERNAME']
session['username'] = account['USERNAME']
msg = 'Logged in successfully !'
msg = 'Logged in successfully !'
UNTITLED (WORKSPACE)
images
login.css
register.css
shop.css
templates
admin
checkout.html
home.html
login.html
register.html
shop.html
app.py
DigiCertGlobalRoot...
OUTLINE
TIMELINE
PROBLEMS 1
OUTPUT
DEBUG CONSOLE
TERMINAL
Python
127.0.0.1 - - [16/Nov/2022 00:02:48] "GET /lib/owlcarousel/assets/owl.carousel.min.css HTTP/1.1" 404 -
127.0.0.1 - - [16/Nov/2022 00:02:48] "GET /lib/easing/easing.min.js HTTP/1.1" 404 -
127.0.0.1 - - [16/Nov/2022 00:02:48] "GET /lib/owlcarousel/owl.carousel.min.js HTTP/1.1" 404 -
127.0.0.1 - - [16/Nov/2022 00:02:48] "GET /mail/jqBootstrapValidation.min.js HTTP/1.1" 404 -
127.0.0.1 - - [16/Nov/2022 00:02:48] "GET /mail/contact.js HTTP/1.1" 404 -
127.0.0.1 - - [16/Nov/2022 00:02:48] "GET /js/main.js HTTP/1.1" 404 -
Live Share
Ln 82, Col 40 Spaces: 4 UTF-8 CRLF Python 3.7.6 ('base': conda) Port : 5500 Prettier
Type here to search
ENG 12:05 AM 11/16/2022

CODE PAGE

USER ACCEPTANCE TESTING

Purpose of Document

The purpose of this document is to briefly explain the test coverage and open issues of the [Smart fashion recommender] project at the time of the release to User Acceptance Testing (UAT).

Defect Analysis

This report shows the number of resolved or closed bugs at each severity level, and how they were resolved

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
DiscoveringTrends	10	4	6	3	23
Easy accessibility	4	7	3	0	14
Personalised access	6	3	0	1	10
Quick customer service/response	9	2	4	5	20
Data security	3	0	2	0	5
Cost/Time saving	10	5	4	3	22
Totals	42	21	19	12	94

TEST CASE ANALYSIS

Section	Total Cases	Not Tested	Fail	Pass
Discovering Trends	20	0	0	20
Easy accessibility	17	0	0	17
Personalised access	24	0	0	24
Quick customer service/response	11	0	0	11
Data security	9	0	0	9
Cost/Time saving	56	0	0	56
Totals	137	0	0	137

9. RESULT

9.1 Performance Metrics

- Accuracy

  The accuracy metric is one of the simplest Classification metrics to implement, and it can be determined as the number of correct predictions to the total number of predictions.

- Confusion Matrix

  A confusion matrix is a tabular representation of prediction outcomes of any binary classifier, which is used to describe the performance of the classification model on a set of test data when true values are known. The confusion matrix is simple to implement, but the terminologies used in this matrix might be confusing for beginners

10.ADVANTAGES & DISADVANTAGES

Advantages

- Improved customer service
- Cloud-based solution
- Order Fulfillment
- Harness Customer Loyalty and Retention
- Helps move vehicles through the service bay quicker
- Mitigate Risks with Added Security
- Maximize Profit

Disadvantages

- System Clash
- Reduced Physical Audits

- No solution to improve or eliminate bottlenecks in the service cycle

11.CONCLUSION

This paper introduced the authors' design of a chatterbot for conversational commerce. The proposed design was created with the aim of improving user interaction in social media marketing and making social media marketing more effective utilizing the quick order method, however there should be further user research to investigate the effectiveness of the proposed design. Moreover, the implemented bot is limited to the smart fashio shopping system only, nadding the support for other shopping systems could increase the usage of chat-commerce bots. In addition, the system is limited to the data source shops, connecting the system to other data sources could enhance the user satisfaction for the recommendation system.

12. FUTURE SCOPE

- Collaboration with supply chain partners, coupled with a holistic approach to supply chain management, will be key to effective inventory management.
- The nature of globalization will change, impacting inventory deployment decisions dramatically.

13. APPENDIX

Source Code

Homepage.html

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8" />
    <title>Smart Fashion Shop</title>
    <meta content="width=device-width, initial-scale=1.0" name="viewport"
/>

    <!-- Favicon -->
    <link href="images/favicon.ico" rel="icon" />

    <!-- Google Web Fonts -->
    <link rel="preconnect" href="https://fonts.gstatic.com" />
    <link

href="https://fonts.googleapis.com/css2?family=Roboto:wght@400;500;700&dis
play=swap"
      rel="stylesheet"
    />

    <!-- Font Awesome -->
    <link
      href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.10.0/css/all.min.css"
      rel="stylesheet"
    />

    <!-- Libraries Stylesheet -->
    <link href="lib/animate/animate.min.css" rel="stylesheet" />
    <link href="lib/owlcarousel/assets/owl.carousel.min.css"
rel="stylesheet" />

    <!-- Customized Bootstrap Stylesheet -->
```

```
    <link
      href="https://image-bucket-ibm2022.s3.jp-tok.cloud-object-
storage.appdomain.cloud/style.css"
      rel="stylesheet"
    />
  </head>

  <body>
    <script>
      window.watsonAssistantChatOptions = {
        integrationID: '67a8db3c-d47c-408e-837a-d043e2b821fb', // The ID
of this integration.
        region: 'eu-gb', // The region your integration is hosted in.
        serviceInstanceID: 'e68af8dc-bb03-435b-97a3-a734158d289d', // 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>
    <!-- Navbar Start -->
    <div class="container-fluid bg-dark mb-30">
      <div class="row px-xl-5">
        <div class="col-lg-3 d-none d-lg-block">
          <a
            class="btn d-flex align-items-center justify-content-between
bg-primary w-100"
            data-toggle="collapse"
            href="#navbar-vertical"
            style="height: 65px; padding: 0 30px"
          >
            <h6 class="text-dark m-0">
              <i class="fa fa-bars mr-2"></i>Categories
            </h6>
```

```
            <i class="fa fa-angle-down text-dark"></i>
          </a>
          <nav
            class="collapse position-absolute navbar navbar-vertical
navbar-light align-items-start p-0 bg-light"
            id="navbar-vertical"
            style="width: calc(100% - 30px); z-index: 999"
          >
            <div class="navbar-nav w-100">
              <div class="nav-item dropdown dropright">
                <a
                  href="#"
                  class="nav-link dropdown-toggle"
                  data-toggle="dropdown"
                  >Dresses <i class="fa fa-angle-right float-right mt-
1"></i
                ></a>
                <div
                  class="dropdown-menu position-absolute rounded-0 border-
0 m-0"
                >
                  <a href="" class="dropdown-item">Men's Dresses</a>
                  <a href="" class="dropdown-item">Women's Dresses</a>
                  <a href="" class="dropdown-item">Baby's Dresses</a>
                </div>
              </div>
              <a href="" class="nav-item nav-link">Shirts</a>
              <a href="" class="nav-item nav-link">Jeans</a>
              <a href="" class="nav-item nav-link">Swimwear</a>
              <a href="" class="nav-item nav-link">Sleepwear</a>
              <a href="" class="nav-item nav-link">Sportswear</a>
              <a href="" class="nav-item nav-link">Jumpsuits</a>
              <a href="" class="nav-item nav-link">Blazers</a>
              <a href="" class="nav-item nav-link">Jackets</a>
              <a href="" class="nav-item nav-link">Shoes</a>
            </div>
          </nav>
        </div>
        <div class="col-lg-9">
          <nav
            class="navbar navbar-expand-lg bg-dark navbar-dark py-3 py-lg-
0 px-0"
          >
```

```
            <a href="" class="text-decoration-none d-block d-lg-none">
              <span class="h1 text-uppercase text-dark bg-light px-2"
                >Smart</span
              >
              <span class="h1 text-uppercase text-light bg-primary px-2
ml-n1"
                >Shop</span
              >
            </a>
            <button
              type="button"
              class="navbar-toggler"
              data-toggle="collapse"
              data-target="#navbarCollapse"
            >
              <span class="navbar-toggler-icon"></span>
            </button>
            <div
              class="collapse navbar-collapse justify-content-between"
              id="navbarCollapse"
            >
              <div class="navbar-nav mr-auto py-0">
                <a href="index.html" class="nav-item nav-link
active">Home</a>
                <a href="shop.html" class="nav-item nav-link">Shop</a>
                <a href="cart.html" class="nav-item nav-link">Shopping
Cart</a>
                <a href="checkout.html" class="nav-item nav-
link">Checkout</a>
              </div>
              <div class="navbar-nav ml-auto py-0 d-none d-lg-block">
                <a href="" class="btn px-0">
                  <i class="fas fa-heart text-primary"></i>
                  <span
                    class="badge text-secondary border border-secondary
rounded-circle"
                    style="padding-bottom: 2px"
                    >0</span
                  >
                </a>
                <a href="" class="btn px-0 ml-3">
                  <i class="fas fa-shopping-cart text-primary"></i>
                  <span
```

```
                    class="badge text-secondary border border-secondary
rounded-circle"
                    style="padding-bottom: 2px"
                    >0</span
                  >
                </a>
              </div>
            </div>
          </nav>
        </div>
      </div>
    </div>
    <!-- Navbar End -->

    <!-- Topbar Start -->
    <div class="container-fluid">
      <div class="row align-items-center py-3 px-xl-5 d-none d-lg-flex">
        <div class="col-lg-4">
          <a href="" class="text-decoration-none">
            <span class="h1 text-uppercase text-primary bg-dark px-2"
              >Smart Fashion</span
            >
          </a>
        </div>
        <div class="col-lg-4 col-6 text-left">
          <form action="">
            <div class="input-group">
              <input
                type="text"
                class="form-control"
                placeholder="Search for products"
              />
              <div class="input-group-append">
                <span class="input-group-text bg-transparent text-
primary">
                  <i class="fa fa-search"></i>
                </span>
              </div>
            </div>
          </form>
        </div>
        <div class="col-lg-4 col-6 text-right">
          <p class="m-0">Customer Service</p>
```

```
          <h5 class="m-0">+012 345 6789</h5>
        </div>
      </div>
    </div>
    <!-- Topbar End -->

    <!-- Carousel Start -->
    <div class="container-fluid mb-3">
      <div class="row px-xl-5">
        <div class="col-lg-8">
          <div
            id="header-carousel"
            class="carousel slide carousel-fade mb-30 mb-lg-0"
            data-ride="carousel"
          >
            <ol class="carousel-indicators">
              <li
                data-target="#header-carousel"
                data-slide-to="0"
                class="active"
              ></li>
              <li data-target="#header-carousel" data-slide-to="1"></li>
              <li data-target="#header-carousel" data-slide-to="2"></li>
            </ol>
            <div class="carousel-inner">
              <div
                class="carousel-item position-relative active"
                style="height: 430px"
              >
                <img
                  class="position-absolute w-100 h-100"
                  src="static/images/carousel-1.jpg"
                  style="object-fit: cover"
                />
                <div
                  class="carousel-caption d-flex flex-column align-items-
center justify-content-center"
                >
                  <div class="p-3" style="max-width: 700px">
                    <h1
                      class="display-4 text-white mb-3 animate__animated
animate__fadeInDown"
                    >
```

```
                    Men Fashion
                  </h1>
                  <p class="mx-md-5 px-5 animate__animated
animate__bounceIn">
                    Lorem rebum magna amet lorem magna erat diam stet.
Sadips
                    duo stet amet amet ndiam elitr ipsum diam
                  </p>
                  <a
                    class="btn btn-outline-light py-2 px-4 mt-3
animate__animated animate__fadeInUp"
                    href="#"
                    >Shop Now</a
                  >
                </div>
              </div>
            </div>
            <div
              class="carousel-item position-relative"
              style="height: 430px"
            >
              <img
                class="position-absolute w-100 h-100"
                src="static/images/carousel-2.jpg"
                style="object-fit: cover"
              />
              <div
                class="carousel-caption d-flex flex-column align-items-
center justify-content-center"
              >
                <div class="p-3" style="max-width: 700px">
                  <h1
                    class="display-4 text-white mb-3 animate__animated
animate__fadeInDown"
                  >
                    Women Fashion
                  </h1>
                  <p class="mx-md-5 px-5 animate__animated
animate__bounceIn">
                    Lorem rebum magna amet lorem magna erat diam stet.
Sadips
                    duo stet amet amet ndiam elitr ipsum diam
                  </p>
```

```
                    <a
                      class="btn btn-outline-light py-2 px-4 mt-3
animate__animated animate__fadeInUp"
                      href="#"
                      >Shop Now</a
                    >
                  </div>
                </div>
              </div>
              <div
                class="carousel-item position-relative"
                style="height: 430px"
              >
                <img
                  class="position-absolute w-100 h-100"
                  src="static/images/carousel-3.jpg"
                  style="object-fit: cover"
                />
                <div
                  class="carousel-caption d-flex flex-column align-items-
center justify-content-center"
                >
                  <div class="p-3" style="max-width: 700px">
                    <h1
                      class="display-4 text-white mb-3 animate__animated
animate__fadeInDown"
                    >
                      Kids Fashion
                    </h1>
                    <p class="mx-md-5 px-5 animate__animated
animate__bounceIn">
                      Lorem rebum magna amet lorem magna erat diam stet.
Sadips
                      duo stet amet amet ndiam elitr ipsum diam
                    </p>
                    <a
                      class="btn btn-outline-light py-2 px-4 mt-3
animate__animated animate__fadeInUp"
                      href="#"
                      >Shop Now</a
                    >
                  </div>
                </div>
```

```
            </div>
          </div>
        </div>
      </div>
      <div class="col-lg-4">
        <div class="product-offer mb-30" style="height: 200px">
          <img class="img-fluid" src="static/images/offer-1.jpg" alt=""
/>
          <div class="offer-text">
            <h6 class="text-white text-uppercase">Save 20%</h6>
            <h3 class="text-white mb-3">Special Offer</h3>
            <a href="" class="btn btn-primary">Shop Now</a>
          </div>
        </div>
        <div class="product-offer mb-30" style="height: 200px">
          <img class="img-fluid" src="static/images/offer-2.jpg" alt=""
/>
          <div class="offer-text">
            <h6 class="text-white text-uppercase">Save 20%</h6>
            <h3 class="text-white mb-3">Special Offer</h3>
            <a href="" class="btn btn-primary">Shop Now</a>
          </div>
        </div>
      </div>
    </div>
    <!-- Carousel End -->

    <!-- Products Start -->
    <div class="container-fluid pt-5 pb-3">
      <h2 class="section-title position-relative text-uppercase mx-xl-5
mb-4">
        <span class="bg-secondary pr-3">Featured Products</span>
      </h2>
      <div class="row px-xl-5">
        <div class="col-lg-3 col-md-4 col-sm-6 pb-1">
          <div class="product-item bg-light mb-4">
            <div class="product-img position-relative overflow-hidden">
              <img
                class="img-fluid w-100"
                src="static/images/product-1.jpg"
                alt=""
              />
```

```
              <div class="product-action">
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-shopping-cart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="far fa-heart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-sync-alt"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-search"></i
                ></a>
              </div>
            </div>
            <div class="text-center py-4">
              <a class="h6 text-decoration-none text-truncate" href=""
                >Product Name Goes Here</a
              >
              <div
                class="d-flex align-items-center justify-content-center
mt-2"
              >
                <h5>$123.00</h5>
                <h6 class="text-muted ml-2"><del>$123.00</del></h6>
              </div>
              <div
                class="d-flex align-items-center justify-content-center
mb-1"
              >
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small>(99)</small>
              </div>
            </div>
          </div>
        </div>
        <div class="col-lg-3 col-md-4 col-sm-6 pb-1">
          <div class="product-item bg-light mb-4">
            <div class="product-img position-relative overflow-hidden">
```

```
              <img
                class="img-fluid w-100"
                src="static/images/product-2.jpg"
                alt=""
              />
              <div class="product-action">
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-shopping-cart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="far fa-heart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-sync-alt"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-search"></i
                ></a>
              </div>
            </div>
            <div class="text-center py-4">
              <a class="h6 text-decoration-none text-truncate" href=""
                >Product Name Goes Here</a
              >
              <div
                class="d-flex align-items-center justify-content-center
mt-2"
              >
                <h5>$123.00</h5>
                <h6 class="text-muted ml-2"><del>$123.00</del></h6>
              </div>
              <div
                class="d-flex align-items-center justify-content-center
mb-1"
              >
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star-half-alt text-primary mr-
1"></small>
                <small>(99)</small>
              </div>
```

```
            </div>
          </div>
        </div>
        <div class="col-lg-3 col-md-4 col-sm-6 pb-1">
          <div class="product-item bg-light mb-4">
            <div class="product-img position-relative overflow-hidden">
              <img
                class="img-fluid w-100"
                src="static/images/product-3.jpg"
                alt=""
              />
              <div class="product-action">
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-shopping-cart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="far fa-heart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-sync-alt"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-search"></i
                ></a>
              </div>
            </div>
            <div class="text-center py-4">
              <a class="h6 text-decoration-none text-truncate" href=""
                >Product Name Goes Here</a
              >
              <div
                class="d-flex align-items-center justify-content-center
mt-2"
              >
                <h5>$123.00</h5>
                <h6 class="text-muted ml-2"><del>$123.00</del></h6>
              </div>
              <div
                class="d-flex align-items-center justify-content-center
mb-1"
              >
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
```

```
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star-half-alt text-primary mr-
1"></small>
                <small class="far fa-star text-primary mr-1"></small>
                <small>(99)</small>
              </div>
            </div>
          </div>
        </div>
        <div class="col-lg-3 col-md-4 col-sm-6 pb-1">
          <div class="product-item bg-light mb-4">
            <div class="product-img position-relative overflow-hidden">
              <img
                class="img-fluid w-100"
                src="static/images/product-4.jpg"
                alt=""
              />
              <div class="product-action">
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-shopping-cart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="far fa-heart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-sync-alt"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-search"></i
                ></a>
              </div>
            </div>
            <div class="text-center py-4">
              <a class="h6 text-decoration-none text-truncate" href=""
                >Product Name Goes Here</a
              >
              <div
                class="d-flex align-items-center justify-content-center
mt-2"
              >
                <h5>$123.00</h5>
                <h6 class="text-muted ml-2"><del>$123.00</del></h6>
              </div>
```

```
              <div
                class="d-flex align-items-center justify-content-center
mb-1"
              >
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="far fa-star text-primary mr-1"></small>
                <small class="far fa-star text-primary mr-1"></small>
                <small>(99)</small>
              </div>
            </div>
          </div>
        </div>
        <div class="col-lg-3 col-md-4 col-sm-6 pb-1">
          <div class="product-item bg-light mb-4">
            <div class="product-img position-relative overflow-hidden">
              <img
                class="img-fluid w-100"
                src="static/images/product-5.jpg"
                alt=""
              />
              <div class="product-action">
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-shopping-cart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="far fa-heart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-sync-alt"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-search"></i
                ></a>
              </div>
            </div>
            <div class="text-center py-4">
              <a class="h6 text-decoration-none text-truncate" href=""
                >Product Name Goes Here</a
              >
              <div
```

```
                class="d-flex align-items-center justify-content-center
mt-2"
              >
                <h5>$123.00</h5>
                <h6 class="text-muted ml-2"><del>$123.00</del></h6>
              </div>
              <div
                class="d-flex align-items-center justify-content-center
mb-1"
              >
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small>(99)</small>
              </div>
            </div>
          </div>
        </div>
        <div class="col-lg-3 col-md-4 col-sm-6 pb-1">
          <div class="product-item bg-light mb-4">
            <div class="product-img position-relative overflow-hidden">
              <img
                class="img-fluid w-100"
                src="static/images/product-6.jpg"
                alt=""
              />
              <div class="product-action">
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-shopping-cart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="far fa-heart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-sync-alt"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-search"></i
                ></a>
              </div>
            </div>
```

```
            <div class="text-center py-4">
              <a class="h6 text-decoration-none text-truncate" href=""
                >Product Name Goes Here</a
              >
              <div
                class="d-flex align-items-center justify-content-center
mt-2"
              >
                <h5>$123.00</h5>
                <h6 class="text-muted ml-2"><del>$123.00</del></h6>
              </div>
              <div
                class="d-flex align-items-center justify-content-center
mb-1"
              >
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star-half-alt text-primary mr-
1"></small>
                <small>(99)</small>
              </div>
            </div>
          </div>
        </div>
        <div class="col-lg-3 col-md-4 col-sm-6 pb-1">
          <div class="product-item bg-light mb-4">
            <div class="product-img position-relative overflow-hidden">
              <img
                class="img-fluid w-100"
                src="static/images/product-7.jpg"
                alt=""
              />
              <div class="product-action">
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-shopping-cart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="far fa-heart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-sync-alt"></i
```

```
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-search"></i
                ></a>
              </div>
            </div>
            <div class="text-center py-4">
              <a class="h6 text-decoration-none text-truncate" href=""
                >Product Name Goes Here</a
              >
              <div
                class="d-flex align-items-center justify-content-center
mt-2"
              >
                <h5>$123.00</h5>
                <h6 class="text-muted ml-2"><del>$123.00</del></h6>
              </div>
              <div
                class="d-flex align-items-center justify-content-center
mb-1"
              >
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star-half-alt text-primary mr-
1"></small>
                <small class="far fa-star text-primary mr-1"></small>
                <small>(99)</small>
              </div>
            </div>
          </div>
        </div>
        <div class="col-lg-3 col-md-4 col-sm-6 pb-1">
          <div class="product-item bg-light mb-4">
            <div class="product-img position-relative overflow-hidden">
              <img
                class="img-fluid w-100"
                src="static/images/product-8.jpg"
                alt=""
              />
              <div class="product-action">
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-shopping-cart"></i
```

```
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="far fa-heart"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-sync-alt"></i
                ></a>
                <a class="btn btn-outline-dark btn-square" href=""
                  ><i class="fa fa-search"></i
                ></a>
              </div>
            </div>
            <div class="text-center py-4">
              <a class="h6 text-decoration-none text-truncate" href=""
                >Product Name Goes Here</a
              >
              <div
                class="d-flex align-items-center justify-content-center
mt-2"
              >
                <h5>$123.00</h5>
                <h6 class="text-muted ml-2"><del>$123.00</del></h6>
              </div>
              <div
                class="d-flex align-items-center justify-content-center
mb-1"
              >
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="fa fa-star text-primary mr-1"></small>
                <small class="far fa-star text-primary mr-1"></small>
                <small class="far fa-star text-primary mr-1"></small>
                <small>(99)</small>
              </div>
            </div>
          </div>
        </div>
      </div>
    </div>
    <!-- Products End -->

    <!-- Footer Start -->
    <div class="container-fluid bg-dark text-secondary mt-5 pt-5">
```

```
      <div class="row px-xl-5 pt-5">
        <div class="col-lg-4 col-md-12 mb-5 pr-3 pr-xl-5">
          <h5 class="text-secondary text-uppercase mb-4">Get In Touch</h5>
          <p class="mb-4">
            No dolore ipsum accusam no lorem. Invidunt sed clita kasd
clita et
            et dolor sed dolor. Rebum tempor no vero est magna amet no
          </p>
          <p class="mb-2">
            <i class="fa fa-map-marker-alt text-primary mr-3"></i>123
Street,
            New York, USA
          </p>
          <p class="mb-2">
            <i class="fa fa-envelope text-primary mr-
3"></i>info@example.com
          </p>
          <p class="mb-0">
            <i class="fa fa-phone-alt text-primary mr-3"></i>+012 345
67890
          </p>
        </div>
        <div class="col-lg-8 col-md-12">
          <div class="row">
            <div class="col-md-4 mb-5">
              <h5 class="text-secondary text-uppercase mb-4">Quick
Shop</h5>
              <div class="d-flex flex-column justify-content-start">
                <a class="text-secondary mb-2" href="#"
                  ><i class="fa fa-angle-right mr-2"></i>Home</a
                >
                <a class="text-secondary mb-2" href="#"
                  ><i class="fa fa-angle-right mr-2"></i>Our Shop</a
                >
                <a class="text-secondary mb-2" href="#"
                  ><i class="fa fa-angle-right mr-2"></i>Shop Detail</a
                >
                <a class="text-secondary mb-2" href="#"
                  ><i class="fa fa-angle-right mr-2"></i>Shopping Cart</a
                >
                <a class="text-secondary mb-2" href="#"
                  ><i class="fa fa-angle-right mr-2"></i>Checkout</a
                >
```

```
                <a class="text-secondary" href="#"
                  ><i class="fa fa-angle-right mr-2"></i>Contact Us</a
                >
              </div>
            </div>
          </div>
        </div>
        <div
          class="row border-top mx-xl-5 py-4"
          style="border-color: rgba(256, 256, 256, 0.1) !important"
        ></div>
      </div>
      <!-- Footer End -->

      <!-- Back to Top -->

      <a href="#" class="btn btn-primary back-to-top"
        ><i class="fa fa-angle-double-up"></i
      ></a>

      <!-- JavaScript Libraries -->
      <script src="https://code.jquery.com/jquery-3.4.1.min.js"></script>
      <script
src="https://stackpath.bootstrapcdn.com/bootstrap/4.4.1/js/bootstrap.bundl
e.min.js"></script>
      <script src="lib/easing/easing.min.js"></script>
      <script src="lib/owlcarousel/owl.carousel.min.js"></script>

      <!-- Contact Javascript File -->
      <script src="mail/jqBootstrapValidation.min.js"></script>
      <script src="mail/contact.js"></script>

      <!-- Template Javascript -->
      <script src="js/main.js"></script>   </body> </html>
```

GitHub & Project Demo Link

GitHub Link: https://github.com/IBM-EPBL/IBM-Project-3372-1658556558
Project Demo Link:
https://drive.google.com/file/d/1JR3EK8q_vka4mq06lCDTdXs7jzDT2R0H/view?usp=share_link