SMART FASHION RECOMMENDATION SYSTEM

PROJECTREPORT

Submitted by

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(AUTONOMOUS)

THIRUVALLUR

PROJECTREPORT

INRODUCTION

Project Overview:

The chore of getting outfits that are appropriate for a particular user or identifying complementary goods given a query garment is frequently declined as fashion advice. We have developed a brand-new, ground-breaking method that enables you to conduct online shopping according to your preferences without conducting any research. The chatbot can be used to accomplish this. Nowadays, more and more individuals are interested in fashion. However, because there are so many different types of clothing, customers must try them on frequently, which takes considerable time and effort. Additionally, retailers find it challenging to meet consumer demand in real time. The photos of the upper body and lower body garments, as well as the human model, are the main emphasis of this work. This multi-label hierarchical application-based classification of studies raises the profile of ongoing research, advances the discipline, offers guidance for future study, and makes it easier to find related studies. The outcomes of this experimental model are better than those

of the earlier systems.

Online buying has expanded over the past few years. The entire e-commerce revenue in Europe increased by 17% in 2013 compared to the previous year, and large companies sometimes have thousands of products, if not more, available for us to choose from online. The most significant factor that people should think about every day is clothing. People want to look beautiful, as seen by the abundance of social media platforms like Facebook and Instagram where they can display their fashion photographs to the world. While standard factors like pricing, delivery, and payment methods still apply in this type of online transaction, their influence seems to be somewhat less than usual. Utilizing suggestions makes it easier and more enjoyable for customers to browse an online store.

This study looked at how photographs could be utilized to anticipate fashion trends and make online fashion suggestions. This research article reviewed the pertinent studies in order to achieve this goal. Additionally, it summarized the research designs of these academic articles after analysing them, and this will serve as a reference for future researchers who want to undertake research in this area.

Projectrequirements:,IBMCloud,IBMWatson,DB2Python 3.7,flask,docker

Project Deliverables: Application for smart fashion recommendation system.

Purpose:

Create a fashion recommendation system that provides responses to questions about shopping for clothing. To determine the fashion category of the supplied input photograph. If the fashion image provided is accurate, then a similar ensemble of apparel will be suggested. Getting products from various e-commerce websites that were found through comparable search terms. The on-line media has extraordinarily influenced the whole lifestyle worldwide or, at least, 99% of it. Everything started in the late 80's, when the web entered the lives of many individuals around the world. Regardless of the numerous issues it brought about in the mid 2000's, the internet business industry has developed quickly and impacted all sides of

employment in the public area. There has been an expanded pace of improvement in the public eye due to internet business.

To obtain the relevant fashion knowledge rules, we present a mechanism of style propagation for discovering semantic relations between clothing styles by considering body figures of people wearing it. User profiling helps personalization and has received much attention in the social multimedia research fields. Simo-Serral et al. analyzed how fashionable a person looks at a photo whereby advising the user to improve the appeal.

LITERATURESURVEY

ExistingProblem

There is a large number of approved sizing systems around the globe for various clothes, such as dresses, tops, skirts, pants and brands. Moreover, there are different size systems such as numeric (38-39-40), standard (S,M,L), fractions (41 1/3, 42.5), convention sizes (36-38, 40-42), country conventions (EU, FR, IT, UK), where inconsistencies and different ways of converting a local size system to another (as brands do not always comply with the same conversion logic) make the task challenging. The exact size is a very subjective feature; users who have purchased items with the same style and shape may make future purchases with different sizes; how an item fits on your body depends on or can be influenced by several factors, making an objective recommendation difficult. Moreover, customers may be driven by emotional aspects; even a piece of accurate size advice can come with a high emotional cost when the advised size differs from the customer's expectation.

References

1. Maria Anastassia Stefani, VassiliosStefanis, John Garofalakis" A Trends-Driven collaborative fashion recommendation system", 2019
2. Shintami Chusnul Hidayati , Cheng-Chun Hsu, Yu-Ting Chang, Kai-Lung Hua, Jianlong Fu, Huang Cheng" What dress fits me best? fashion recommendation on the clothing style for personal body shape",2019.
3. Anjan M, Abhishek V, C.Balamanikantan, Dheeraj , Dr. Venugeetha Y" Fashion Recommendation System using CNN",2022.
4. Ying Huang a, Tao Huang b" Outfit recommendation system based on deep learning",2017.
5. Samit Chakraborty1∗ ID, Md. Saiful Hoque2 , S.M. Surid3"A Comprehensive Review on image based style prediction and online fashion recommendation",2020.
6. Muhammad KHALID1 , Mao KEMING1 , Tariq HUSSAIN2" Design and implementation of clothing fashion style recommendation system using deep learning",2021.

7. YanZhang,1,2 Xiang Liu,1 Yunyu Shi,1 Yunqi Guo,3 ChaoqunXu,3 Erwen Zhang,4 JiaxunTang,1 and Zhijun Fang1"Fashion Evaluation Method for Clothing Recommendation Based on Weak Appearance Feature**",** 2017.
8. Seyed Omid Mohammadi1 , Ahmad Kalhor2"Smart fashion:A review of AI application in virtual drive-on & fashion sysnthesis.",2021.
9. Samitchakraborty, Md.SaifulHoque, Naimur Rahman Jeem , Manik Chandra Biswas, DeepayanBardhan , Edgar Lobaton" Fashion recommendation system, model and methods: A Review",2021.
10. Federico Becattini, Lavinia De Divitiis, Claudio Baecchi and Alberto Del Bimbo" Fashion Remcommendation Based on Style and Social Events**",2021.**

ProblemStatementDefinitions

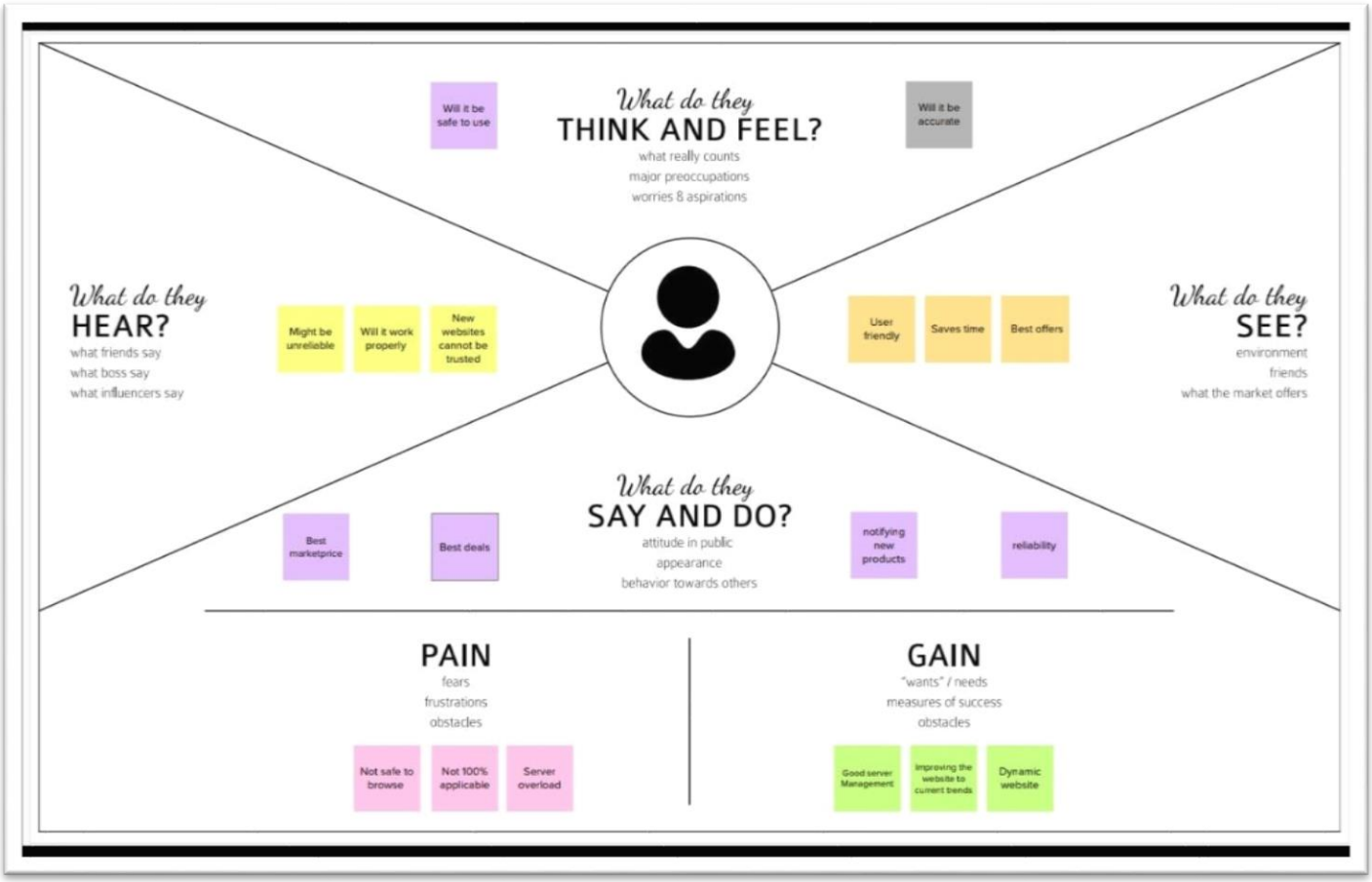
Problem Statement	**I am (Customer)**	**I'm trying to**	**But**	**Because**	**Which makes me feel**
PS- 1	I am a Collge Student	I am trying to buy some formal wears for college	I cannot able to find the right dress	Either the brand or colour does not suit	Which makes me feel Frustrated
PS-2	I am Average Women	I am trying to buy a dress for special occasion	But I could not able to find the dress within my budget	Product price is not within my budget	Which makes me feel Sad

IDEATION&PROPOSEDSOLUTION

Empathy Map Canvas:

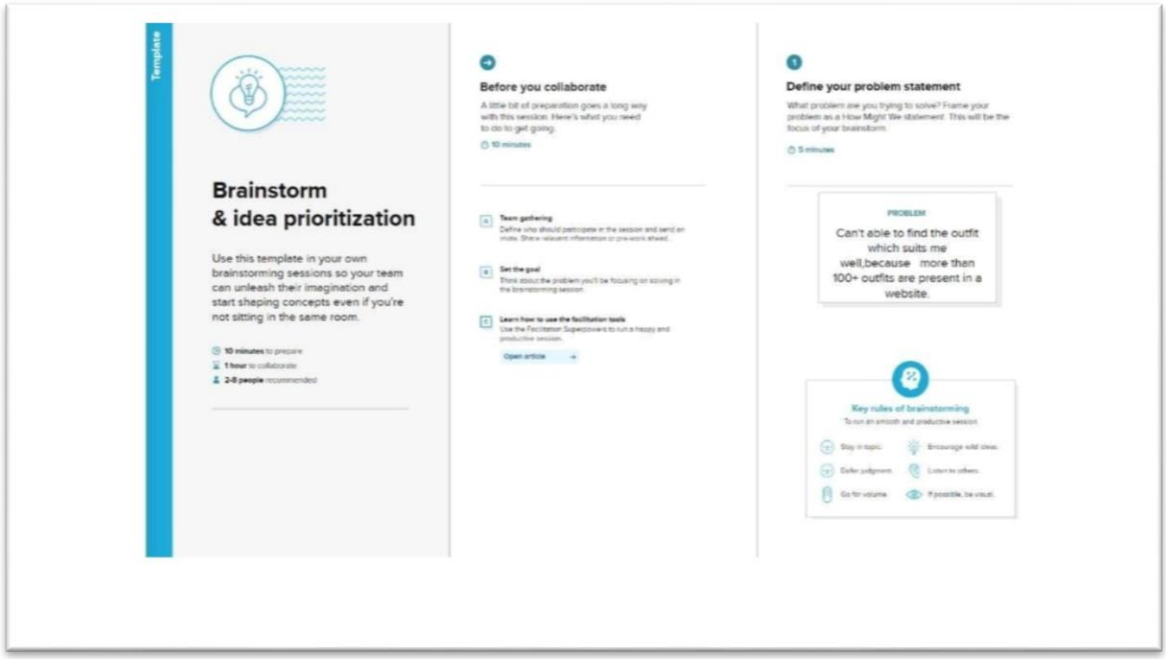
An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes.

It is a useful tool to helps teams better understand their users. Creating an effective solutionrequiresunderstandingthetrueproblemandthepersonwhoisexperiencingit.Theexerciseof creating the map helps participants consider things from the user's perspective along with his other goals and challenges

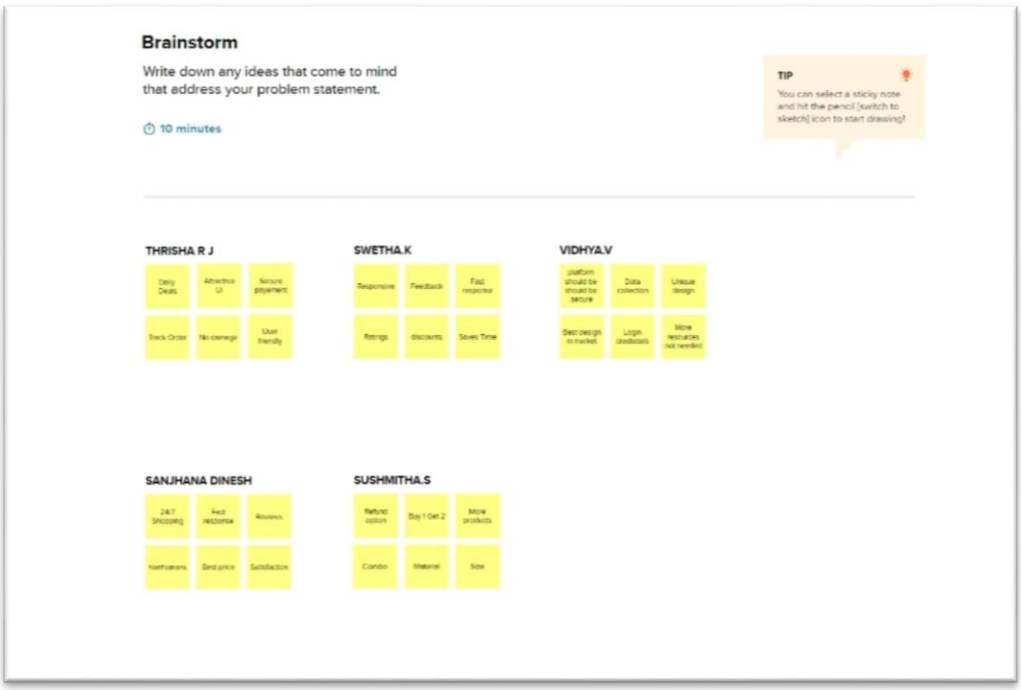


Ideation and Brainstorming

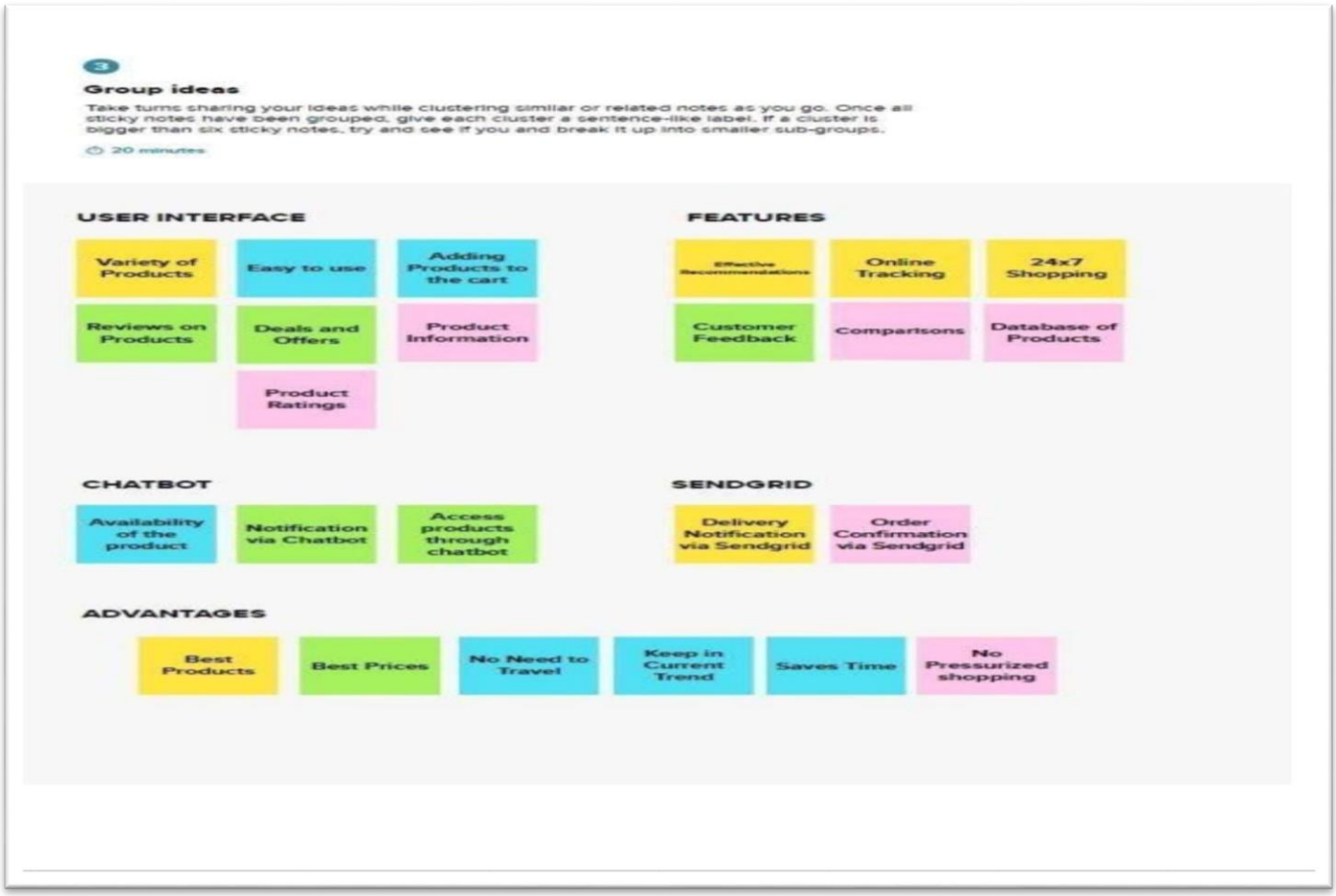
Step-1: Team Gathering, Collaboration and Select the Problem Statements:



Step-2: Brainstorm, Idea Listing and Grouping



Step-3: Idea Prioritization



Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	How can we make online fashion shopping even smarter ? Eventhough online shopping is convenient ,the main problem isthat a shopping cart cannotsay “This dress looks like it was made especially for you ,mam” or “ May I suggest a top that perfectly matches with the pant ?”
2.	Idea/Solution description	Chatbot helps the customer in selecting an Outfit Customer can easily ask for what they want and it filters the various collection to suggest the products fitting their style. The Bot will assist the customers till the purchase is done.
3.	Novelty/Uniqueness	With the help of IBM Cloud Object Storage, we are going to store and manage large amount of data which is highly scalable and secure. Give recommendation based on customer interest. The chat bot indeed keeps you engaged and perfectly fits the designer’s goal of “Going directly to the consumer”..
4.	Social Impact/Customer Satisfaction	Fashion recommending chat bots, the automated and smart contextual messaging system act as a personal stylists. Integrated customer Feedback collecting system. Advertise best deals and offers on that day.
5.	Business Model(Revenue Model)	Simple and easy UI to enable end-user for seamless and smart purchase experience. Get many inputs such as: Gender, Age ,Dress size, Dress category, Color preference, Price filter etc.. for better recommendation. Easy monitoring of customers ,products as well as feedback database in dedicated Admin dashboard.
6.	Scalability of the Solution	Large and Varied collection of fashion apparels in database for more personalised search results. Cloud integration of Chatbot for quick and efficient recommendation system. Chatbots may be seen as a user interface for fashion applications by providing recommendations,exploring and searching huge catalogues , complementing virtual fitting room features and delivering customer services.

Problem Solution fit:

1. CUSTOMER SEGMENT He/she is devoted follower of the latest fashion trends.	2.JOBS-TO-BE-DONE The recommendations that are generated are not accurate enough.	3.TRIGGERS Seeing their peers use an application that provides a more accurate and favored output.
4.EMOTIONS:BEFORE/AFTER BEFORE-Disappointed and dissatisfied. AFTER-Happy and satisfied.	5.AVAILABLE SOLUTIONS Going to an in-person store to look for more options instead of an online application	6.CUSTOMER CONSTRAINTS Lack of resources, low budget, transportation issue and lack of stores.
7.BEHAVIOUR DIRECTLY RELATED-Find an application that has a wider range of options or check for update in the current application to get better recommendations. INDIRECTLY ASSOCIATED-Customer visits fashion runways and exhibits frequently.	8.CHANNELS OF BEHAVIOUR ONLINE-Do research on what application works the best for their individual need for better satisfaction. OFFLINE-Goes to fashion related events to get a better understanding on fashion so that they don't need to reply on the application much.	9.PROBLEM ROOT CAUSE Customers have to keep updating with the ever growing technology where things get old or outdated easily.
10.YOUR SOLUTION Create an application with a primary goal to provide a better recommendations ie. provide many more datasets as		

REQUIREMENT ANALYSIS:

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement(Epic)	Sub Requirement(Story/Sub-Task)
FR-1	Sign up	Register by using mobile number/email id
FR-2	User Verification	Verify via Email Verify via OTP
FR-3	Login	Login by using username / password
FR-4	Profile Updation	Update the profile details like Gender, Age , Address & mobile number ,etc,.
FR-5	Chatbot	Chatbot is useful to search products , view offers ,discounts and stock availability. It is also used to solve queries and issues.
FR-6	Ordering the product	After confirming the product , buy the product via Cash on Delivery or online transactions.
FR-7	Tracking the ordered Product	After ordering the product , track the delivery via link received to your registered mobile number through SMS.
FR-8	Logout	After receiving the product ,user can logout the account when he/she needs

Non-Functional Requirements:

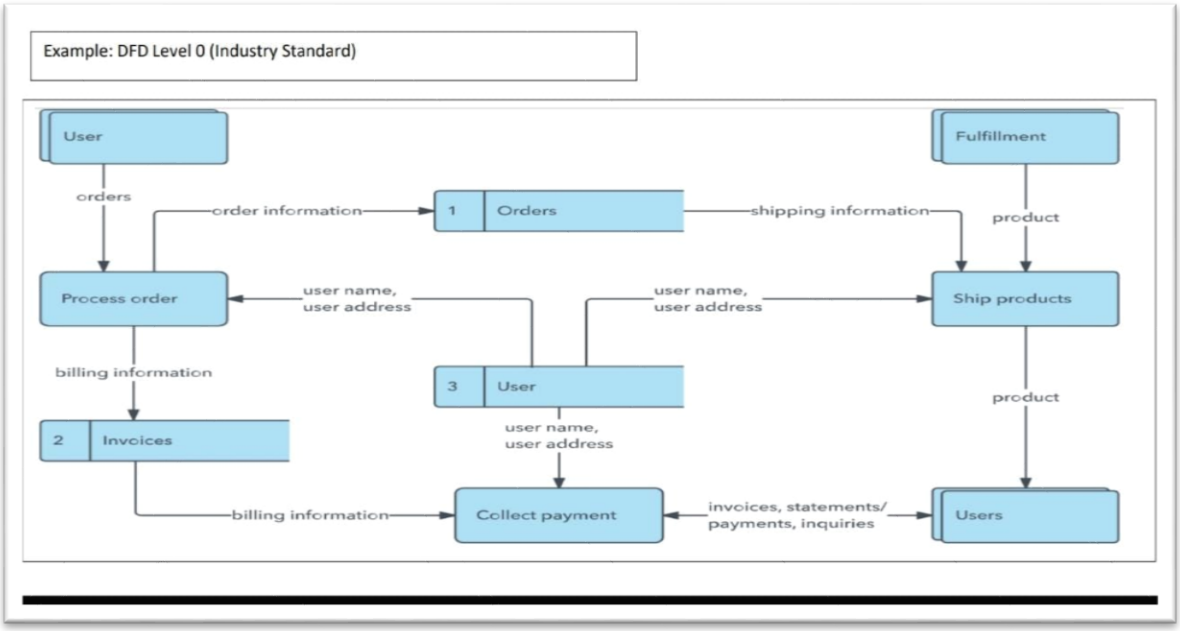
Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	The application will be designed in such a way that any user can easily navigate through it and user can easily view , order and track the product until delivery.(Easy and Compact design.)
NFR-2	Security	Using of SSL (Secure Socket Layer) certificate (Python Flask to Cloud connect) will provide security to the project. The user details will be kept as more secure.
NFR-3	Reliability	To make sure the application doesn't go down due to network traffic and the details entered in this application is kept as highly confidential, so it is highly reliable.
NFR-4	Performance	. To make sure the application doesn't go down due to network traffic and the details entered in this application is kept as highly confidential, so it is highly reliable.
NFR-5	Availability	This application will be available to all users (network connectivity is necessary) at any given point of time. Users can access the chatbot for raising any queries/ questions.
NFR-6	Scalability	. Chatbot can be very useful during festival season to know about offers and discounts. It will be helpful whenever we make online shopping.

PROJECT DESIGN

Data Flow Diagrams:

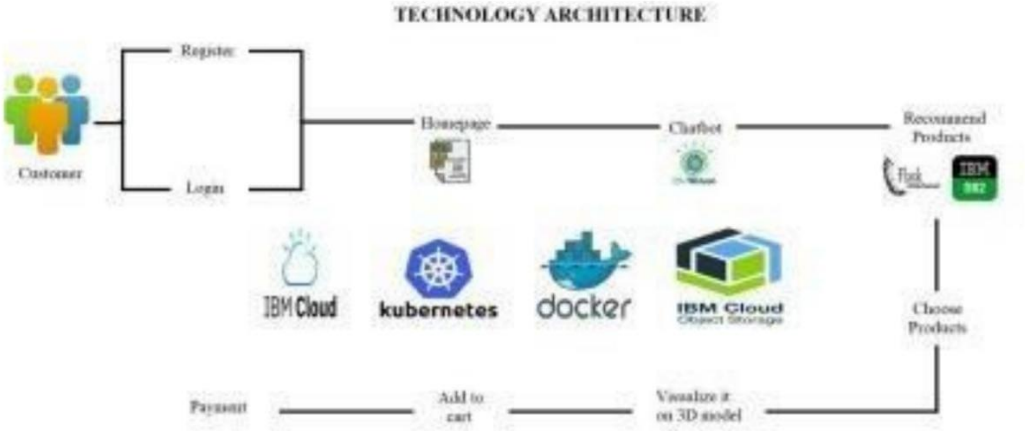
A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



Solution & Technical Architecture

Solution Architecture:

Solution Architecture Diagram:



Way Chatbot:

FLASK IBM CLOUD IBM DB2 KUBERNETES DOCKER

Table-1:Components&Technologies:

S.No	Component	Technology	Description
1	User Interface	HTML, CSS, JavaScript / Angular Js / React Js.	User can interact with the application through Chatbot for good Human-computer interface.
2	Application Logic-1	Java Python	The application will have the login/sign up page where the user can login into the main dashboard or they can register into the application.
3	Application Logic-2	IBM Watson STT service	The application contains a Chatbot where the user needs to give their details like • gender, • age • type of product these were they wish to buy using Watson assistant through chatbot.
4	Application Logic-3	IBM Watson Assistant	User's will get the recommendations based on their interests, can get the details about offers, discounts and chatbot will send a notification to customers if the order is confirmed.
5	Database	MySQL, NoSQL,	Customer's details and order are stored in the database and whenever we can be fetch and retrieve data from database.
6	Cloud Database	IBM DB2, IBM Cloudant	With use of Database Service on Cloud, user can access all the data stored in the cloud over a network from any device and user's data are stored in a well secure manner.
7	File Storage	IBM Block Storage or Other Storage Service or Local File system	Previously ordered product details and other customer details can be stored in the IBM Block Storage as the data kept inside are highly protected.
8	Infrastructure (Server / Cloud)	Local, Cloud Foundry, Kubernetes , Docker	Chatbot with updated services can be deployed in an IBM cloud by using Watson assistant.

Table-2: Application Characteristics:

S.No	Characteristics	Technology	Description
1	**Open-Source Framework**	**Python - Flask**	**• Flask is a web framework in Python is used in the implementation of smart fashion recommender application.**
2	**Security Implementations**	**Container Registry, Kubernetes Cluster.**	**This application uses Container Registry in IBM cloud so that the user details are kept as more secure and confidential. •User have to confirm the login while logging in to avoid any misuse of the credentials**
3	**Scalable Architecture**	**Container Registry, Kubernetes Cluster.**	**• The Smart Fashion Recommender Application is more useful whenever user's make online purchase and it's demand increase at festival season's to know about the available offers and discounts.**
4	**Availability**	**Docker, Kubernetes Cluster.**	**• Docker helps to improve the network management so that the application can be accessed at anytime.**
5	**Performance**	**Docker, Kubernetes Cluster.**	**• The performance of this application is high.** **• efficient as the network traffic can be easily managed.**

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story /Task	Acceptance criteria	Priority	Release
Customer (Mobile user/Web 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	

		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	
		USN-4	As a user, I can register for the application through Gmail		Medium	
	Login	USN-5	As a user, I can log into the application by entering email & password		High	
Customer Care Executive		USN-7	As a customer care executive i can solve the login issues and other issues of the application	I can provide support or solution at any time 24*7 M	Medium	
Administrator	Application	USN-8	As a administrator i can upgrad or update the application	I can fix the bugs which arises for the customers and users of the application	Medium	

MILESTONES	ACTIVITY	DESCRIPTION
Ideation phase	Literature survey	Literature survey on selected project and gathering information.
	Empathy map	Prepare empathy map to capture the user pains and gains, prepare a list of problem statement.
	Ideation	Organizing the brainstorming session and prioritize the top three ideas based on feasibility hand importance.
Project design phase 1	Proposed solution	Prepare proposed solution

		document which includes novelty, feasibility of ideas, business model, social impact,scalability of solution.
	Problem solution fit	Prepare problem solution fit Documents.
	Solution architecture	Prepare solution architecture document of the project
Project design phase 2	Customer journey map	Prepare customer journey map to understand the user interactions and experience with the application.
	Functional requirements	Prepare functional and nonfunctional necessity document.
	Data flow diagram	Prepare data flow diagram and user stories
	Technology architecture	Draw technology architecture diagram
Project planning phase	Milestones and activity list	Prepare milestones and activity list of the project.
	Sprint delivery plan	Planning ofsprints
Setting-up app environment	Create IBM cloud account	Sign up IBM cloud account
	Create flask project	Getting started with the flask to create project.
	Install IBM cloud CLI	Install IBM command line interface (CLI).
	Docker CLI installation	Installing docker CLI
	Create an account in SendGrid	Create an account in SendGrid and use service as email integration to the application for sending emails.
MILESTONES	ACTIVITY	DESCRIPTION
Project development phase	Delivery of Sprint-1,2,3,4	To develop and submit the code after completion of testing.
Implementing web application	Create UI to interact with the application.	Create UI registration page login page view products page
	Create IBM DB2 and connect	Create an IBM DB2 in the IBM

	with the Python.	cloud and connect it to Python.
Integrating sendgrid service	SendGrid integration with the Python.	The SendGrid services must be integrated in order for the application to send emails.
Developing a chatbot	Building a chatbot and integrate with the application.	Build the chatbot and integrate it to the flask application.
Deployment of app in IBM cloud	Containerize the app	Create a docker image of the application in addition to push it to the IBM container registry.
	Upload image to IBM container registry.	Upload the image to IBM container registry.
	Deploy it in Kubernetes cluster.	Once the image is uploaded to IBM container registry deploy the image toward IBM Kubernetes cluster.

PROJECTPLANNING&SCHEDULING:

Sprint planning &Estimation:

Sprint	Functional Requirement (Epic)	User Story Number	User Story /Task	Story Points	Priority	Team Members
Sprint-1		**USN-1**	**The user will login into the website and go through the products available on the website**	**20**	**High**	**Thrisha.R.J Sanjhana Dinesh Swetha.K Vidhya.V Sushmitha.A**
Sprint-2		**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**	**Thrisha.R.J Sanjhana Dinesh Swetha.K Vidhya.V Sushmitha.A**
Sprint-3		**USN-3**	**The user can directly talk to Chatbot rega**	**20**	**High**	**Thrisha.R.J Sanjhana Dinesh Swetha.K Vidhya.V Sushmitha.A**

Sprint-4	**Final delivery**	**USN-4**	**Container of applications using docker kubernetes and the deployement applications.create the documentation and final.**	**20**	**High**	**Thrisha.R.J Sanjhana Dinesh Swetha.K Vidhya.V Sushmitha.A**

Project Tracker, Velocity & Burn down Chart:

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed Planned	Sprint Release Date(Actual) (as on End Date)
Sprint-1	**20**	**6**	**Days 24 Oct 2022**	**29 ct 2022**		**29 Oct 2022**
Sprint-2	**20**	**6**	**Days 31 Oct 2022**	**05 ov 2022**		**05 Nov 2022**
Sprint-3	**20**	**6**	**Days 07 Nov 2022**	**12 Nov 2022**		**12 Nov 2022**
Sprint-4	**206**	**6**	**Days 14 Nov 2022**	**19 Nov 2022**		**19 Nov 2022**

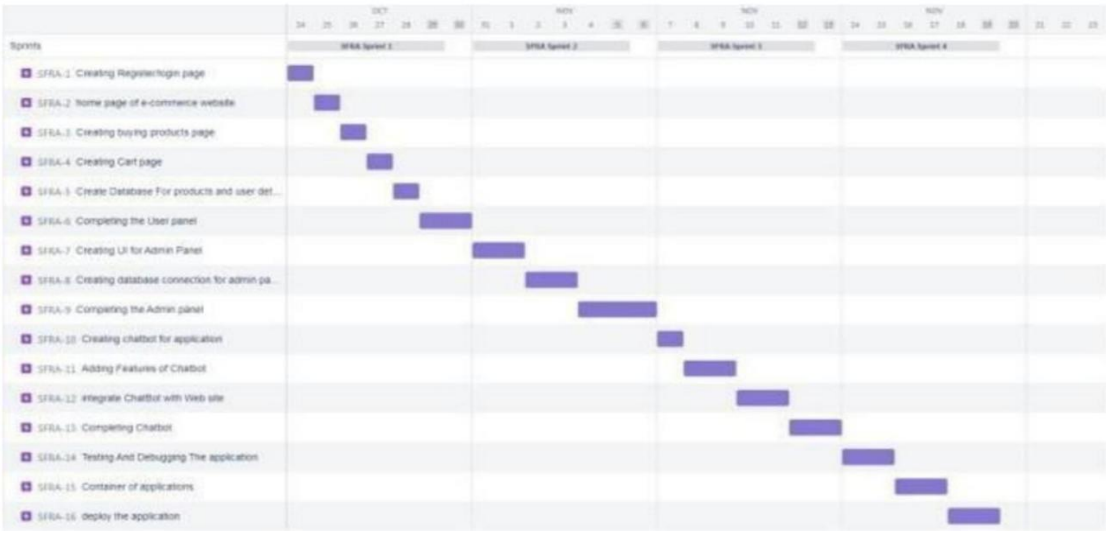
Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint).

Let's calculate the team's average velocity(AV) periteration unit (story points per day)

AV=sprint duration/velocity=20/10=2

Burn down Chart:



CODING&SOLUTIONING

App.py

```
from flask import Flask, render_template, request, redirect, url_for,session

import ibm_db
 import re


 app = Flask(__name__)

 app.secret_key = 'a'


 conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=54a2f15b-5c0f-46df-8954-
 7e38e612c2bd.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32733;SECURITY=SSL;SSLServer
 Certificate=DigiCertGlobalRootCA.crt;UID=bsb19147;PWD=M8Q6aCGQuLHwiHkU","","")
```

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


def index():
    return render_template('index.html')




@app.route('/login',methods =['GET', 'POST'])
def login():
    global userid
    msg = ''


    if request.method == 'POST' :
        username = request.form['email-id']
        password = request.form['password']
        sql = "SELECT * FROM users WHERE email-id =? 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['email-id']
            userid=  account['email-id']
            session['username'] = account['email-id']
            msg = 'Logged in successfully !'

            msg = 'Logged in successfully !'
            return render_template('index.html', msg = msg)
        else:
            msg = 'Incorrect username / password !'
    return render_template('login.html', msg = msg)




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

```
    if request.method == 'POST' :
        username = request.form['username']
        email = request.form['email']
        password = request.form['password']
        sql = "SELECT * FROM users WHERE email-id =?"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.bind_param(stmt,1,username)
        ibm_db.execute(stmt)
        account = ibm_db.fetch_assoc(stmt)
        print(account)
        if account:
            msg = 'Account already exists !'
        elif not re.match(r'[^@]+@[^@]+\.[^@]+', email-id):
            msg = 'Invalid email address !'
        elif not re.match(r'[A-Za-z0-9]+', password):
            msg = 'name must contain only characters and numbers !'
        else:
            insert_sql = "INSERT INTO  users VALUES (?, ?, ?)"
            prep_stmt = ibm_db.prepare(conn, insert_sql)
            ibm_db.bind_param(prep_stmt, 1, email-id)
            ibm_db.bind_param(prep_stmt, 2, password)
            ibm_db.bind_param(prep_stmt, 3, Confirm password)
            ibm_db.execute(prep_stmt)
            msg = 'You have successfully registered !'
    elif request.method == 'POST':
        msg = 'Please fill out the form !'
    return render_template('login.html', msg = msg)


from flask import Flask, render_template, request, redirect, url_for, session
import ibm_db
import re


app = Flask(__name__)

app.secret_key = 'a'


conn = ibm_db.connect("DATABASE=bludb;HOSTNAME=54a2f15b-5c0f-46df-8954-
7e38e612c2bd.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32733;SECURITY=SSL;SSLServer
Certificate=DigiCertGlobalRootCA.crt;UID=bsb19147;PWD=M8Q6aCGQuLHwiHkU","","")


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

```
def index():
    return render_template('index.html')




@app.route('/login',methods =['GET', 'POST'])
def login():
    global userid
    msg = ''


    if request.method == 'POST' :
        username = request.form['email-id']
        password = request.form['password']
        sql = "SELECT * FROM users WHERE email-id =? 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['email-id']
            userid=  account['email-id']
            session['username'] = account['email-id']
            msg = 'Logged in successfully !'

            msg = 'Logged in successfully !'
            return render_template('index.html', msg = msg)
        else:
            msg = 'Incorrect username / password !'
    return render_template('login.html', msg = msg)




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

```
        password = request.form['password']
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        if account:
            msg = 'Account already exists !'
        elif not re.match(r'[^@]+@[^@]+\.[^@]+', email-id):
            msg = 'Invalid email address !'
        elif not re.match(r'[A-Za-z0-9]+', password):
            msg = 'name must contain only characters and numbers !'
        else:
            insert_sql = "INSERT INTO  users VALUES (?, ?, ?)"
            prep_stmt = ibm_db.prepare(conn, insert_sql)
            ibm_db.bind_param(prep_stmt, 1, email-id)
            ibm_db.bind_param(prep_stmt, 2, password)
            ibm_db.bind_param(prep_stmt, 3, Confirm password)
            ibm_db.execute(prep_stmt)
            msg = 'You have successfully registered !'
    elif request.method == 'POST':
        msg = 'Please fill out the form !'
    return render_template('login.html', msg = msg)


@app.route('/index')
def index():

    return render_template('index.html')




    @app.route('/about')
def about():

    return render_template('about.html')




if __name__ == '__main__':
   app.run(host='0.0.0.0')
```

Home.html

```
<doctypehtml>
                <!-- Created By CodingNepal -->
                <html lang="en" dir="ltr">
                   <head>
                      <meta charset="utf-8">
                      <title>Login and Registration Form in HTML | CodingNepal</title>
                      <link rel="stylesheet" href="style.css">
                      <meta name="viewport" content="width=device-width, initial-scale=1.0">
                   </head>
                   <body>
                      <div class="wrapper">
                         <div class="title-text">
                            <div class="title login">
                               Login
                            </div>
                            <div class="title signup">
                               Signup
                            </div>
                         </div>
                         <div class="form-container">
                            <div class="slide-controls">
                               <input type="radio" name="slide" id="login" checked>
                               <input type="radio" name="slide" id="signup">
                               <label for="login" class="slide login">Login</label>
                               <label for="signup" class="slide signup">Signup</label>
                               <div class="slider-tab"></div>
                            </div>
                            <div class="form-inner">
                               <form action="#" class="login">
                                  <div class="field">
                                     <input type="text" placeholder="email-id" required>
                                  </div>
                                  <div class="field">
                                     <input type="password" placeholder="password" required>
                                  </div>
                                  <div class="pass-link">
                                     <a href="forgot.html">Forgot password?</a>
                                  </div>
                                  <div class="field btn">
                                     <div class="btn-layer"></div>
                                     <input type="submit" value="Login">
```

```
                    </div>
                    <div class="signup-link">
                       Not a member? <a href="">Signup now</a>
                    </div>
                 </form>
                 <form action="#" class="signup">
                    <div class="field">
                       <input type="text" placeholder="email-id" required>
                    </div>
                    <div class="field">
                       <input type="password" placeholder="password" required>
                    </div>
                    <div class="field">
                       <input type="password" placeholder="Confirm password" required>
                    </div>
                    <div class="field btn">
                       <div class="btn-layer"></div>
                       <input type="submit" value="Signup">
                    </div>
                 </form>
              </div>
           </div>
        </div>
        <script>
           const loginText = document.querySelector(".title-text .login");
           const loginForm = document.querySelector("form.login");
           const loginBtn = document.querySelector("label.login");
           const signupBtn = document.querySelector("label.signup");
           const signupLink = document.querySelector("form .signup-link a");
           signupBtn.onclick = (()=>{
             loginForm.style.marginLeft = "-50%";
             loginText.style.marginLeft = "-50%";
           });
           loginBtn.onclick = (()=>{
             loginForm.style.marginLeft = "0%";
             loginText.style.marginLeft = "0%";
           });
           signupLink.onclick = (()=>{
             signupBtn.click();
             return false;
           });
        </script>
     </body>
  </html>
```

Index.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>RST/Home</title>
                <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-
            awesome.min.css">
                <link rel="stylesheet" href="https://rakesh87.s3.us-east.cloud-object-
            storage.appdomain.cloud/style.css">
            </head>


            <body>
                <section id="header">
                    <a href="#"><img src="https://saravanan2001mohan.s3.us-east.cloud-object-
            storage.appdomain.cloud/rst%20(1).png"
                            class="logo" alt="" width="150" height="60"></a>
                    <div>
                        <ul id="navbar">
                            <li><a class="active" href="index.html">Home</a></li>
                            <li><a href="login.html">Login</a><x/li>
                            <li><a href="product.html">Product</a></li>
                            <li><a href="about.html">About</a></li>
                            <li><a href="contact.html">Contact</a></li>
                            <li><a href="cart.html"><i class="fa fa-shopping-bag"></i></a></li>
                            <li><a href="register.html"><i class="fa fa-user-secret"></i></a></li>
                        </ul>
                </section>
                <section id="hero">
                    <h4>"Happiness Depends Upon Ourselves"</h4>
                    <h2>Smart Fashion Recommender</h2>
                    <h1>Application</h1>
                    <p>Dress Up In Confidence</p>
                    <button class="normal">Shop now</button>
                </section>
                <section id="feature" class="section-p1">
                    <div class="fe-box">
```

```
            <img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/freeship.png"
alt="" width="100"
                height="100">
            <h6>Free Shipping</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/orderonline.jpg"
alt="" width="100"
                height="100">
            <h6>Online Order</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/savemoney.jpg"
alt="" width="100"
                height="100">
            <h6>Save Money</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/promotion.jpg"
alt="" width="100"
                height="100">
            <h6>Promotions</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/happysell.jpg"
alt="" width="100"
                height="100">
            <h6>Happy Sell</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/support.jpg"
alt="" width="100"
                height="100">
            <h6>F24/7 Support</h6>
        </div>

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

```
<div class="banner-box banner-box2">
<h4>spring/summer</h4>
<h2>upcommig seasons</h2>
<span>The best classic dress is on sale at U Nik</span>
<a href="blog.html"><button class="white">Collection</button></a>
</div >
</section>
<section id="banner3">
<div class="banner-box">
<h2>SEASONAL SALE</h2>
<h3>Winter collection 50% off</h3>
</div >
<div class="banner-box banner-box2">
<h2>SEASONAL SALE</h2>
<h3>Winter collection 50% off</h3>
</div >
<div class="banner-box banner-box3">
<h2>SEASONAL SALE</h2>
<h3>Winter collection 50% off</h3>
</div >
</section> -->
    <section id="newsletter" class="section-p1">
        <div class="newstext">
            <h4>Sign up for NewsLetters</h4>
            <p>Get Email updates about our latest shop and <span>special offer</span>
            </p>
        </div>
        <div class="form">
            <input type="text" placeholder="Your E-mail Address">
            <button class="normal">login</button>
        </div>
    </section>
    <footer class="section-p1">
        <div class="col">
            <img class="logo"
                src="https://saravanan2001mohan.s3.us-east.cloud-object-
storage.appdomain.cloud/rst%20(1).png" alt=""
                width="200" height="100">
            <h4>Contact</h4>
            <p><strong>E-Mail: </strong>rstsmartfashion@gmail.com</p>
            <p><strong>Phone: </strong>1234567890</p>
            <div class="follow">
                <h4>Follow us</h4>
                <div class="icon">
                    <i class="fa fa-facebook-f"></i>
                    <i class="fa fa-twitter"></i>
                    <i class="fa fa-instagram"></i>
```

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

<script>
    window.watsonAssistantChatOptions = {
      integrationID: "f575ccb9-7f1a-4ceb-b32b-23f9d2a71c7a", // The ID of this integration.
      region: "au-syd", // The region your integration is hosted in.
      serviceInstanceID: "c8db2a25-708c-4bac-bb36-d9b5b790d6d3", // 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>
```

TESTING

				Date	03-Nov-22	
				Team ID	PNT2022TMID01360	
				Project Name	Smart Fashion Recommender Application	
				Maximum Marks	4 marks	
Test case ID	**Feature Type**	**Component**	**Test Scenario**	**Pre-Requisite**	**Steps To Execute**	**Test Data**
LoginPage_TC_OO1	Functional	Home Page	Verify user is able to see the Login/Signup popup when user clicked on My account button	None	1.Enter URL and click go 2.Click on My Account dropdown button 3.Verify login/Singup popup displayed or not	https://127.0.0.1:5000/
LoginPage_TC_OO2	UI	Home Page	Verify the UI elements in Login/Signup popup	Home	1.Enter URL and click go 2.Click on My Account dropdown button 3.Verify login/Singup popup with below UI elements: a.email text box b.password text box c.Login button d.New customer? Create account link e.Last password? Recovery password link	https://127.0.0.1:5000/
LoginPage_TC_OO3	Functional	Home page	Verify user is able to log into application with Valid credentials	Username and password	1.Enter URL(https://Trendzy.com/) and click go 2.Click on My Account dropdown button 3.Enter Valid username/email in Email text box 4.Enter valid password in password text box 5.Click on login button	Username: Pksc password: 123456
LoginPage_TC_OO4	Functional	Login page	Verify user is able to log into application with InValid credentials	Username and password	1.Enter URL(https://127.0.0.1:5000/) and click go 2.Click on My Account dropdown button 3.Enter InValid username/email in Email text box 4.Enter valid password in password text box 5.Click on login button	Username: pksc@gmail password: Testing123
LoginPage_TC_OO4	Functional	Login page	Verify user is able to log into application with InValid credentials	Login first	1.Enter URL(https://127.0.0.1:5000/) and click go 2.Click on My Account dropdown button 3.Enter Valid username/email in Email text box 4.Enter Invalid password in password text box 5.Click on login button	Username: pksc password: 1234567
LoginPage_TC_OO5	Functional	Login page	Verify user is able to log into application with InValid credentials	Login first	1.Enter URL(https://127.0.0.1:5000/)and click go 2.Click on My Account dropdown button 3.Enter InValid username/email in Email text box 4.Enter Invalid password in password text box 5.Click on login button	Username: pksc password: Testing123

Verify user is able to Buy products	Functional	order page	verify user is able to order products		user will buy the product in order page	user data
Verify user is get purchase conformation mail?	Functional	order page	verify user is able to get conformation mail	Report generation	user will get the mail Notification	email

USER ACCEPTANCE TESTING

1. Purpose of Document

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

2. 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
By Design	10	4	2	3	20
Duplicate	1	0	3	0	4
External	2	3	0	1	6
Fixed	11	2	4	20	37
Not Reproduced	0	0	1	0	1
Skipped	0	0	1	1	2
Won't Fix	0	5	2	1	8
Totals	24	14	13	26	7

3. Test Case Analysis

This report shows the number of test cases that have passed, failed, and untested

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	7	0	0	7
Client Application	51	0	0	51
Security	2	0	0	2
Outsource Shipping	3	0	0	3
Exception Reporting	9	0	0	9
Final Report Output	4	0	0	4
Version Control	2	0	0	2

RESULTS

PERFORMANCE METRICS:

NFT - Risk Assessment									
S.No	Project Name	Scope/feature	Functional Changes	Hardware Changes	Software Changes	Impact of Downtime	Load/Volume Changes	Risk Score	Justification
1	Smart fashion recommender Application	New	Low	No Changes	Moderate	Yes, 1.4 hours	>15 to 35%	GREEN	

NFT - Detailed Test Plan				
S.No	Project Overview	NFT Test approach	Assumptions/Dependencies/Risks	Approvals/SignOff
1	Login Page	1) Open the Smart fashion recommender Application 2) Login with user Credentials	No Risks	N/A
2	Signup Page	1) Open the Smart fashion recommender Application 2) Enter the Details and Create a new User	No Risks	N/A
3	Records	1) Log in to Smart fashion recommender Application 2) Enter all the pesonal details and get recommendetions from the chatbot	No Risks	N/A
4	Dashboard	1) Log in to smart fashion recommender Application 2) View the available items	No Risks	N/A
5	Bill generator	1) Log in to smart fashion recommender Application 2) Generate the bill for the purchased item	No Risks	N/A
5	Deployment Acknowledgement	1) Mails are Sent to the Registerd user about the delivery	No Risks	N/A

The performance of a recommendation algorithm is evaluated by using some specificmetrics that indicate the accuracy of the system. The type of metric used depends onthe type of filtering technique. Root Mean Square Error (RMSE), Receiver Operating Characteristics (ROC), Area Under Cover (AUC), Precision, Recall and F1 score is generally used to evaluate the performance or accuracy of the recommendation algorithms. Root-mean square error (RMSE). RMSE is widely used in evaluating and comparing the performance of a recommendation system model compared to other models.

6. ADVANTAGES & DISADVANTAGES

ADVANTAGES:

- The proposed system shows that it can process the user's clothes from the images, identify the type and color of the outfit and finally recommend the most suitable outfit for the given occasion based on the user's existing clothes.
- The system provides a wardrobe, where users can store images of clothes that they have.
- This method can allow users to discover new interests despite the absence of contents in the user’s profile.

DISADVANTAGES:

- The model only recommends products based on existing database of previous users interest, which restricts its expansion.
- Difficult to include side features for query/items.
- Privacy invasion can be a concern, as when more than the required data are collected it can lead to a privacy policy.

Conclusion:

The Smart Fashion Recommender Application mostly uses a user's closet to suggest the ideal dress combinations for a user who lacks sense of style. Due to the system's limitations, it might not always recommend the ideal attire for a given situation. depends solely on the clothing in the user's closet. Fashion's strong ties to historical periods are still another factor. However, the system does a remarkable job of helping users develop a sense of fashion, and it can provide the best suggestions based on the user's clothing. The system is relatively simple for end users to access and utilise because it is implemented as a website. The system's range can be increased by adding the capacity to recognise distinct apparel designs and patterns, as well as by raising the quantity of instances

Future Scope:

Although it is a highly efficient chatbot, it could have more options to explore in the future. In the future instead of a text conversation A voice assistant could be used where the customer also uses their voice to converse. This could be an easier and innovative way of recommendation. This could also help older people who find it difficult to text. Chatbots could also be evolved to have seamless and realistic conversations with the customer in order to help business.

To create a useful recommendation system, further research should focus on along with analyses of time series and precise categorization of product photos based on variations in colour, trend, and dress style. Therefore, this study will be extremely benefited to academics who want to use augmented reality and virtual reality elements to create fashion recommendation chatbot.

Appendix

SOURCE CODE:

ABOUT.html

```
<!DOCTYPE
html>
            <html>
                <!DOCTYPE html>
            <html lang="en">
            <head>
            <meta charset="utf-8">
            <title>HTML</title>
            <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-
            awesome.min.css">
            <style>
                .About-us {
```

```
        width: 100%;
        text-align: center;
        background-color: #ccc;
        margin-top: 30px;
        margin-bottom: 30px;
      }
      h1{
        color: red;
        font-size: 35px;
      }
      img {
        border-radius: 50%;
      }

      p {
        font-size: 20px;
      }
    h3 {
        text-shadow:
      }
    a {
      padding: 20px;
        text-align: center;
        text-decoration: none;
        margin: 5px 2px;
        background: #3B5998;
      color: white;
        border-radius: 8px;
       font-size: 50px;
   }
</style>
</head>
<body>
  <div class="About-us">
    <h1> About Us </h1>
       <img src="https://s3.ap-south-
1.amazonaws.com/s3.studytonight.com/tutorials/uploads/pictures/1628677506-101156.png">
       <p>Our mission is to empower young Students to be the inventors and creators.</p>
       <hr>
       <p>In a world where so much is being done for technology and so little for the environment,
education is not even a part of most discussions.</p>
    <p>We at Studytonight believe that by widening the reach of education, by making it freely
available, so much can be achieved.</p>
    <p>And this journey started in 2013 when a young boy thought "wouldn't it be great, to have a
website, with simple tutorials for programming languages, just like a friend would teach you!", and
Studytonight was born.</p>
   <h3> follow us on </h3>
```

```
   <a href="#" class="fa fa-facebook"></a>
   <a href="#" class="fa fa-twitter"></a>
   <a href="#" class="fa fa-linkedin"></a>
  </div>
</body>
</html>
</html>
```

FORGOT.html

```
 <!DOCTYPE
 html>


             <head>
                 <title>Forgot</title>
             </head>
             <body>
                 <script>
                     function validate(){
                     var a=document.getElementById("rpas").value;
                     var b=document.getElementById("copas").value;
             if(a!=b)
             alert("Enter the valid password");
                     }
                 </script>

                     <center><table><h2>Reset Password</h2>
                         <form action="#" class="forgot">
                               <div class="field">
                                 <h4> Email address:<input type="text" placeholder="Email Address"
             required  id="mail"> </h4>
                               </div>
                               <div class="field">
                                  <h4>Reset Password:<input type="password" placeholder="Password"
             required id="rpas"></h4>
                               </div>
                               <div class="field">
                                 <h4>Confirm Password:<input type="password" placeholder="Confirm
             password" required id="copas"></h4>
                               </div>
                               <div class="field btn">
                                  <div class="btn-layer"></div>
                                 <h4><input type="button" value="Reset" onclick="validate()"></h4>
                               </div>
                           </form>
```

```
                        </table>
                         </center>

                    </body>
                    </html>
```

PRODUCT.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>RST/Home</title>
                <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-
            awesome.min.css">
                <link rel="stylesheet" href="https://rakesh87.s3.us-east.cloud-object-
            storage.appdomain.cloud/style.css">
            </head>


            <body>
                <!-- <section id="header">
                    <a href="#"><img src="https://saravanan2001mohan.s3.us-east.cloud-object-
            storage.appdomain.cloud/rst%20(1).png"
                            class="logo" alt="" width="150" height="60"></a>
                    <div>
                        <ul id="navbar">
                            <li><a class="active" href="index.html">Home</a></li>
                            <li><a href="main.html">Login</a><x/li>
                            <li><a href="product.html">Product</a></li>
                            <li><a href="about.html">About</a></li>
                            <li><a href="contact.html">Contact</a></li>
                            <li><a href="cart.html"><i class="fa fa-shopping-bag"></i></a></li>
                            <li><a href="register.html"><i class="fa fa-user-secret"></i></a></li>
                        </ul>
                </section> -->
```

```
    <!-- <section id="hero">
        <h4>"Happiness Depends Upon Ourselves"</h4>
        <h2>Smart Fashion Recommender</h2>
        <h1>Application</h1>
        <p>Dress Up In Confidence</p>
        <button class="normal">Shop now</button>
    </section> -->
    <!-- <section id="feature" class="section-p1">
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/freeship.png"
alt="" width="100"
                height="100">
            <h6>Free Shipping</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/orderonline.jpg"
alt="" width="100"
                height="100">
            <h6>Online Order</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/savemoney.jpg"
alt="" width="100"
                height="100">
            <h6>Save Money</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/promotion.jpg"
alt="" width="100"
                height="100">
            <h6>Promotions</h6>
        </div>
        <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/happysell.jpg"
alt="" width="100"
                height="100">
            <h6>Happy Sell</h6>
        </div> -->
        <!-- <div class="fe-box">
            <img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/support.jpg"
alt="" width="100"
                height="100">
            <h6>F24/7 Support</h6>
        </div>
    </section> -->
    <section id="product1" class="section-p1">
    <!-- <h2>Featured Product</h2> -->
```

```
<p>New Collections New Modern Designs</p>
<div class="pro-container">
<div class="pro">
<img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/shopshirt1.jpg" alt="" >
<div class="des">
<span>Attitude</span>
<h5>Blue n Brown T-Shirts</h5>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
</div>
<h4>₹1500</h4>
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
<div class="pro">
<img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/shopshirt2.jpg" alt="">
<div class="des">
<span>U.S.Polo Assnn</span>
<h5>Blue strip T-Shirts</h5>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
</div>
<h4>₹1570</h4>
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
<div class="pro">
<img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/shopshirt3.jpg" alt="">
<div class="des">
<span>Zara</span>
<h5>Plain T-Shirts</h5>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
</div>
<h4>₹1400</h4>
```

```
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
<div class="pro">
<img src="https://unik.s3.jp-tok.cloud-object-storage.appdomain.cloud/home5.jpg" alt="">
<div class="des">
<span>Ruralking</span>
<h5>Checked T-Shirts</h5>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
</div>
<h4>₹2000</h4>
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
<div class="pro">
<img src="https://s3.jp-tok.cloud-object-storage.appdomain.cloud/unik/saree.jpg" alt="">
<div class="des">
<span>Banarasi</span>
<h5>Georgette Bandhani Rama Blue & Olive Green Saree</h5>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
</div>
<h4>₹10,000</h4>
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
<div class="pro">
<img src="https://s3.jp-tok.cloud-object-storage.appdomain.cloud/unik/saree1.jpg" alt="">
<div class="des">
<span>Banarasi</span>
<h5>Banarasi Silk Jaal Dark Maroon Saree</h5>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
</div>
```

```
<h4>₹9000</h4>
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
<div class="pro">
<img src="https://s3.jp-tok.cloud-object-storage.appdomain.cloud/unik/saree2.jpg" alt="">
<div class="des">
<span>Banarasi</span>
<h5>Banarasi Silk Buttis Yellow Saree</h5><br>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
</div>
<h4>₹8000</h4>
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
<div class="pro">
<img src="https://s3.jp-tok.cloud-object-storage.appdomain.cloud/unik/saree3.jpg" alt="">
<div class="des">
<span>Banarasi</span>
<h5>Banarasi Silk Jaal Purple Saree</h5><br>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
</div>
<h4>₹6000</h4>
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
</div>
</section>
<section id="banner" class="section-m1">
<h4>Repair Services</h4>
<h2>Up to <span>70% off</span> All t-Shirts & Accessories</h2>
<a href="products.html"><button class="normal">Explore More</button></a>
</section>
<section id="product1" class="section-p1">
<h2>New Arrivals</h2>
<p>Branded shoe's and T-shirts </p>
<div class="pro-container">
```

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

```
<h4>₹6600</h4>
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
<div class="pro">
<img src="https://s3.jp-tok.cloud-object-storage.appdomain.cloud/unik/shoe3.jpg" height="400"
alt="">
<div class="des">
<span>Walkaroo</span>
<h5>Brown High Heel</h5>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
</div>
<h4>₹7800</h4>
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
<div class="pro">
<img src="https://s3.jp-tok.cloud-object-storage.appdomain.cloud/unik/tops.jpg" alt="">
<div class="des">
<span>Zara</span>
<h5>Black Smile T-Shirts</h5>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
</div>
<h4>₹900</h4>
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
<div class="pro">
<img src="https://s3.jp-tok.cloud-object-storage.appdomain.cloud/unik/tops1.jpg" alt="">
<div class="des">
<span>Zara</span>
<h5>Pink dog T-Shirts</h5>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
```

```
<i class="fa fa-star"></i>
</div>
<h4>₹900</h4>
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
<div class="pro">
<img src="https://s3.jp-tok.cloud-object-storage.appdomain.cloud/unik/tops2.jpg" alt="">
<div class="des">
<span>Zara</span>
<h5>Black and White Trendy Shirt</h5>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
</div>
<h4>₹1500</h4>
</div>
<a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
<div class="pro">
<img src="https://s3.jp-tok.cloud-object-storage.appdomain.cloud/unik/tops3.jpg" alt="">
<div class="des">
<span>Zara</span>
<h5>Green Panda Shirt</h5>
<div class="star">
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
<i class="fa fa-star"></i>
</div>
<h4>₹600</h4>
</div>
<!-- <a href="#"><i class="fa fa-shopping-bag bag"></i></a>
</div>
</div>
</section>
<section id="sm-banner" class="section-p1">
<div class="banner-box">
<h4>Crazy Deals</h4>
<h2>Buy 1 get 1 free</h2>
<span>The best classic dress is on sale at U Nik</span>
<a href="products.html"><button class="white">Learn More </button></a>
</div>
```

```
<div class="banner-box banner-box2">
<h4>spring/summer</h4>
<h2>upcommig seasons</h2>
<span>The best classic dress is on sale at U Nik</span>
<a href="blog.html"><button class="white">Collection</button></a>
</div >
</section>
<section id="banner3">
<div class="banner-box">
<h2>SEASONAL SALE</h2>
<h3>Winter collection 50% off</h3>
</div >
<div class="banner-box banner-box2">
<h2>SEASONAL SALE</h2>
<h3>Winter collection 50% off</h3>
</div >
<div class="banner-box banner-box3">
<h2>SEASONAL SALE</h2>
<h3>Winter collection 50% off</h3>
</div > -->
<!-- </section> --> -->
    <!-- <section id="newsletter" class="section-p1">
        <div class="newstext">
            <h4>Sign up for NewsLetters</h4>
            <p>Get Email updates about our latest shop and <span>special offer</span>
            </p>
        </div>
        <div class="form">
            <input type="text" placeholder="Your E-mail Address">
            <button class="normal">login</button>
        </div>
    </section> -->
    <!-- <footer class="section-p1">
        <div class="col">
            <img class="logo"
                src="https://saravanan2001mohan.s3.us-east.cloud-object-
storage.appdomain.cloud/rst%20(1).png" alt=""
                width="200" height="100">
            <h4>Contact</h4>
            <p><strong>E-Mail: </strong>rstsmartfashion@gmail.com</p>
            <p><strong>Phone: </strong>1234567890</p>
            <div class="follow">
                <h4>Follow us</h4>
                <div class="icon">
                    <i class="fa fa-facebook-f"></i>
                    <i class="fa fa-twitter"></i>
                    <i class="fa fa-instagram"></i>
```

```
                    <i class="fa fa-pinterest-p"></i>
                    <i class="fa fa-youtube"></i>
                </div>
            </div>
        </div> -->
        <!-- <div class="col"> -->
            <!-- <h4>About</h4>
<a href="#">About us</a>
<a href="#">Delivery Information</a>
<a href="#">Privacy Policy</a>
<a href="#">Tearms & Conditions</a>
<a href="#">Contact us</a>
</div>
<div class="col">
<h4>My Account</h4>
<a href="#">Sign In</a>
<a href="#">View Cart</a>
<a href="#">My Wishlist</a>
<a href="#">Track my order</a>
<a href="#">Help</a>
</div>
</footer>
<div class="copyright">
<center><p>© 2022, PNT2022TMI36870 - Smart Fashion Recommender Application </p></center>
</div> -->
<!-- <script>
    window.watsonAssistantChatOptions = {
      integrationID: "f575ccb9-7f1a-4ceb-b32b-23f9d2a71c7a", // The ID of this integration.
      region: "au-syd", // The region your integration is hosted in.
      serviceInstanceID: "c8db2a25-708c-4bac-bb36-d9b5b790d6d3", // 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>
```

GITHUB LINK:

https://github.com/IBM-EPBL/IBM-Project-5056-1658746787.git

DEMO LINK:

https://drive.google.com/file/d/1UVyG-Mm_dvz0OuFz_sHv6hEScuuVuc7S/view?usp=share_link

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