SMART FASHION RECOMMENDER APPLICATION

A PROJECT REPORT

Submitted by

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in

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MUTHAYAMMAL COLLEGE OF ENGINEERING

RASIPURAM

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BONAFIDE CERTIFICATE

Certified that this project report **"SMART FASHION RECOMMENDER APPLICATION"** is the bonafide work of **"J. VELMANI (621719104052), M. MURALIDHARAN (621719104025), M. MUKESH (621719104023), K. ANAND (621719104002)"** who carried out project work under my supervision.

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Internal Examiner

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DECLARATION

We affirm that the project work titled **"SMART FASHION RECOMMENDER APPLICATION"** being submitted in partial fulfillment for the award of **B.E.,(Computer Science and Engineering)** is the original carried out by us. It has not formed the part of any other project work submitted for award of any degree, either in this or any other University.

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INTRODUCTION

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

According to different studies, e-commerce retailers, such as Amazon, eBay, and social networking sites, such as Pinterest, Snapchat, Instagram, Facebook are now regarded as the most popular media for fashion advice and recommendations Research on textual content, such as posts and comments emotion and information diffusion , and images has attracted the attention of modern-day researchers, as it can help to predict fashion trends and facilitate the development of effective recommendation systems .

1.1 PROJECT OVERVIEW

An online Fashion recommender system is a process in which people (specifical customers) are being provided with the option of purchasing goods and services directly from the seller, all in a real-time environment. Online Fashion recommender is an application of the internet as electronic commerce. From the business perspective, customers usually find the products more attractive, on websites, as they get all the details available there.

People in large number are doing online shopping today, and it is not only because it is convenient as one can shop from home, but also because there is an ample number of varieties available, with a high competition of prices, and also it is easy to navigate for searching regarding any particular item.

1.2 PURPOSE

Systems are often used to solve different complex problems in this scenario, such as social fashion-based recommendations (outfits inspired by influencers), product recommendations, or size and fit recommendations.

The impact of social networks and the influence that fashion influencers have on the choices people make for shopping is undeniable. For instance, many people use Instagram to learn about fashion trends from top influencers, which helps them to buy similar or even exact outfits from the tagged brands in the post. When traced, customers' social behavior can be a very useful guide for online shopping websites, providing insights on the styles the customers are really interested in, and hence aiding the online shops in offering better recommendations and facilitating customers quest for outfits.

2. LITERATURE SURVEY

Year	Recommendation System Approach	Properties
Before 1992	Mafia, developed in 1990	Content filtering. Mail filtering agent for providing a cognitive intelligence-based service for document processing.
1992 to 1998	Tapestry, developed in 1992	Collaborative filtering. Developed by Palo Alto. Allowed users only to rate messages as either good or bad product and service.
	Group lens, first used in 1994	Rate data to form the recommendation.
	Movie lens, proposed in 1997	Useful to construct a well-known dataset.
1999 to 2005	PLSA (Probabilistic Latent Semantic Analysis), proposed in 1999	Developed by Thomas Hofmann. Collaborative filtering.

2.1 EXISTING SYSTEM

Lack of consistency between brands: 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.

Subjectivity: 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.

Data sparsity: Users are able to buy only a small part of the items of an e-commerce website and on the other hand articles have a limited stock, which can in turn hinder the task of recommender systems working with user-item fit feedback.

2.2 REFERENCE

- https://www.w3schools.com/
- https://stackoverflow.com/
- https://arxiv.org/pdf/2202.02757.pdf
- https://link.springer.com/book/10.1007/978-3-030-55218-3#:~:text=Recommender%20Systems%20are%20often%20used,or%20size%20and%20fit%20recommendations.
- https://www.w3schools.com/html/html_favicon.asp
- www.gihub.com

2.3 PROBLEM STATEMENT DEFINITION

The textile and apparel industries have grown tremendously over the last years. Customers no longer have to visit many stores, stand in long queues, or try on garments in dressing rooms as millions of products are now available in online catalogs. However, given the plethora of options available, an effective recommendation system is necessary to properly sort, order, and communicate relevant product material or information to users. Effective fashion RS can have a noticeable impact on billions of customers' shopping experiences and increase sales and revenues on the provider-side.

The goal of this survey is to provide a review of recommender systems that operate in the specific vertical domain of garment and fashion products. We have identified the most pressing challenges in fashion RS research and created a taxonomy that categorizes the literature according to the objective they are trying to accomplish (e.g., item or outfit recommendation, size recommendation, explain ability, among others) and type of side-information (users, items, context). We have also identified the most important evaluation goals and perspectives (outfit generation, outfit recommendation, pairing recommendation.

CHAPTER 3

IDEATION & PROPOSED SOLUTION

3.1 EMPATHY MAP CANVAS

3.2 IDEATION & BRAINSTORMING

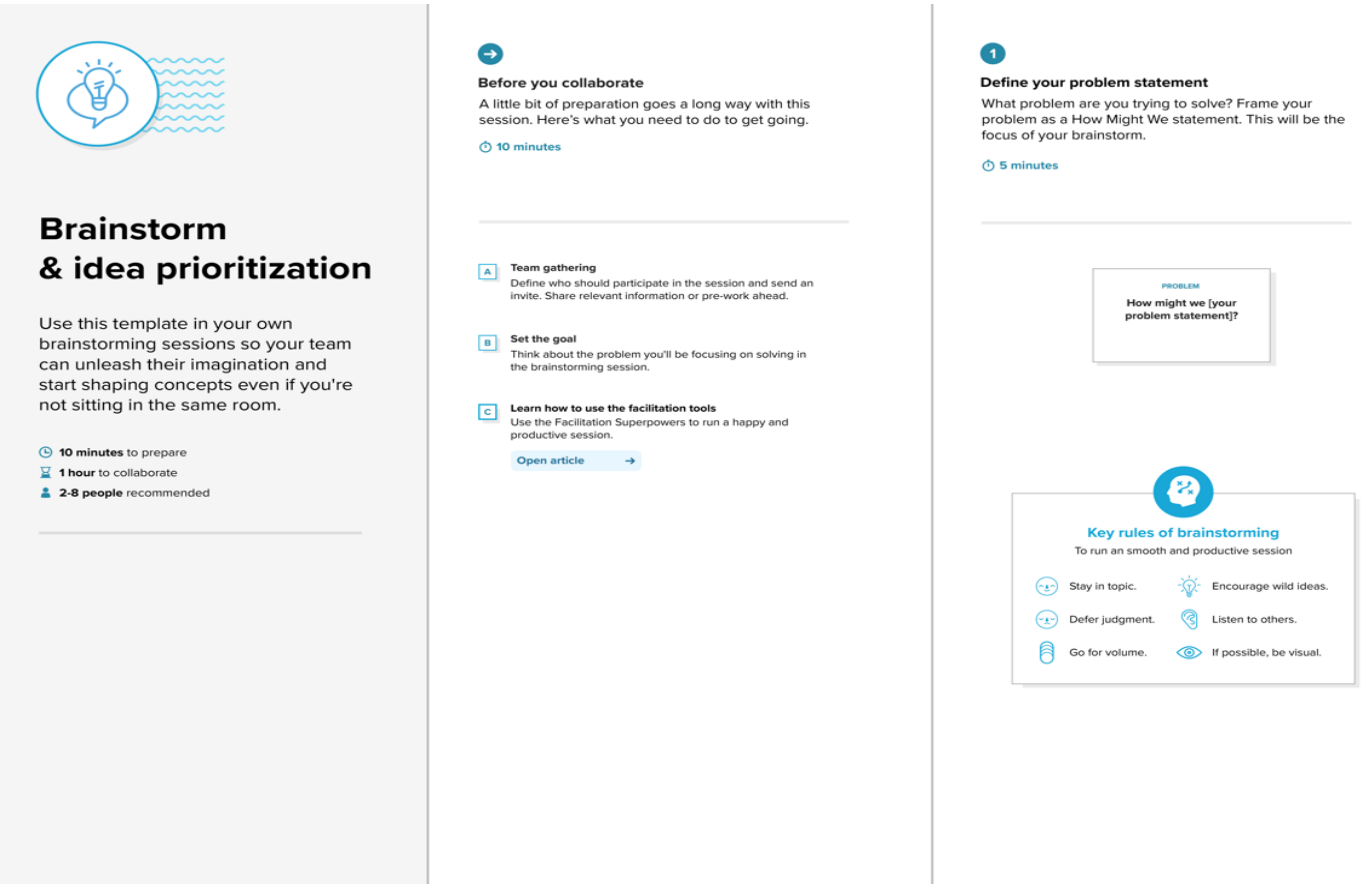
Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Prioritizing volume over value, out-of-the-box ideas are welcome and built upon, and all participants are encouraged to collaborate, helping each other develop a rich number of creative solutions.

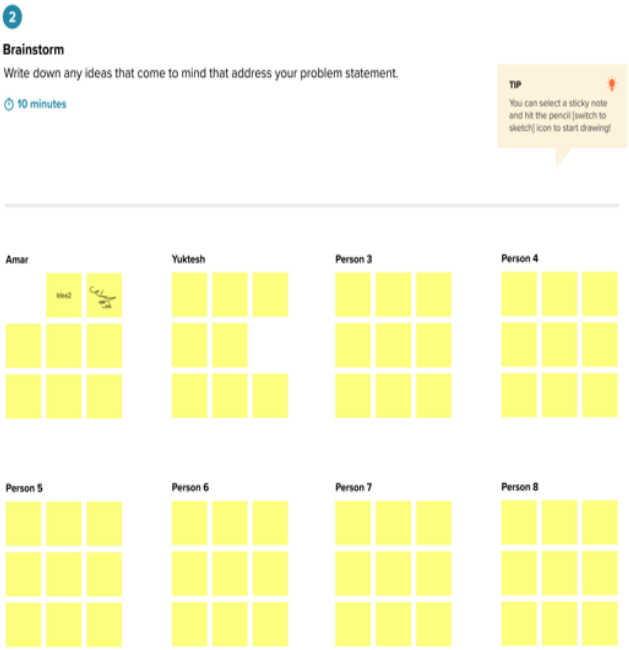
Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

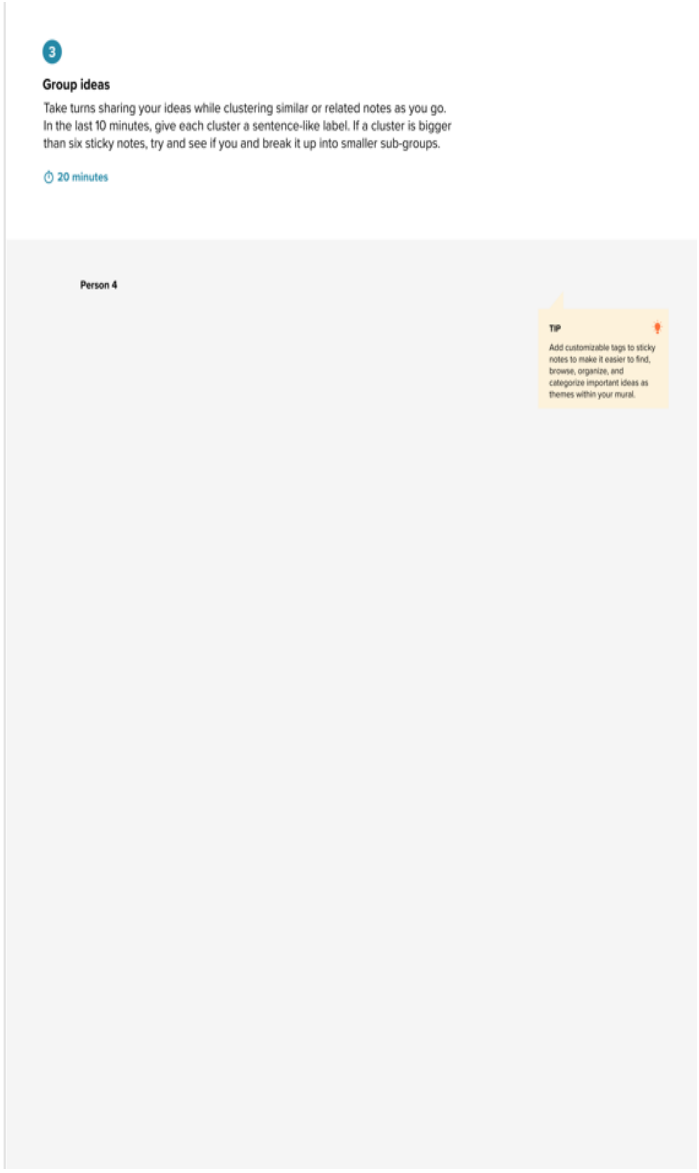
Reference: https://www.mural.co/templates/empathy-map-canvas

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

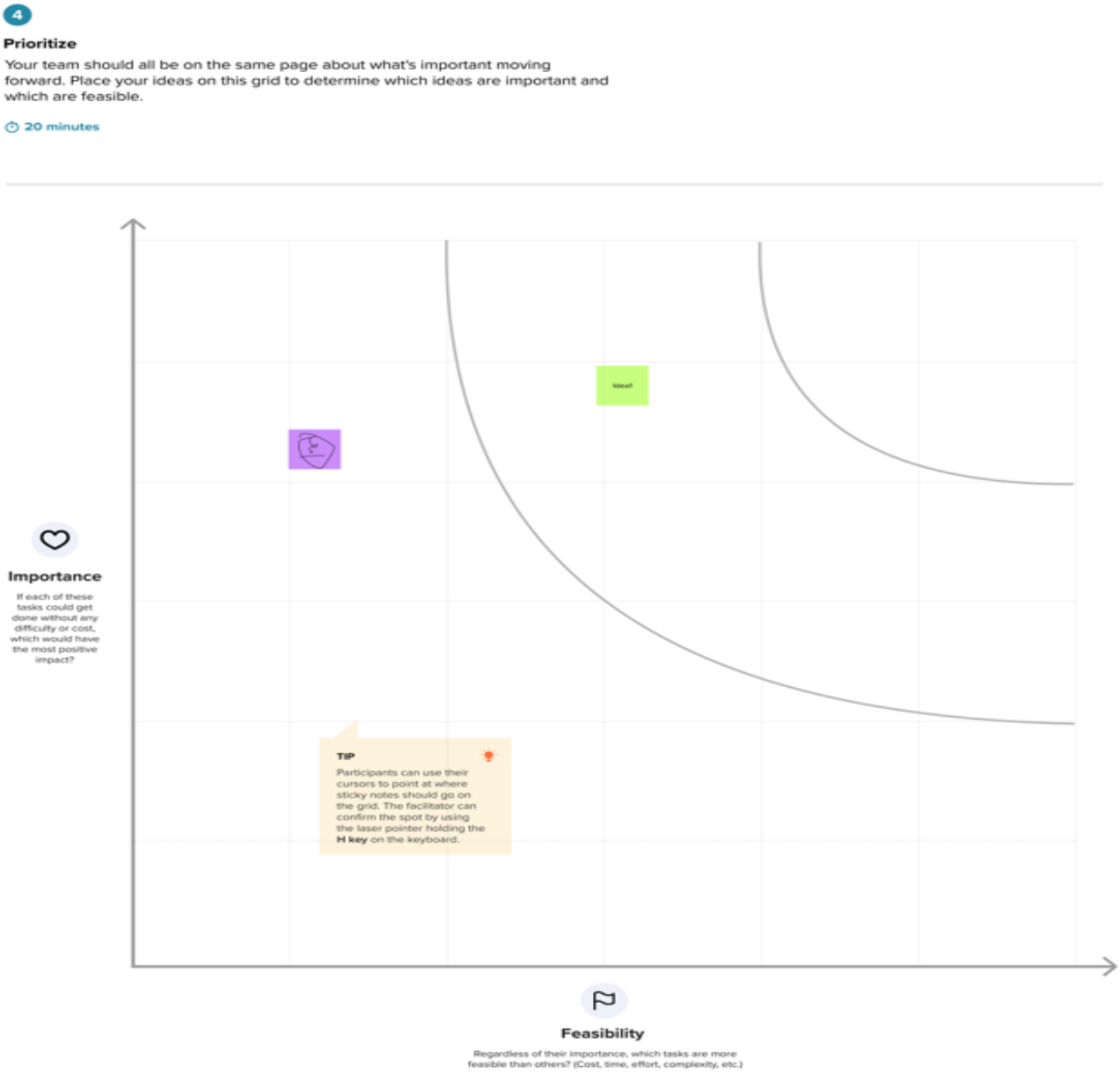


Step-2: Brainstorm, Idea Listing and Grouping





Step-3: Idea Prioritization



3.3 PROPOSED SOLUTION

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	> Copycats & product counterfeiting
2.	Idea / Solution description	> You can also trademark important words or designs, which makes it easier to pursue legal action against those who try to copy you.
3.	Novelty / Uniqueness	> A unique fashion brand should speak to a niche in the fashion industry with its own voice and creativity.
4.	Social Impact / Customer Satisfaction	> Customer satisfaction is defined as a measurement that determines how happy customers are with a company's products, services, and capabilities.
5.	Business Model (Revenue Model)	> Optimize Your eCommerce Storefront. A clothing business without an online presence is missing out on key opportunities.
6.	Scalability of the Solution	> Scalability is an aspect or rather a functional quality of a system, software or solution.

3.4 PROPOSED SOLTION FIT

1.CUSTOMER SEGMENT	4.CUSTOMER CONSTRAINTS	7.AVAILABLE SOLUTIONS
➢ Teenagers and young adults.	○ Limited stock ○ Over price	○ Customer can request return within a week. ○ They also request refund on payment issue.
2.JOBS TO BE DONE	**5.PROBLEM ROOT CAUSE**	**8.BEHAVIOUR**
➢ If any problems faced by customer please get into our sight.	➢ Internet issue while purchasing or some technical issue.	➢ Customer just explore and pick which is favourite to their own, don't consider others opinion.
3.EMOTIONS: BEFORE / AFTER	**6.SOLUTION**	**9.CHANNELS OF BEHAVIOUR**
○ **Before :** Lost, insecure ○ **After :** Confident, in control	➢ Kindly check that your network connection is stable while paying or purchasing.	○ **ONLINE :** Using chat option customer can access our service ○ **OFFLINE:** By make a call to the given toll-free customer care number.

4. REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENT

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form
FR-2	User Login	Login Using Username and Password Login Using Email id and password
FR-3	Review or Rating	User can review a product and can give a rating for it.
FR-4	Assistant	By Using assistant make the work easier.
FR-5	Logout	Logout from the webpage after exploring

4.2 NON-FUNCTIONAL REQUIREMENT

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

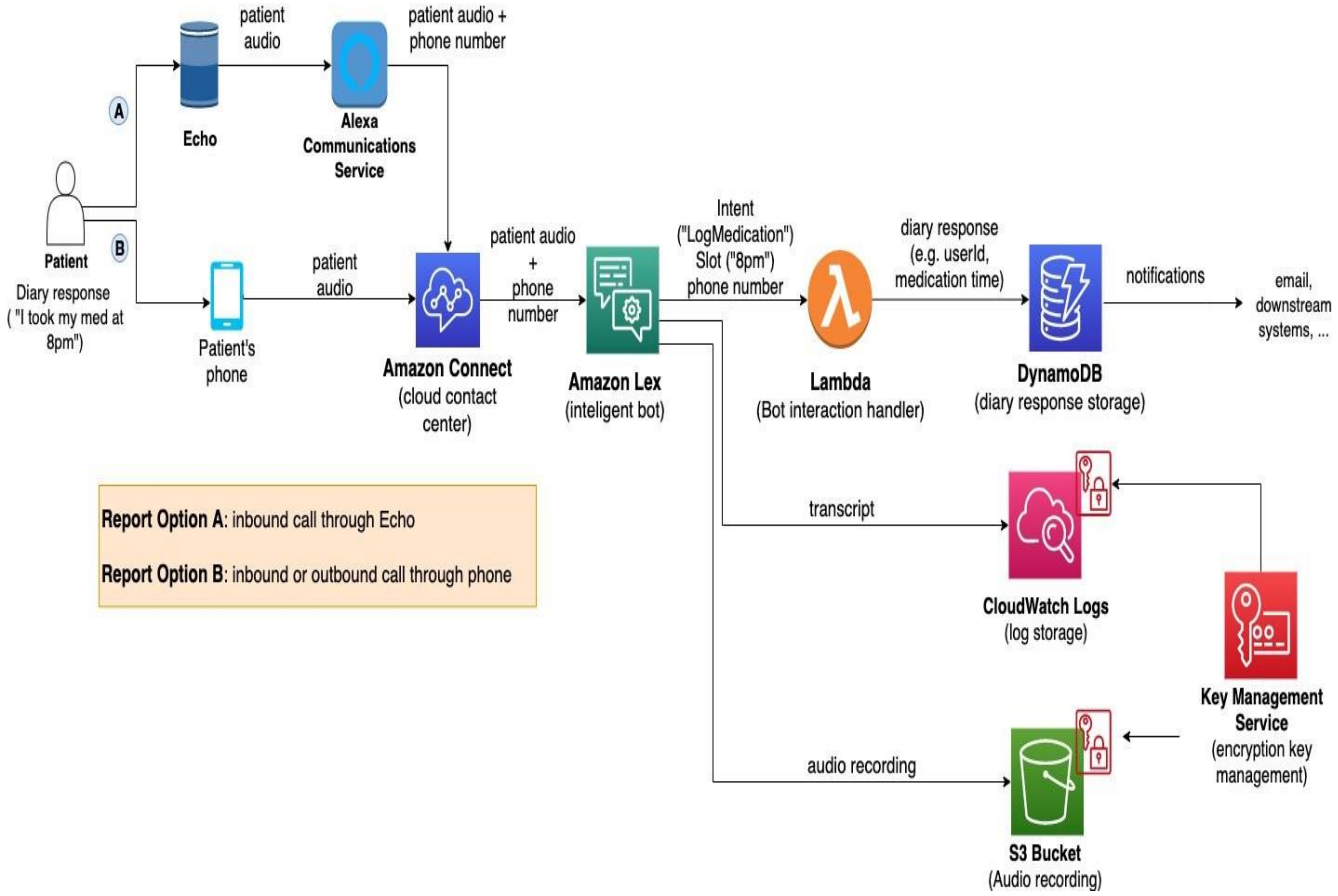
FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The webpage should be useful for most of people those who visited it.
NFR-2	**Security**	The data should be stored in safe place which is given by the users.
NFR-3	**Reliability**	The service should be given at the same quality to all the user of the website.
NFR-4	**Performance**	The performance of the website should clean and it should contain clean UI to retain customer.

5 PROJECT DESIGN

5.1 DATA FLOW DIAGRAM

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

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.



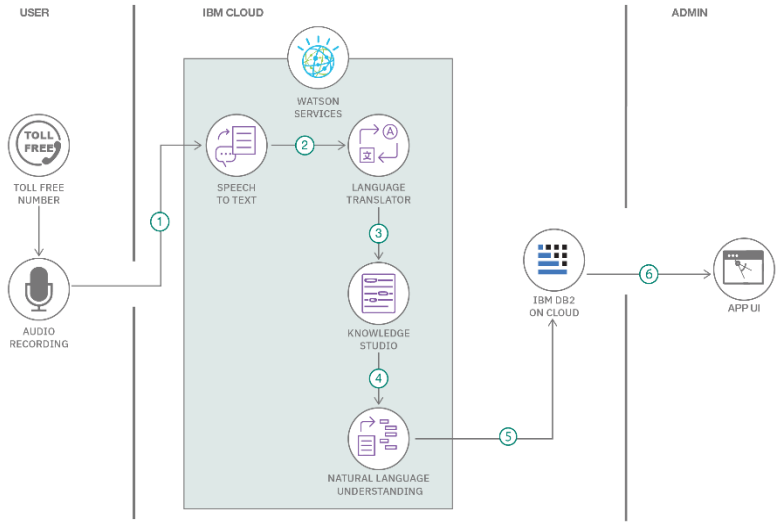
5.2 SOLUTION &TECHNICAL ARCHITECTURE

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2.

Example: Order processing during pandemics for offline mode

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/



Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

5.3 USER STORIES

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Web user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.		High	Sprint-1
	Login	USN-2	As a user, I can log into the application by entering email or User name & password which I had registered	I can access my account / dashboard	High	Sprint-1
	Dashboard	USN-3	As a user, I can explore the web page to find the latest fashion and details about those products	I am able to like or dislike the new ideas that showcased	Medium	Sprint-2
	Assistant	USN-4	As a user, I can use the personal assistant offered by the website to make my job easier	It is completely an extra choice	Low	Sprint 3
Customer Care Executive	Request	USN-5	If any problem occurred or any doubts you can contact Customer care executive		High	Sprint 4

6. PROJECT PLANNING & SCHEDULING

6.1 SPRINT PLANNING & ESTIMATION

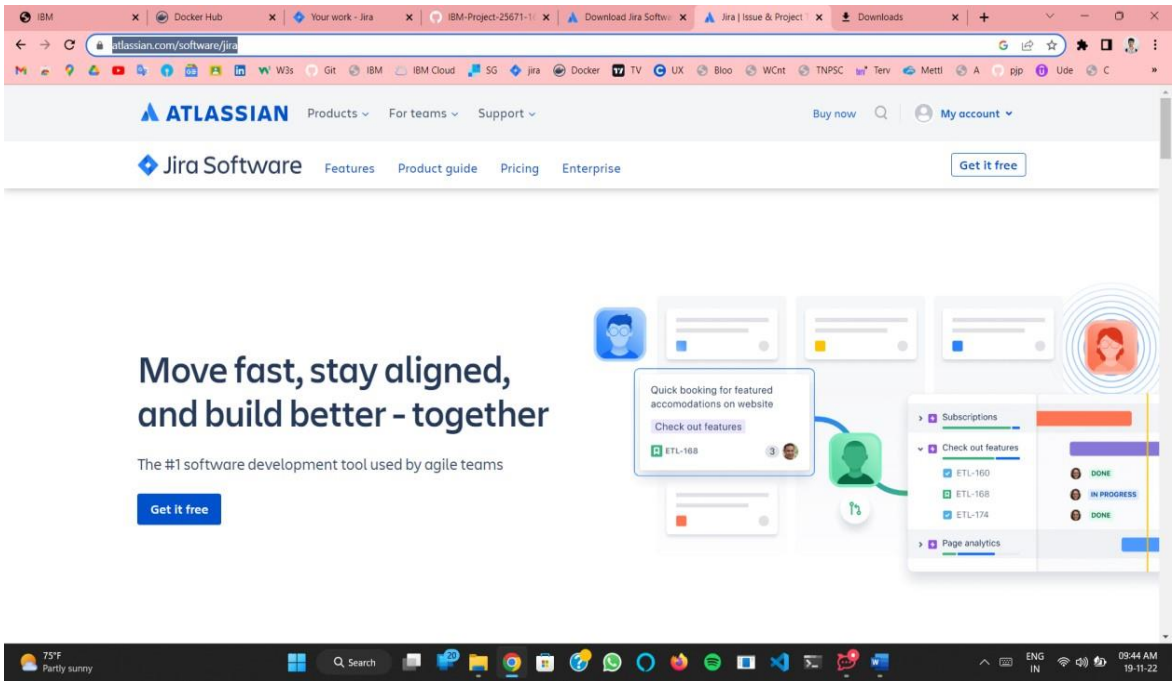
Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint 1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High	Velmani J, Mukesh M Muralidharan M, Anand K
Sprint 1	Login	USN-2	As a user, I can log into the application by entering email or User name & password which I had registered	1	High	Velmani J, Mukesh M Muralidharan M, Anand K
Sprint 2	Dashboard	USN-3	As a user, I can explore the web page to find the latest fashion and details about those products	2	High	Velmani J, Mukesh M Muralidharan M, Anand K
Sprint 3	Assistant	USN-4	As a user, I can use the personal assistant offered by the website to make my job easier	2	High	Velmani J, Mukesh M Muralidharan M, Anand K
Sprint 4	Uploading as image in Docker and Containerize app in IBM	USN-5	Making the app file as image in Docker and Using Kubernetes Containerize the app into IBM.	1	High	Velmani J, Mukesh M Muralidharan M, Anand K

6.2 SPRINT DELIVERY SCHEDULE

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	24 Oct 2022	29 Oct 2022	1	29 Oct 2022
Sprint-2	20	10 Days	31 Oct 2022	10 Nov 2022	3	10 Nov 2022
Sprint-3	20	5 Days	11 Nov 2022	15 Nov 2022	2	15 Nov 2022
Sprint-4	20	5 Days	15 Nov 2022	19 Nov 2022	2	19 Nov 2022

6.3 REPORTS FROM JIRA

1. Navigate to https://www.atlassian.com/software/jira

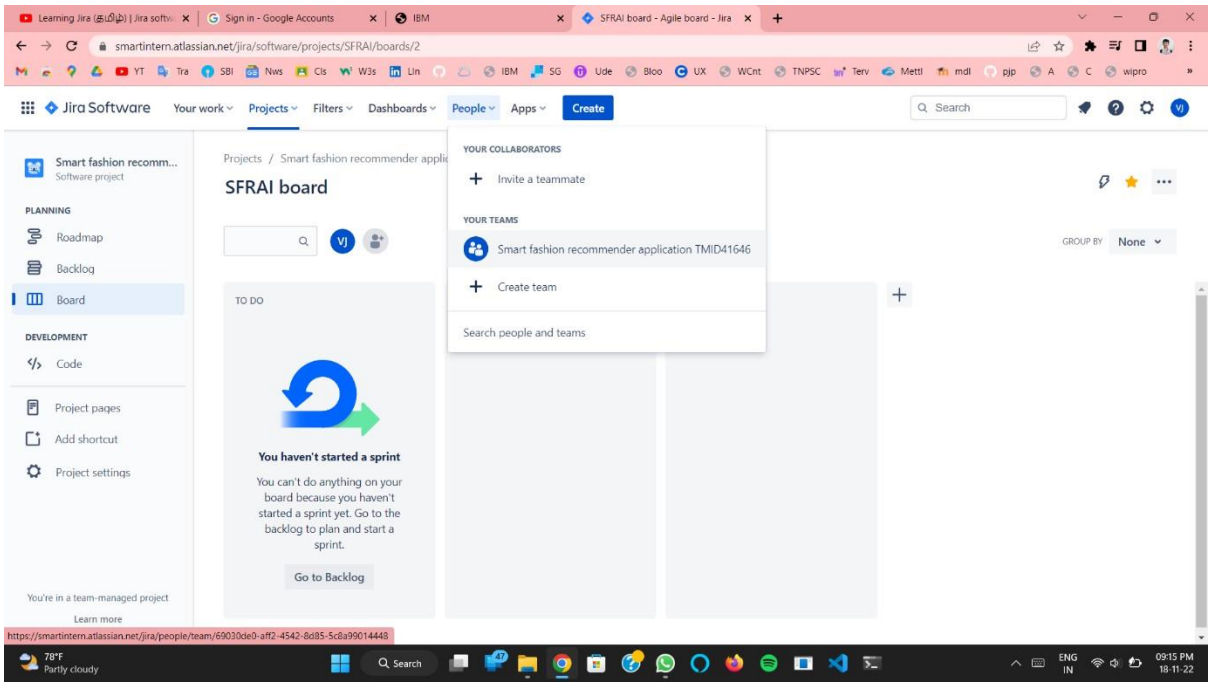


2. Click on get started free. And follow the account creation procedures.

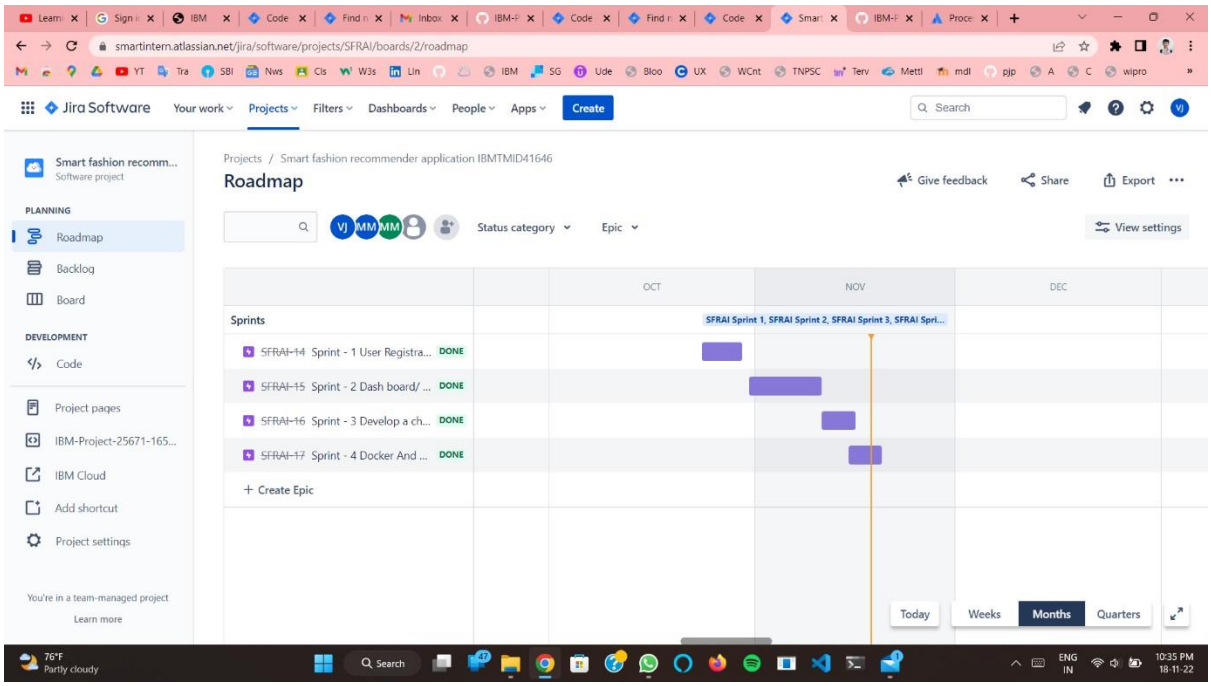
3. Once you done search for SMARTINTERNZ domain add your team members to the Group

4. And get started for Creating a sprint and task assigning activities

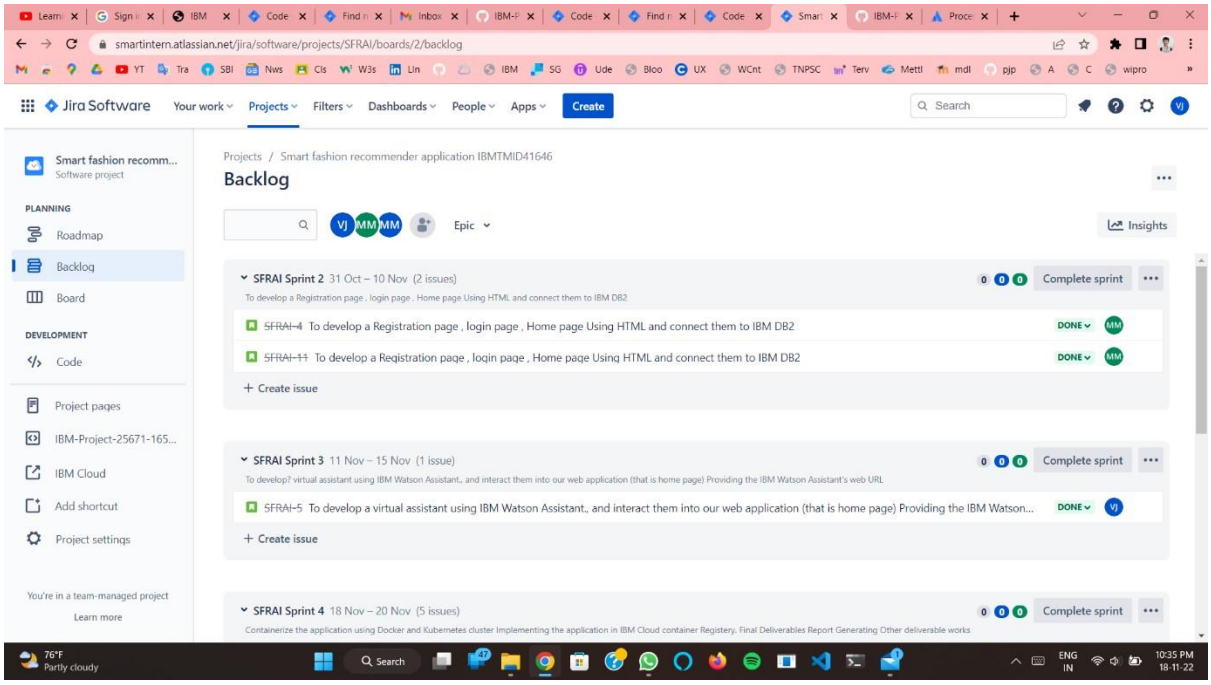
Our Project, Work and Dashboard pages as follows:



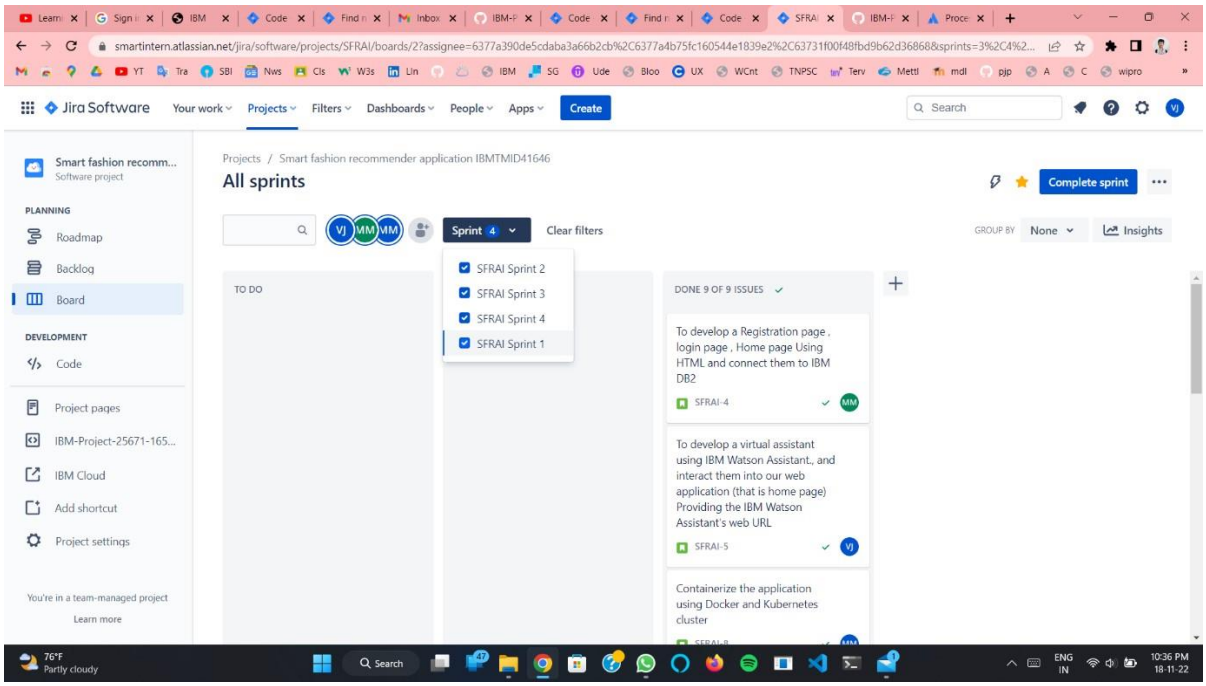
Our Project Details Page:



Sprint Progress Page:



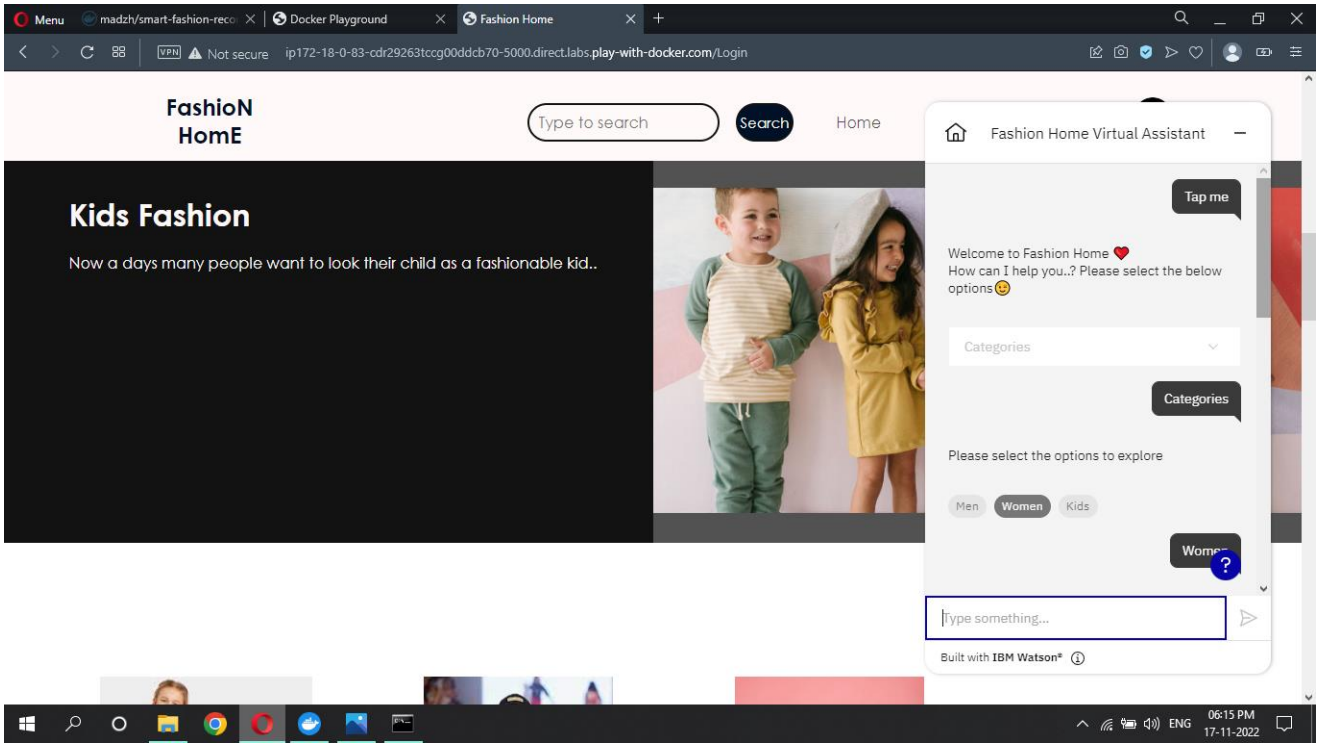
Sprint Done page :



7. CODING & SOLUTIONING

7.1 FEATURE 1

IBM Watson Assistant uses artificial intelligence that understands customers in context to provide fast, consistent, and accurate answers across any application, device, or channel. Remove the frustration of long wait times, tedious searches, and unhelpful chatbots with the leader in trustworthy AI.



7.2 FEATURE 2

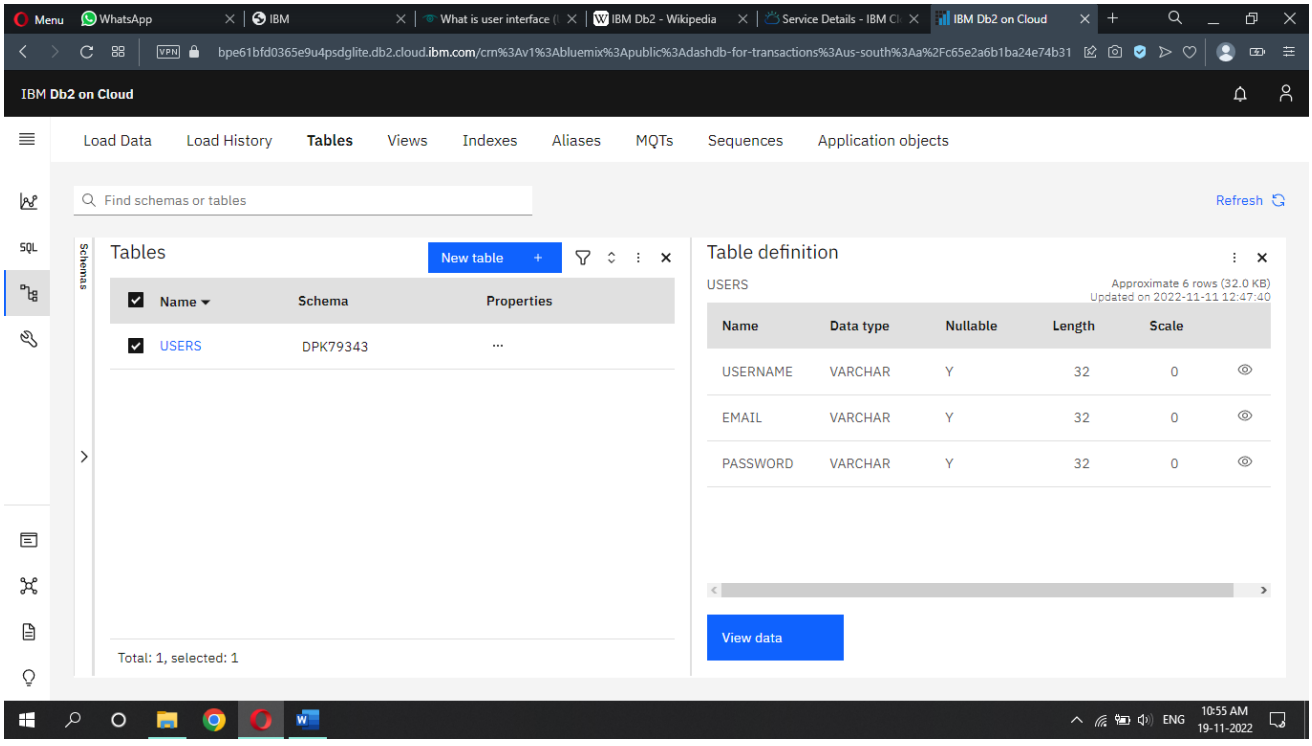
Clean User Interface

The user interface (UI) is the point of human-computer interaction and communication in a device. This can include display screens, keyboards, a mouse and the appearance of a desktop. It is also the way through which a user interacts with an application or a website.

The growing dependence of many businesses on web applications and mobile applications has led many companies to place increased priority on UI in an effort to improve the user's overall experience.

7.3 DATABASE SCHEME (if Applicable)

Db2 is a family of data management products, including database servers, developed by IBM. It initially supported the relational model, but was extended to support object–relational features and non-relational structures like JSON and XML. The brand name was originally styled as DB/2,[2] then DB2 until 2017 and finally changed to its present form.



8. TESTING

8.1 TEST CASES

Case 1

Verify user able to see the UI elements

Steps:

1. The user visits out website through the link
2. They can understand our user-friendly UI in our website

Case 2

Verify user able to register their account in our website

Steps:

1. User needs to register their account with their credentials
2. Then the user who able to login their account

Case 3

Verify user able to login to application or not

Steps:

1. To explore our home page user needs to login with their correct credentials
2. If the user enters with their correct credentials, then the user can explore our website.

Case 4

Verify user able to access the chat (IBM Watson Assistant)?

Steps:

1. After a successful login user can able to access the Chatbot for accessing a resource which are available in our website.
2. In the Chatbot user can explore our product details and customer support for their need

Case 5

Verify user can able to explore and search

Steps:

1. If the user wants to search about our products, they can use the search box which is the top right corner of our website.
2. User can able to explore our products and other categories in our website.

8.2 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	7	2	3	3	15
Duplicate	0	0	3	0	3
External	1	0	0	1	2
Fixed	12	2	4	7	25
Not Reproduced	0	0	1	0	1
Skipped	0	0	1	1	2
Won't Fix	1	2	2	1	6
Totals	20	6	14	13	54

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	5	0	0	5
Client Application	37	0	0	37
Security	2	0	0	2
Outsource Shipping	3	0	0	3
Exception Reporting	7	0	0	7
Final Report Output	2	0	0	2
Version Control	3	0	0	3

9. RESULTS

9.1 PERFORMANCE METRICS

The performance of a recommendation algorithm is evaluated by using some specific metrics that indicate the accuracy of the system. The type of metric used depends on the 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. A lower RMSE value indicates higher performance by the recommendation model. RMSE, can be as represented as follows:

1.Precision

Precision can be defined as the fraction of correct recommendations or predictions (known as True Positive) to the total number of recommendations provided, which can be as represented as follows:

- ✓ It is also defined as the ratio of the number of relevant recommended items to the number of recommended items expressed as percentages.

2.Recall

Recall can be defined as the fraction of correct recommendations or predictions (known as True Positive) to the total number of correct relevant recommendations provided, which can be as represented as follows:

- ✓ It is also defined as the ratio of the number of relevant recommended items to the total number of relevant items expressed as percentages.

3.F1 Score

F1 score is an indicator of the accuracy of the model and ranges from 0 to 1, where a value close to 1 represents higher recommendation or prediction accuracy. It represents precision and recall as a single metric and can be as represented as follows:

4.Coverage

Coverage is used to measure the percentage of items which are recommended by the algorithm among all of the items.

5.Accuracy

Accuracy can be defined as the ratio of the number of total correct recommendations to the total recommendations provided, which can be as represented as follows:

6.Intersection over union (IoU)

It represents the accuracy of an object detector used on a specific dataset

10. ADVANTAGE & DISADVANTAGE

ADAVANTAGE

- Products recommended based on the evaluation of experienced users.
- IT does not need any information from other users, which makes this technique more feasible and less time consuming.
- This technique can be applied to one of the multiple users' generators. This method can allow users to discover new interests despite the absence of content in the user's profile.
- User can easily to search the product and can use our chat bot

DISADVANTAGE

- As it is CBF domain-dependent, rigorous domain knowledge is required to make precise recommendations.
- The model only recommends products based on an existing database of previous users' interest, which restricts its expansion.
- Not applicable for new users, similar to content-based methods.
- Difficult to include side features for query/items.

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11. CONCLUSION

Recommendation systems have the potential to explore new opportunities for retailers by enabling them to provide customized recommendations to consumers based on information retrieved from the Internet. They help consumers to instantly find the products and services that closely match with their choices. Moreover, different stat-of-the-art algorithms have been developed to recommend products based on users' interactions with their social groups. Therefore, research on embedding social media images within fashion recommendation systems has gained huge popularity in recent times. This paper presented a review of the fashion recommendation systems, algorithmic models and filtering techniques based on the academic articles related to this topic. The technical aspects, strengths and weaknesses of the filtering techniques have been discussed elaborately, which will help future researchers gain an in-depth understanding of fashion recommender systems. However, the proposed prototypes should be tested in commercial applications to understand their feasibility and accuracy in the retail market, because inaccurate recommendations can produce a negative impact on a customer. Moreover, future research should concentrate on including time series analysis and accurate categorization of product images based on the variation in color, trend and clothing style in order to develop an effective recommendation system. The proposed model will follow brand specific personalization campaigns and hence it will ensure highly curated and tailored offerings for users. Hence, this research will be highly beneficial for researchers interested in using augmented and virtual reality features .

12.FUTURE SCOPE

Fashion designing has become very popular in India in the last few years and many people are now considering it as a career choice. With economic prosperity, the average income of Indians has increased. Hence, people have better lifestyles compared to the past and they can afford spend more on their attire. As a result, there is an increased demand for professionals who can design and create new garments, dresses and attires to cater to the people from different walks of life.

A career in fashion application designing is considered as financially rewarding and has become very popular with people with creative mindset. It is normally looked at as a field full of glamor, though the field is full of very intense competition and huge number of challenges as well. However, there is a wide scope of fashion designing students enjoy a lot of choices once they complete their fashion designing professional studies.

- The fashion designers in the 21st century have multiple number of options including research, designing, cloth production and textile designing, etc.
- There is also a huge scope of fashion designing in Canada, USA, UK and countries in the European Union.
- They are free to join garment manufacturing companies, fashion houses, export units etc. after the completion of their studies.
- The scope of fashion technology is not only limited to garments. It covers many other aspects such as accessories, footwear, etc.

13.APPENDIX

Login Form:

```
<html>
    <head>
        <meta name="viewpoint" content="width=device-width, initial-scale=1.0">
        <title>Login</title>
        <link rel="stylesheet" href="https://storagedemo-madzh.s3.jp-tok.cloud-object-
storage.appdomain.cloud/Regcss.css">
    </head>
    <body>

        <div class="main">
            <div class="navbar">
                <div class="menu">
                    <ul>


                    </ul>
                </div>
            </div>

            <div class="content">
                <h1>Smart Fashion <br><span>Application</span></h1>

                    <div class="form">
                        <h2>LOGIN</h2>
                        <form action="/Login" method="post">
                        <input type="text"     name="username"     placeholder="Enter
Username Here">
                        <input type="password" name="password" placeholder="Enter Password
here">
                        <button  type="submit" class="btnn"><a href="#">Login</a></button>

                        <p class="link">Don't have an account<br>
                        <a href="/Register">Sign up </a> here</a></p>

                        </form>

                    </div>
            </div>
        </div>

    </body>
</html>
```

Python Code for Flask:

```
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=9938aec0-8105-433e-8bf9-
0fbb7e483086.c1ogj3sd0tgtu0lqde00.databases.appdomain.cloud;PORT=32459;Security=SSL;SSLServe
rCertificate=DigiCertGlobalRootCA.crt;UID=dpk79343;PWD=29Jm7EbzOubtoerk",'','')

@app.route('/')

def homer():
    return render_template('Login.html')


@app.route('/Login',methods =['GET', 'POST'])
def login():
    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 !'
            return render_template('Finalhome.html', msg = msg)
        else:
            msg = 'Incorrect username / password !'
```

```
    return render_template('Login.html', msg = msg)




@app.route('/Register', methods =['GET', 'POST'])
def registet():
    msg = ''
    if request.method == 'POST' :
        username = request.form['username']
        email = request.form['email']
        password = request.form['password']
        sql = "SELECT * FROM users WHERE username =?"
        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):
            msg = 'Invalid email address !'
        elif not re.match(r'[A-Za-z0-9]+', username):
            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, username)
            ibm_db.bind_param(prep_stmt, 2, email)
            ibm_db.bind_param(prep_stmt, 3, password)
            ibm_db.execute(prep_stmt)
            msg = 'You have successfully registered !'
    elif request.method == 'POST':
        msg = 'Please fill out the form !'
    return render_template('Reg.html', msg = msg)

@app.route('/Homepage')
def dash():

    return render_template('Finalhome.html')



@app.route('/display')
def display():
    print(session["username"],session['id'])
```

```
    cursor = mysql.connection.cursor()
    cursor.execute('SELECT * FROM job WHERE userid = % s', (session['id'],))
    account = cursor.fetchone()
    print("accountdislay",account)
    return render_template('display.html',account = account)

@app.route('/Logout')

def logout():
   session.pop('loggedin', None)
   session.pop('id', None)
   session.pop('username', None)
   return render_template('Login.html')

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

1. **GitHub Project Repository link : https://github.com/IBM-EPBL/IBM-Project-25671-1659970243**
2. **Project Demo Link :**