SMART FASHION RECOMMENDER APPLICATION

A PROJECT REPORT

Submitted by

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in partial fulfillment for the award of degree of
Bachelor of Technology(B.Tech) in
INFORMATION TECHNOLOGY

M.P.NACHIMUTHU M.JAGANATHAN ENGINEERING COLLEGE.

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We would like to extend our gratitude to the **IBM** for **Nalaiya Thiran** project for providing us with all the facility that was required.

It was a great learning experience.We would like to take this opportunity to express our gratitude.

DATE:
18.11.2022

TEAM MEMBERS:
PRIYADHARSHINI S
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SWETHA Y
VIGNESH C

1. INTRODUCTION

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

1.1 PROJECT OVERVIEW

The main aim of this system to develop an e-commerce platforms, where numerous choices are available, an efficient recommendation system is required to sort, order, and efficiently convey relevant product content or information to users. Image-based fashion recommendation systems (FRSs) have attracted a huge amount of attention from fast fashion retailers as they provide a personalized shopping experience to consumers. In addition, this review also explores various potential models that could be implemented to develop fashion recommendation systems in the future.

1.2 PURPOSE

- The fashion choices of consumers depend on many factors, such as demographics, geographic location, individual preferences, interpersonal influences, age, gender, season, and culture.
- The Fashion Recommendation System is mainly used to recommend the best possible outfit combinations to a user who has no fashion sense based on their wardrobe.
- It mat not always provide the best possible outfit to wear for an occasion as the system clothes present in the users wardrobe.
- As with other products such as electronics and books, fashion products were also recommended based on the user's previouspurchase hist

2. LITERATURE SURVEY

1. Paper Title: **Image-based fashion recommender system.**

Publication: Year (2021).

Author name: ShaghayeghShirkhani.

Methodology: Collaborative filtering, the iterative filtering process, matrix factorization, and content-based systems. Systems for collaborative filtering make product recommendations based on user similarity metrics and/or by grouping things from similar users' purchases.

Despite the variety of collaborative filtering methods, many widely used systems can be distilled down to just two steps:

1. Seek out users who have similar rating tendencies to the active user (the user whom the prediction is for).
2. To establish a prediction for the active user, utilise the ratings from the users who shared your interests in step one.

2**. Paper Title:Individualized fashion recommender system**

Author name: M Sridevi, N ManikyaArun, M Sheshikala and E Sudarshan

Methodology: This design seeks to use an image of a product provided by the stoner as input to prompt recommendations because people frequently see things that they're interested in and tend to look for products that are similar to those. We reuse the Deep Fashion Dataset (DFD) photos using

neural networks, and we generate the final suggestions using a closest neighbour backed recommender.

3. Paper Title :A Review on Clothes Matching and Recommendation System Based on user attributes.

Author name: AtharvPandit ,KunalGoel , Manav Jain , NehaKatre

Methodology: It's crucial to dress adequately while venturing out into the real world. The confidence of the individual is raised and a very positive impression is made when they are dressed appropriately in clothing that exhibits some degree of style and is worn in a way that complies with societal norms. The goal of the study is to make it easier for customers to locate the best-fitting outfits by taking into account fine elements like style, patterns, colours, and textures, as well as user characteristics like age, skin tone, and favouritecolours. It seeks to assist the user in organising their closet and making stylish clothing selections. It makes an effort to assist the user in dressing appropriately for the occasion and in finding clothing that complements their personal style. In order to create a robust system that discovers the user's matching outfits and provides recommendations, an in-depth analysis of numerous systems that are built for various aspects is undertaken in this research. Systems created to propose clothing using various methodologies have been researched, with both their benefits and drawbacks highlighted. It has also been investigated how to make clothing detecting systems user-friendly while accepting feedback from the user.

4. Paper Title: An Intelligent Personalized Fashion Recommendation System

Author : QingqingTuLe Dong

Methodology: The proposed system develops a novel way for the analysis of fashion multimedia information from both diversity and personalized aspects based on fashion.

5 .Paper Title: Fashion Recommendation Systems

Author name: SamitChakraborty , Md. SaifulHoque, NaimurRahmanJeem, Manik Chandra Biswas, DeepayanBardhan and Edger Lobaton.

Methodology: Fast fashion has grown significantly over the past few years, which has had a significant impact on the textile and fashion industries. An effective recommendation system is needed in e-commerce platforms where there are many options available to sort, order, and effectively communicate to user's pertinent product content or information. Fast fashion retailers have paid a lot of attention to image-based fashion recommendation systems (FRSs), which offer customers a customised purchasing experience. There aren't many academic studies on this subject, despite its enormous potential. The studies that are now accessible do not conduct a thorough analysis of fashion recommendation systems and the accompanying filtering methods. This review also looks at many potential models that might be used to create future fashion suggestion systems.

2.1 EXISTING PROBLEM

- Significant investment required.
- Too many choices
- The complex onboarding process
- Lack of data analytics capability
- The ‘cold start’ problem
- Inability to capture changes in user behaviour
- Privacy concerns

2.2 REFERENCE

[1] Girshick R et al, "Rich feature hierarchies for accurate object detection and semantic segmentation," in 2018 IEEE Conference on Computer Vision and Pattern Recognition, 2018. DOI: 10.1109/CVPR.2018.81.

[2] Gocl D, Chaudhury S and Ghosh H. "Recommendation of complementary garments using ontology", 2015 Fifth Nat. Conf. on Compute.

Vision, Pattern Recognition. Image Process. and Graph. (NCVPRIPG). 2015.

2.3 PROBLEM STATEMENT DEFINITION

Create a Smart Fashion Recommender System that provides personalized recommendation and respond quickly to the consumer through chatbot which improves consumers overall purchasing experience.

3. IDEATION & PROPOSED SOLUTION

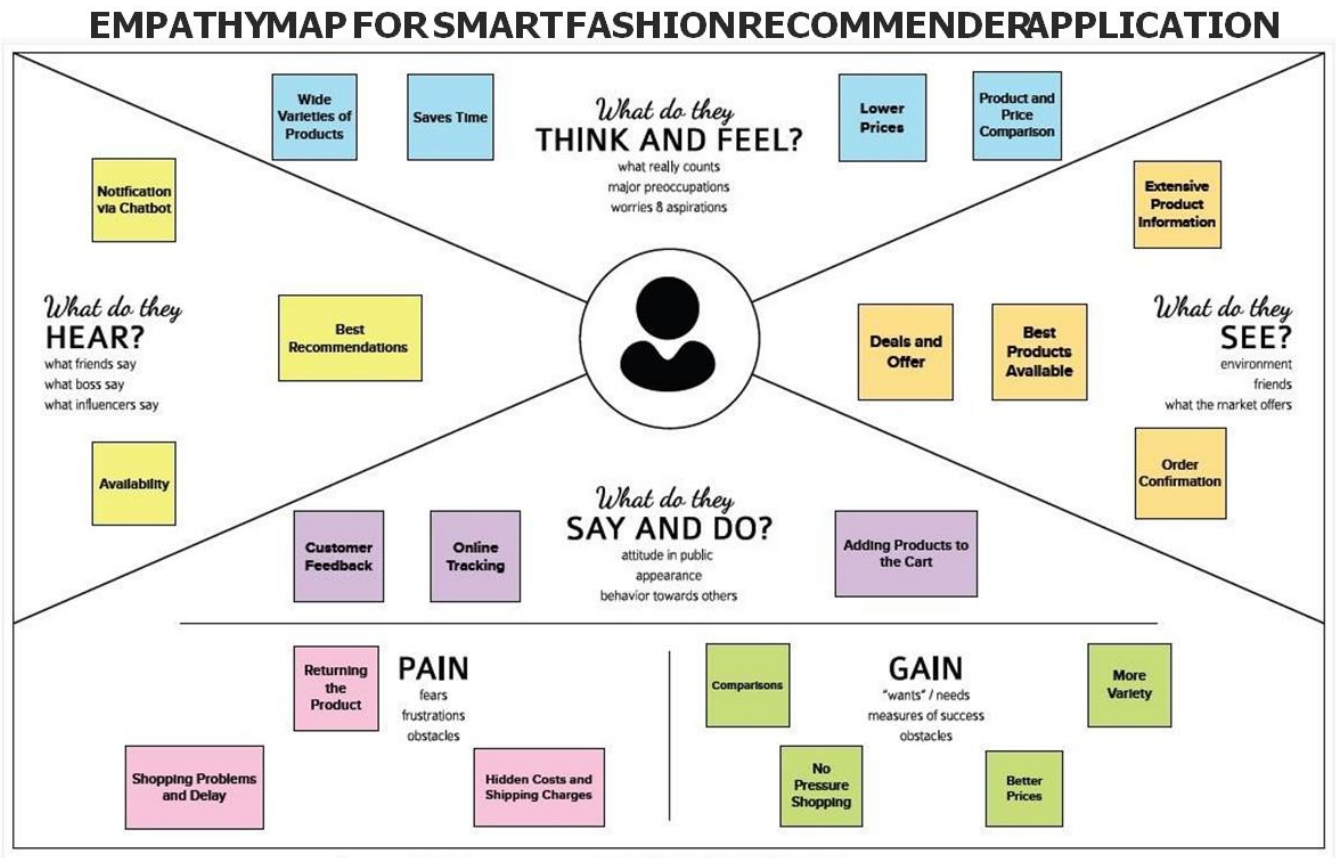
Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Production facing too many types of garments, consumers need to try Lack of fashion recommendation in online clothing applications.
2.	Idea / Solution description	By Suggesting the most interesting apt products to the users. To develop a chatbot application

		to recommend fashion ideas to users.
3.	Novelty / Uniqueness	The chatbot is maintained up - to -date with the upcoming trends to provide unique and fresh clothing options. Chatbot will help to find the right product effectively, with this feature user can save time and it is a easy process.
4.	Social Impact / Customer Satisfaction	Customers are provided with good quality and personalized suggestions which lead to customer satisfaction.
5.	Business Model (Revenue Model)	Luxury and premium brands can be promoted on this application to generate more revenue.

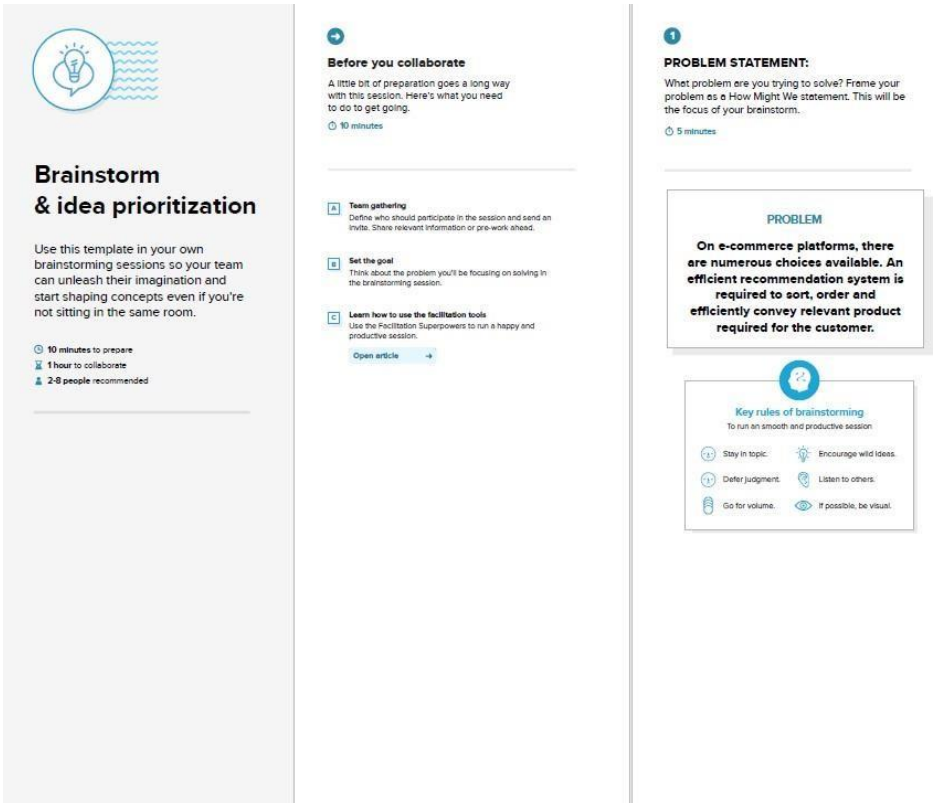
6.	Scalability of the Solution	Application is highly scalable. Established marketing strategy. Suggestions along with the requested ones.

3.1 EMPATHY MAP CANVAS

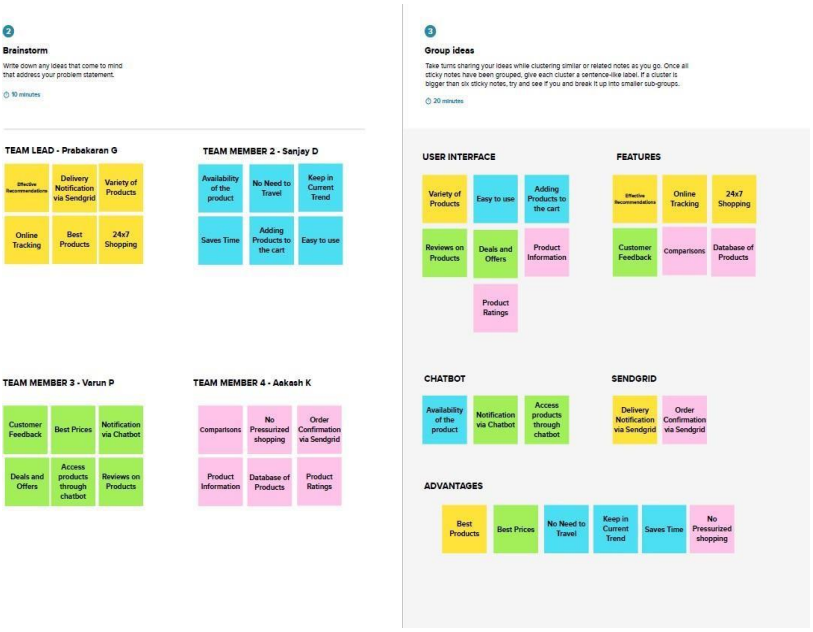


3.2 IDEATION & BRAINSTROMING

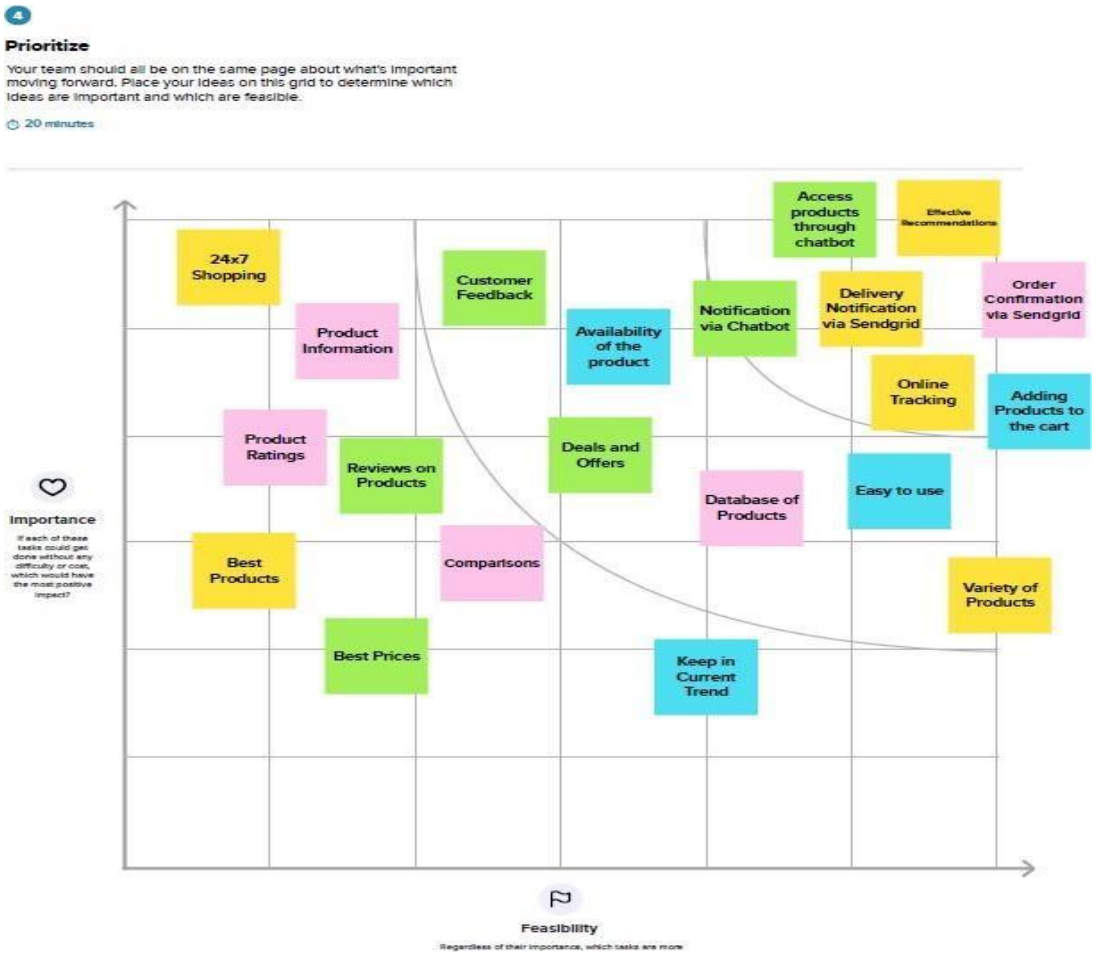
Step-1: Team Gathering, Collaboration and Select the Problem Statement



Step-2: Brainstorm, Idea Listing and Grouping



3.3 PROPOSED SOLUTION



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3.3 PROBLEM SOLUTION FIT

Problem-Solution fit canvas 2.0

Smart Fashion Recommender Application | **Team ID:** PNT2022TMID44592

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

Who is your customer? i.e. working parents of 0-5 y.o. kids

- Customers can purchase the products within a short time.

6. CUSTOMER CONSTRAINTS — CC

What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

In internet hosts a lot of adds limiting its usability.

Network connection must be proper.

5. AVAILABLE SOLUTIONS — AS

Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital notetaking

- Smart Fashion Recommender which are supported in many browsers
- Smart Fashion Recommender Chatbot is developed in this project.

Explore AS, differentiate

Focus on J&P, tap into BE

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

be more than one; explore different sides.

- To collect data about our visitors and to make better product suggestions and recommendations.
- customer queries, their needs, and preferences can allow you to personalize product pages and build customer's satisfaction.

9. PROBLEM ROOT CAUSE — RC

What is the real reason that this problem exists? What is the back story behind the need to do this job? i.e. customers have to do it because of the change in regulations.

- Customer service will be available for 24 hours.
- Chatbot can help with recovering carts.

7. BEHAVIOUR — BE

What does your customer do to address the problem and get the job done? i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

- Seamless Real-Life Interaction
- Customer Data Security
- Reduce Customer Frustration

Focus on J&P, tap into BE, understand RC

Identify strong TR & EM

3. TRIGGERS — TR

What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.

- Improve Lead Generation.
- Reduce Customer Service Costs.
- Monitor Consumer Data to Gain Insights.

4. EMOTIONS: BEFORE / AFTER — EM

How do customers feel when they face a problem or a job and afterwards? i.e. lost, insecure > confident, in control - use it in your communication strategy & design.

- Took longer time to process and respond to the query.

10. YOUR SOLUTION — SL

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality. If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

- Instead of navigating to several screens for booking products online, the user can directly talk to Chatbot regarding the products.

8. CHANNELS of BEHAVIOUR — CH

ONLINE

What kind of actions do customers take online? Extract online channels from #7

- Able to serve customers with a consistent level of quality in a short period of time across different channels,

OFFLINE

What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

- Make sure they are aware of the usage of the chatbots

Extract online & offline CH of BE

4.REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENTS

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form.
FR-2	User Interaction	Interaction through the Chat Bot
FR-3	Track Products	Ask Chat bot to Track my Orders.
FR-4	Buying Products	Through the Chat Bot Recommendations.
FR-5	Return Products	Return through the Chat Bot
FR-6	User payment	Through UPI/Net banking/COD.

4.2 NON-FUNCTIONAL REQUIREMENTS

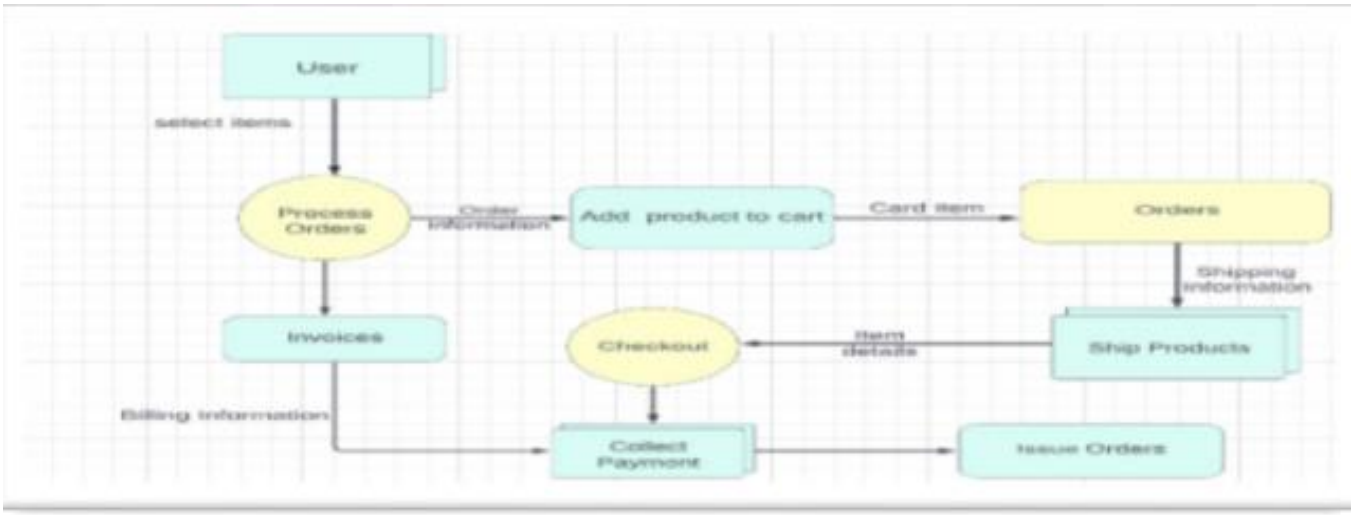
Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Using Android or IOS or windows applications. User friendly interface that makes them easy to access.
NFR-2	Security	The user data is stored securely in IBM cloud. Data will not be misused.
NFR-3	Reliability	The Quality of the services are trusted. Resetting password if user is unable to login (forget password option)
NFR-4	Performance	Chatbot for apt recommendation and quicker search.
NFR-5	Availability	New collections are available according to the trend.
NFR-6	Scalability	Its easy to scalable size of users and products.

5. PROJECT DESIGN

5.1 DATA FLOW DIAGRAM

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 requirements graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



- Admin is maintaining all the things that the users are purchasing
- To keep track of the stock information
- The chatbot can give payment details to the users.

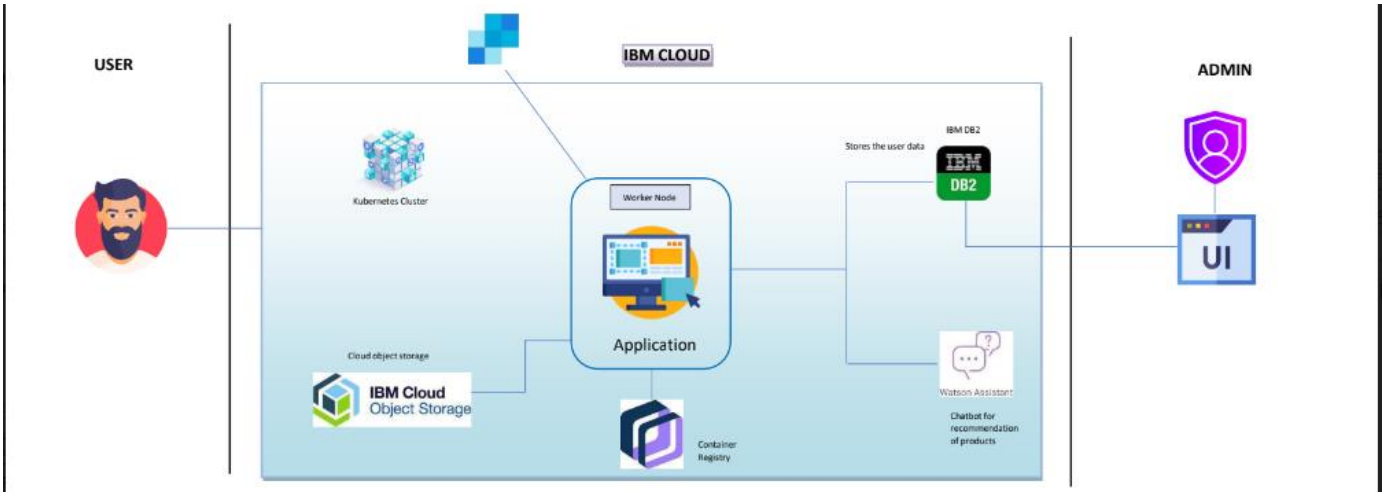
- We can manage user selections and orders using chatbots.

5.2 SOLUTION & TECHNICAL ARCHITECHTURE

COMPONENT	DESCRIPTION	TECHNOLOGY
Website	Website Customer can proceed the website and interact with the chatbot to get the desire product	HTML, CSS, JavaScript, Watson chatbot
Docker	Service for storing the private container images	Container
IBM Object Storage	Bucket are used to upload the images and files	Bucket
Kubernetes	Manage the complete process in the stable state If any software crash it automatically restart the work	Kubernetes
DB2	Data types are String, Numeric, Date, time, and timestamp distinct types. Act_ sortmem_ limit, auto_ del_ rec _ obj, auto_ maint	MySQL

	Configuration .	
Cloud DB2	A fully managed cloud database with AI capabilities that keep our website running 24*7.	IBM DB2
Watson chatbot	Customers can search the product easily by human-like interaction with bot.	IBM Watson Assistant
Infrastructure (Server/ Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Anaconda	Local, Cloud Foundry, Kubernetes, etc.
	Cloud Sever Configuration: IBM cloud	

TECHNICAL ARCHITECTURE DIAGRAM



5.3 USER STORIES

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail		Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password	I can access and make purchases.	High	Sprint-1
	Dashboard					
Customer (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	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail		Medium	Sprint-1
		USN-5	As a user, I can log into the application by entering email & password	I can access and make purchases.	High	Sprint-1
Administrator	Login	USN-1	I enter my mail and password on organisation's approval	I can approve products and purchases	High	Sprint-1 Administrator

6. PROJECT PLANNI

6.1 SPRINT PLANNING & ESTIMATION

Remaining tasks (Milestones & Activities) to be completed

Milestones	Activities	Description
Project Development Phase	Delivery of Sprint – 1,2,3,4	To develop the code and submit the developed code by testing it
Setting up App environment	Create IBM Cloud account	Signup for an IBM Cloud account
	Create flask project	Getting started with Flask to create project
	Install IBM Cloud CLI	Install IBM Command Line Interface
	Docker CLI Installation	Installing Docker CLI on laptop
	Create an account in sendgrid	Create an account in sendgrid. Use the service as email integration to our application for sending emails
Implementing web Application	Create UI to interact with Application	Create UI • Registration page • Login page • View products page • Add products page
	Create IBM DB2 & connect with python	Create IBM DB2 service in IBM Cloud and connect with python code with DB
Integrating sendgrid service	Sendgrid integration with python	To send emails form the application we need to integrate the Sendgrid service
Developing a chatbot	Building a chatbot and Integrate to 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 your application and push it to the IBM container registry
	Upload image to IBM container registry	Upload the image to IBM container registry
	Deploy in kubernetes cluster	Once the image is uploaded to IBM Container registry deploy the image to IBM Kebernetes cluster

Finished tasks (Milestones & Activities)

Milestones	Activities	Description
Ideation Phase	Literature Survey	Literature survey on the selected project & information gathering
	Empathy Map	Prepare Empathy map to capture the user Panis & Gains, prepare list of problem statement
	Ideation	Organizing the brainstroming session and prioritise the top 3 ideas based on feasibility & Importance
Project Design Phase I	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 document
	Solution Architecture	Prepare solution architecture document
Project Design Phase II	Customer Journey	Prepare customer journey map to understand the user interactions & experience with the application
	Functional requirement	Prepare functional & non functional requirement document
	Data Flow Diagram	Prepare Data Flow Diagram and user stories
	Technology architecture	Draw the technology architecture diagram
Project Planning Phase	Milestones & Activity list	Prepare milestones and activity list of the project
	Sprint Delivery Plan	Prepare sprint delivery plan

6.2 SPRINT DELIVERY SHEDULE

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	S.Priyadharshini P.Malarvizhi Y.Swetha C.Vignesh
Sprint-1	Confirmation	USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	S.Priyadharshini P.Malarvizhi Y.Swetha C.Vignesh
Sprint-1	Login	USN-3	As a user, I can log into the application by entering email & password	1	High	S.Priyadharshini P.Malarvizhi Y.Swetha C.Vignesh
Sprint-2	Dashboard	USN-4	Browse the products that are offered on the website. The customer can interact with chat bot directly about the products rather than navigate through various screens.	3	High	S.Priyadharshini P.Malarvizhi Y.Swetha C.Vignesh

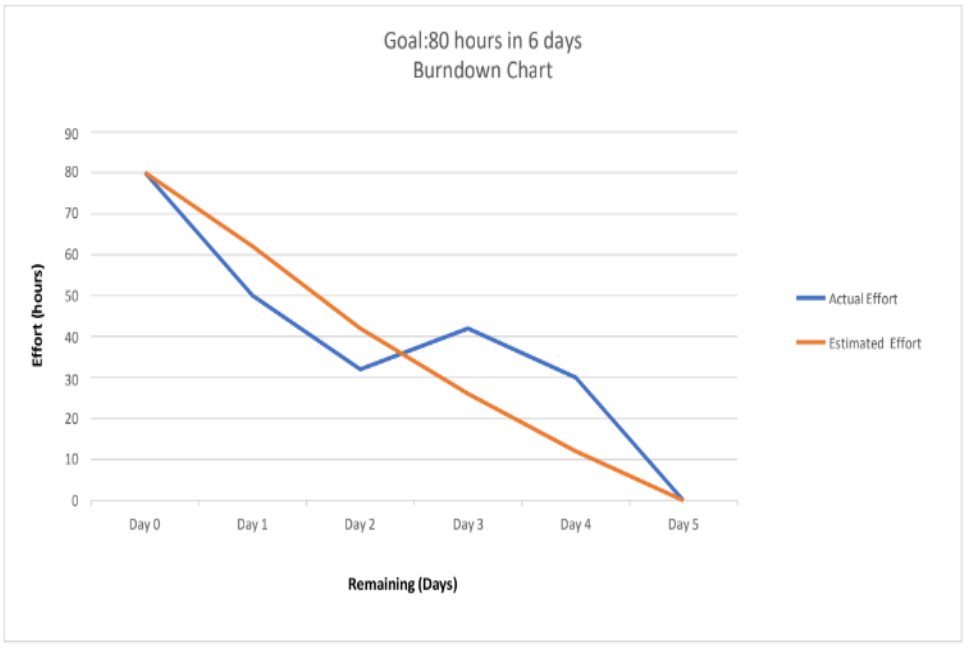
Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-3	Live chat-Chat Bot	USN-4	As a user, my recommendations can be made by the chat bot depending on my interest	2	High	S.Priyadharshini P.Malarvizhi Y.Swetha C.Vignesh
Sprint-3	Tracking the order	USN-5	As a user, If I order any product, chat bot notifies it.	2	High	S.Priyadharshini P.Malarvizhi Y.Swetha C.Vignesh
Sprint-4	Flow of orders and check out	USN-6	As a user, I can track my order and collect information about shipping	2	High	S.Priyadharshini P.Malarvizhi Y.Swetha C.Vignesh
Sprint-4	Return the product if not satisfied	USN-7	As a user, If I am not satisfy with the product, I can return in 7 days from the date of delivery	2	Medium	S.Priyadharshini P.Malarvizhi Y.Swetha C.Vignesh

6.3 Reports from JIRA

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	18	6 Days	24 Oct 2022	29 Oct 2022	18	29 Oct 2022
Sprint-2	18	6 Days	31 Oct 2022	05 Nov 2022	18	05 Nov 2022
Sprint-3	18	6 Days	07 Nov 2022	12 Nov 2022	18	12 Nov 2022
Sprint-4	18	6 Days	14 Nov 2022	19 Nov 2022	18	19 Nov 2022

Burndown Chart

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.



7. CODING & SOLUTIONING

7.1 FEATURE 1

home.html:

```
<!DOCTYPEhtml>
<html>

<head>
  <title>HOME PAGE</title>
</head>
<style>
  ul {
    list-style-type: none;
    margin: 0;
    padding: 0;
    overflow: hidden;
    background-color: #333;
  }

  li {
    float: left;
  }

  lia {
    display: block;
    color: white;
    text-align: center;
    padding: 14px16px;
    text-decoration: none;
  }

  lia:hover:not(.active) {
    background-color: #111;
```

```
  }

  .active {
    background-color: #04AA6D;
  }
  </style>
<body>

<ahref="file:///C:/Users/ELCOT/Downloads/IBM%20PROJ/action_page.html#work"></a
>
  <divclass="main">
          <divclass="navbar">
              <divclass="icon">
                  <h2class="logo">Smart Fashion</h2>
              </div>

              <divclass="menu">
                <divclass="w3-top">
                  <divclass="w3-bar w3-white w3-card"id="myNavbar">
                    <ahref="#home"class="w3-bar-item w3-button w3-wide"></a>
                    <!-- Right-sided navbar links -->
                    <divclass="w3-right w3-hide-small"><b>
                      <ul>

<li><ahref="file:///C:/Users/ELCOT/Downloads/IBM%20PROJ/action_page.html">HOME
</a></li>

<li><ahref="file:///C:/Users/ELCOT/Downloads/IBM%20PROJ/login.html">LOGIN</a><
/li>
<li><ahref="file:///C:/Users/ELCOT/Downloads/IBM%20PROJ/signup.html">SIGNUP</a
></li>
                    </ul>
                    </div>
                  </div>
          <imgsrc="home.webp"width="1500px"height="500px">
        </div>
      </body>
</html>
```

Style.css:

```
body {
  background-image: url('bg image.webp');
    font-family: "Roboto", sans-serif;
  }

  .signup-box {
    width: 360px;
    height: 620px;
    margin: auto;
    background-color: white;
    border-radius: 3px;
  }

  .login-box {
    width: 360px;
    height: 280px;
    margin: auto;
    border-radius: 3px;
    background-color: white;
  }


  h1 {
    text-align: center;
    padding-top: 15px;
  }

  h4 {
    text-align: center;
  }

  form {
    width: 300px;
    margin-left: 20px;
  }

  formlabel {
    display: flex;
    margin-top: 20px;
    font-size: 18px;
  }

  forminput {
```

```
    width: 100%;
    padding: 7px;
    border: none;
    border: 1pxsolidgray;
    border-radius: 6px;
    outline: none;
  }
  input[type="submit"] {
    width: 320px;
    height: 35px;
    margin-top: 20px;
    border: none;
    background-color: #49c1a2;
    color: white;
    font-size: 18px;
  }
  p {
    text-align: center;
    padding-top: 20px;
    font-size: 15px;
  }
  .para-2 {
    text-align: center;
    color: white;
    font-size: 15px;
    margin-top: -10px;
  }
  .para-2a {
    color: #49c1a2;
  }
```

Sign up.html:

```
<!DOCTYPEhtml>
<html>
<title>Smart Fashion</title>
<linkrel="icon"type="image/x-icon"href="images/download.jpg">
<metacharset="UTF-8">
<metaname="viewport"content="width=device-width, initial-scale=1">
<linkrel="stylesheet"href="https://www.w3schools.com/w3css/4/w3.css">
<linkrel="stylesheet"href="https://fonts.googleapis.com/css?family=Raleway">
<linkrel="stylesheet"href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
```

```
<linkrel="stylesheet"href="https://cdn.jsdelivr.net/npm/bootstrap@4.6.2/dist/c
ss/bootstrap.min.css"
  integrity="sha384-
xOolHFLEh07PJGoPkLv1IbcEPTNtaed2xpHsD9ESMhqIYd0nLMwNLD69Npy4HI+N"crossorigin="
anonymous">


<style>
  body,
  h1,
  h2,
  h3,
  h4,
  h5,
  h6 {
    font-family: "Raleway", sans-serif
  }

  body,
  html {
    height: 100%;
    line-height: 1.8;
  }

  /* Full height image header */
  .bgimg-1 {
    background-position: center;
    background-size: cover;
    background-image: url("images/clothing-line.jpg");
    min-height: 100%;
  }

  .w3-bar.w3-button {
    padding: 16px;
  }
</style>

<body>

  <!-- Navbar (sit on top) -->
  <divclass="w3-top">
    <divclass="w3-bar w3-white w3-card"id="myNavbar">
      <b>
      <ahref="#home"class="w3-bar-item w3-button w3-wide">SMART Z</a>
      <!-- Right-sided navbar links -->
      <divclass="w3-right w3-hide-small">
        <ahref="#home"class="w3-bar-item w3-button">HOME</a>
```

```
        <ahref="#about"class="w3-bar-item w3-button">ABOUT</a>
        <ahref="#team"class="w3-bar-item w3-button"><iclass="fa fa-user"></i>
TEAM</a>
        <ahref="#work"class="w3-bar-item w3-button"><iclass="fa fa-th"></i>
WORK</a>
        <ahref="#contact"class="w3-bar-item w3-button"><iclass="fa fa-
envelope"></i> CONTACT</a>
        <ahref="login.html"class="w3-bar-item w3-button"><iclass="fa fa-sign-
out"aria-hidden="true"></i> LOGOUT</a>
      </b>
    </div>
      <!-- Hide right-floated links on small screens and replace them with a
menu icon -->

      <ahref="javascript:void(0)"class="w3-bar-item w3-button w3-right w3-
hide-large w3-hide-medium"
        onclick="w3_open()">
        <iclass="fa fa-bars"></i>
      </a>
    </div>
  </div>
  <imgsrc="home.webp">

  <!-- Sidebar on small screens when clicking the menu icon -->
  <navclass="w3-sidebar w3-bar-block w3-black w3-card w3-animate-left w3-hide-
medium w3-hide-large"
    style="display:none"id="mySidebar">
    <ahref="javascript:void(0)"onclick="w3_close()"class="w3-bar-item w3-
button w3-large w3-padding-16">Close ×</a>
    <ahref="#home"onclick="w3_close()"class="w3-bar-item w3-button">HOME</a>
    <ahref="#about"onclick="w3_close()"class="w3-bar-item w3-button">ABOUT</a>
    <ahref="#team"onclick="w3_close()"class="w3-bar-item w3-button">TEAM</a>
    <ahref="#work"onclick="w3_close()"class="w3-bar-item w3-button">WORK</a>
    <ahref="#contact"onclick="w3_close()"class="w3-bar-item w3-
button">CONTACT</a>
  </nav>

  <!-- Header with full-height image -->
  <headerclass="bgimg-1 w3-display-container w3-grayscale-min"id="home">
    <divclass="w3-display-left w3-text-white"style="padding:48px">
      <spanclass="w3-jumbo w3-hide-small">Start something that
matters</span><br>
      <spanclass="w3-xxlarge w3-hide-large w3-hide-medium">Start something
that matters</span><br>
      <spanclass="w3-large">Stop wasting valuable time with projects that just
isn't you.</span>
```

```
      <p><ahref="#about"
          class="w3-button w3-white w3-padding-large w3-large w3-margin-top
w3-opacity w3-hover-opacity-off">Learn more
          and start today</a></p>
    </div>
    <divclass="w3-display-bottomleft w3-text-grey w3-large"style="padding:24px
48px">
      <iclass="fa fa-facebook-official w3-hover-opacity"></i>
      <iclass="fa fa-instagram w3-hover-opacity"></i>
      <iclass="fa fa-snapchat w3-hover-opacity"></i>
      <iclass="fa fa-pinterest-p w3-hover-opacity"></i>
      <iclass="fa fa-twitter w3-hover-opacity"></i>
      <iclass="fa fa-linkedin w3-hover-opacity"></i>
    </div>
  </header>

  <!-- About Section -->
  <divclass="w3-container"style="padding:128px 16px"id="about">
    <h3class="w3-center">ABOUT THE COMPANY</h3>
    <pclass="w3-center w3-large">Key features of our company</p>
    <divclass="w3-row-padding w3-center"style="margin-top:64px">
      <divclass="w3-quarter">
        <iclass="fa fa-desktop w3-margin-bottom w3-jumbo w3-center"></i>
        <pclass="w3-large">Responsive</p>
        <p>“When we ground ourselves in the present moment, we spontaneously
connect better with others.”</p>
      </div>
      <divclass="w3-quarter">
        <iclass="fa fa-heart w3-margin-bottom w3-jumbo"></i>
        <pclass="w3-large">Passion</p>
        <p>"Believe in your heart that you're meant to live a life full of
passion, purpose, magic and miracles.”</p>
      </div>
      <divclass="w3-quarter">
        <iclass="fa fa-diamond w3-margin-bottom w3-jumbo"></i>
        <pclass="w3-large">Design</p>
        <p>"Design creates culture. Culture shapes values. Values determine
the future."</p>
      </div>
      <divclass="w3-quarter">
        <iclass="fa fa-cog w3-margin-bottom w3-jumbo"></i>
        <pclass="w3-large">Support</p>
        <p>“There’s a fine line between support and stalking and let’s all
stay on the right side of that.”</p>
      </div>
    </div>
```

```
  </div>

  <!-- Promo Section - "We know design" -->
  <divclass="w3-container w3-light-grey"style="padding:128px 16px">
    <divclass="w3-row-padding">
      <divclass="w3-col m6">
        <h3>We know design.</h3>
        <p>"Make it simple, but significant."</p>
        <p><ahref="#work"class="w3-button w3-black"><iclass="fa fa-th"> </i>
View Our Works</a></p>
      </div>
      <divclass="w3-col m6">
        <imgclass="w3-image w3-round-
large"src="images/clothing.jpg"alt="Buildings"width="700"height="394">
      </div>
    </div>
  </div>

  <!-- Team Section -->
  <divclass="w3-container"style="padding:128px 16px"id="team">
    <h3class="w3-center">THE TEAM</h3>
    <pclass="w3-center w3-large">The ones who runs this company</p>
    <divclass="w3-row-padding w3-grayscale"style="margin-top:64px">
      <divclass="w3-col l3 m6 w3-margin-bottom">
        <divclass="w3-card">
          <imgsrc="images/team2.jpg"alt="John"style="width:100%">
          <divclass="w3-container">
            <h3>John Doe</h3>
            <pclass="w3-opacity">CEO & Founder</p>
            <p>Manages and directs the company toward its primary goals and
objectives. Oversees employment decisions
              at the executive level of the company. Leads a team of
executives to consider major decisions including
              acquisitions, mergers, joint ventures, or large-scale
expansion.</p>
            <p><buttonclass="w3-button w3-light-grey w3-block"><iclass="fa fa-
envelope"></i> Contact</button></p>
          </div>
        </div>
      </div>
      <divclass="w3-col l3 m6 w3-margin-bottom">
        <divclass="w3-card">
          <imgsrc="Images/team1.jpg"alt="Jane"style="width:100%">
          <divclass="w3-container">
            <h3>Anja Doe</h3>
            <pclass="w3-opacity">Stylist</p>
```

```
            <p>Responsible for the visual style and images in magazines,
newspapers, product packaging.Inspire and guide
              the vision
              of the design team, oversee the work of illustrators,
graphic/visualdesigners, photographers, and others
              who are
              engaged in artwork or layout design.</p>
            <p><buttonclass="w3-button w3-light-grey w3-block"><iclass="fa fa-
envelope"></i> Contact</button></p>
          </div>
        </div>
      </div>
      <divclass="w3-col l3 m6 w3-margin-bottom">
        <divclass="w3-card">
          <imgsrc="images/team3.jpg"alt="Mike"style="width:100%">
          <divclass="w3-container">
            <h3>Mike Ross</h3>
            <pclass="w3-opacity">Designer</p>
            <p>Plan, create and code internet sites and web pages, many of
which combine text with sounds, pictures,
              graphics
              and video clips.Responsible for creating the design and layout
of a website or web pages.
              It and can mean working on a brand new website or updating an
already existing site.</p>
            <p><buttonclass="w3-button w3-light-grey w3-block"><iclass="fa fa-
envelope"></i> Contact</button></p>
          </div>
        </div>
      </div>
      <divclass="w3-col l3 m6 w3-margin-bottom">
        <divclass="w3-card">
          <imgsrc="images/team4.jpg"alt="Dan"style="width:100%">
          <divclass="w3-container">
            <h3>Dan Star</h3>
            <pclass="w3-opacity">Marketing Manager</p>
            <p>Conceptualize visuals based on requirements. Prepare rough
drafts and present ideas. Develop
              illustrations,
              logos and other designs using software or by hand. Use the
appropriate colors and layouts for each
              graphic.
              Work with copywriters and creative director to produce final
design.</p>
            <p><buttonclass="w3-button w3-light-grey w3-block"><iclass="fa fa-
envelope"></i> Contact</button></p>
```

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

  <!-- Promo Section "Statistics" -->
  <divclass="w3-container w3-row w3-center w3-dark-grey w3-padding-64">
    <divclass="w3-quarter">
      <spanclass="w3-xxlarge">7+</span>
      <br>Partners
    </div>
    <divclass="w3-quarter">
      <spanclass="w3-xxlarge">5K+</span>
      <br>Designers
    </div>
    <divclass="w3-quarter">
      <spanclass="w3-xxlarge">10K+</span>
      <br>Happy Clients
    </div>
    <divclass="w3-quarter">
      <spanclass="w3-xxlarge">150+</span>
      <br>Awards
    </div>
  </div>

  <!-- Work Section -->
  <divclass="w3-container"style="padding:128px 16px"id="work">
    <h3class="w3-center">OUR WORK</h3>
    <pclass="w3-center w3-large">What we've done for people</p>

    <divstyle="margin-left: 40px;">

      <ahref="view/view1.html">
        <imgsrc="https://fashionimages.s3.us-south.cloud-object-
storage.appdomain.cloud/fashion1.jpg"
          alt="womenfashion"srcset=""></a>
      <ahref="view/view2.html">
        <imgsrc="https://fashionimages.s3.us-south.cloud-object-
storage.appdomain.cloud/fashion2.jpg"
          alt="womenfashion"srcset=""></a>
      <ahref="view/view3.html">
        <imgsrc="https://fashionimages.s3.us-south.cloud-object-
storage.appdomain.cloud/c1.jpg"
         alt="womenfashion"srcset=""></a>
      <ahref="view/view4.html">
```

```
        <imgsrc="https://fashionimages.s3.us-south.cloud-object-
storage.appdomain.cloud/fashion4.jpg"
          alt="womenfashion"srcset=""></a>
      <ahref="view/view5.html">
        <imgsrc="https://fashionimages.s3.us-south.cloud-object-
storage.appdomain.cloud/f1.jpg"
          alt="womenfashion"srcset=""></a>
      <ahref="view/view6.html">
        <imgsrc="https://fashionimages.s3.us-south.cloud-object-
storage.appdomain.cloud/tr9.jpg"
        alt="womenfashion"srcset=""></a>
      <ahref="view/view7.html">
        <imgsrc="https://fashionimages.s3.us-south.cloud-object-
storage.appdomain.cloud/a1.jpg"
        alt="womenfashion"srcset=""></a>
    </div>

    <divclass="list-group"style="text-align:center">
      <a  class="list-group-item list-group-item-action"><h1>Find yourself
more in:</h1></a>
      <ahref="category/womenformals.html"class="list-group-item list-group-
item-action list-group-item-primary"><h1>Women formals</h1></a>
      <ahref="category/menformals.html"class="list-group-item list-group-item-
action list-group-item-secondary"><h1>Men formals</h1></a>
      <ahref="category/kidsfashion.html"class="list-group-item list-group-
item-action list-group-item-success"><h1>Kids fashion</h1></a>
      <ahref="category/fashionsilks.html"class="list-group-item list-group-
item-action list-group-item-danger"><h1>Fashion silks</h1></a>
      <ahref="category/chappels.html"class="list-group-item list-group-item-
action list-group-item-warning"><h1>Chappels</h1></a>
      <ahref="category/bags.html"class="list-group-item list-group-item-action
list-group-item-info"><h1>Bags</h1></a>

    </div>


    <script>
      window.watsonAssistantChatOptions = {
        integrationID:"ef29ddf3-1ad6-4ae1-bb89-6b2874052e04", // The ID of
this integration.
        region:"au-syd", // The region your integration is hosted in.
        serviceInstanceID:"c9725f2c-df35-4683-8958-3989a7075028", // The ID of
your service instance.
        onLoad:function(instance) { instance.render(); }
      };
      setTimeout(function(){
        constt=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>

  </div>

  <!-- Modal for full size images on click-->
  <divid="modal01"class="w3-modal w3-
black"onclick="this.style.display='none'">
    <spanclass="w3-button w3-xxlarge w3-black w3-padding-large w3-display-
topright"title="Close Modal Image">×</span>
    <divclass="w3-modal-content w3-animate-zoom w3-center w3-transparent w3-
padding-64">
      <imgid="img01"class="w3-image">
      <pid="caption"class="w3-opacity w3-large"></p>
    </div>
  </div>

  <!-- Skills Section -->
  <divclass="w3-container w3-light-grey w3-padding-64">
    <divclass="w3-row-padding">
      <divclass="w3-col m6">
        <h3>Our Skills.</h3>
        <p>Sketching designs <br>
          Selecting fabrics and embellishments and sourcing suppliers<br>
          Sewing and creating physical pieces<br>
          Hosting model fittings and making necessary alterations<br>
          Participating in fashion shows<br>
          Communicating with clients and the media<br>
          Marketing designs<br>
          Promoting designs to creative directors and merchandisers<br>
        </p>
      </div>
      <divclass="w3-col m6">
        <pclass="w3-wide"><iclass="fa fa-camera w3-margin-
right"></i>Styling</p>
        <divclass="w3-grey">
          <divclass="w3-container w3-dark-grey w3-
center"style="width:90%">90%</div>
        </div>
        <pclass="w3-wide"><iclass="fa fa-desktop w3-margin-
right"></i>Designing</p>
```

```
        <divclass="w3-grey">
          <divclass="w3-container w3-dark-grey w3-
center"style="width:85%">85%</div>
        </div>
        <pclass="w3-wide"><iclass="fa fa-photo w3-margin-
right"></i>Marketing</p>
        <divclass="w3-grey">
          <divclass="w3-container w3-dark-grey w3-
center"style="width:75%">80%</div>
        </div>
      </div>
    </div>
  </div>


  <!-- Contact Section -->
  <divclass="w3-container w3-light-grey"style="padding:128px
16px"id="contact">
    <h3class="w3-center">CONTACT</h3>
    <pclass="w3-center w3-large">Lets get in touch. Send us a message:</p>
    <divstyle="margin-top:48px">
      <p><iclass="fa fa-map-marker fa-fw w3-xxlarge w3-margin-
right"></i>CHENNAI, India.</p>
      <p><iclass="fa fa-phone fa-fw w3-xxlarge w3-margin-right"></i> Phone:
+919376456032</p>
      <p><iclass="fa fa-envelope fa-fw w3-xxlarge w3-margin-right"></i> Email:
smartfashionrecommender@gmail.com</p>
      <br>
      <formaction="/action_page.php"target="_blank">
        <p><inputclass="w3-input w3-
border"type="text"placeholder="Name"requiredname="Name"></p>
        <p><inputclass="w3-input w3-
border"type="text"placeholder="Email"requiredname="Email"></p>
        <p><inputclass="w3-input w3-
border"type="text"placeholder="Subject"requiredname="Subject"></p>
        <p><inputclass="w3-input w3-
border"type="text"placeholder="Message"requiredname="Message"></p>
        <p>
          <buttonclass="w3-button w3-black"type="submit"inputtype="reset">
            <iclass="fa fa-paper-plane"><astyle="text-decoration:
none;"href="submit.html"> SEND MESSAGE </a></i>
          </button>
        </p>
      </form>
      <!-- Image of location/map -->
      <imgsrc="images/map.jpg"class="w3-image w3-
greyscale"style="width:100%;margin-top:48px">
```

```
    </div>
  </div>

  <!-- Footer -->
  <footerclass="w3-center w3-black w3-padding-64">
    <ahref="#home"class="w3-button w3-light-grey"><iclass="fa fa-arrow-up w3-
margin-right"></i>To the top</a>
    <divclass="w3-xlarge w3-section">
      <iclass="fa fa-facebook-official w3-hover-opacity"></i>
      <iclass="fa fa-instagram w3-hover-opacity"></i>
      <iclass="fa fa-snapchat w3-hover-opacity"></i>
      <iclass="fa fa-pinterest-p w3-hover-opacity"></i>
      <iclass="fa fa-twitter w3-hover-opacity"></i>
      <iclass="fa fa-linkedin w3-hover-opacity"></i>
    </div>
  </footer>

  <script>
    // Modal Image Gallery
    functiononClick(element) {
      document.getElementById("img01").src = element.src;
      document.getElementById("modal01").style.display = "block";
      varcaptionText = document.getElementById("caption");
      captionText.innerHTML = element.alt;
    }


    // Toggle between showing and hiding the sidebar when clicking the menu
icon
    varmySidebar = document.getElementById("mySidebar");

    functionw3_open() {
      if (mySidebar.style.display === 'block') {
        mySidebar.style.display = 'none';
      } else {
        mySidebar.style.display = 'block';
      }
    }

    // Close the sidebar with the close button
    functionw3_close() {
      mySidebar.style.display = "none";
    }
  </script>

</body>
```

```
</html>
```

7.2 FEATURE 2

```
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;SSLServerCertificate=DigiCertGlobalRootCA.crt;UID=dpk79343;PWD=29Jm7EbzOubtoerk",'','')

@app.route('/')

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


@app.route('/Login',methods =['GET', 'POST'])
deflogin():
    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('homepage.html', msg = msg)
        else:
            msg = 'Incorrect username / password !'
    return render_template('index.html', msg = msg)




@app.route('/Register', methods =['GET', 'POST'])
defregistet():
    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 !'
        elifnot re.match(r'[^@]+@[^@]+\.[^@]+', email):
            msg = 'Invalid email address !'
        elifnot 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')
defdash():

    return render_template('homepage.html')

@app.route('/apply',methods =['GET', 'POST'])
defapply():
     msg = ''
     if request.method == 'POST' :
         username = request.form['username']
         email = request.form['email']

         qualification= request.form['qualification']
         skills = request.form['skills']
         jobs = request.form['s']
         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 = 'there is only 1 job position! for you'
            return render_template('apply.html', msg = msg)



         insert_sql = "INSERT INTO  job 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, qualification)
         ibm_db.bind_param(prep_stmt, 4, skills)
         ibm_db.bind_param(prep_stmt, 5, jobs)
         ibm_db.execute(prep_stmt)
         msg = 'You have successfully applied for job !'
         session['loggedin'] = True
         TEXT = "Hello,a new application for job position" +jobs+"is
requested"




     elif request.method == 'POST':
```

```
        msg = 'Please fill out the form !'
    return render_template('apply.html', msg = msg)

@app.route('/display')
defdisplay():
    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')

deflogout():
   session.pop('loggedin', None)
   session.pop('id', None)
   session.pop('username', None)
   return render_template('home.html')

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

privacy.html:

```
<!DOCTYPEhtml>
<htmllang="en">
  <head>
    <title>Privacy Policy</title>
    <linkrel="icon"type="image/x-icon"href="images/download.jpg">
    <linkrel="stylesheet"href="style.css"/>
    <link

href="https://fonts.googleapis.com/css2?family=Roboto:wght@300&display=swap"
      rel="stylesheet"
    />
  </head>
  <body>
    <divclass="signup-box"style="height: 390px; margin-top:175px ;">
        <h1>Privacy Policy</h1>

    <pstyle="margin-left: 2em; margin-right: 2em;">Your privacy is important
to us. To better protect your privacy we provide
```

```
        this notice explaining our online information practices and the
choices you can make about the way your information is
        collected and used.We maintain the privacy of your email address and
password submitted to us in the registration process
        (unless you enter such information as your username or in the text of
your entries to user areas), but other information
        you provide should be considered nonconfidential and available for
viewing by others.
    </p>
    <astyle="margin-left: 10em;"href="signup.html">Back</a>
        </div>
  </body>
</html>
```

Login.html:

```
<!DOCTYPEhtml>
<htmllang="en">
  <head>
    <title>Login</title>
    <linkrel="icon"type="image/x-icon"href="images/download.jpg">
    <linkrel="stylesheet"href="style.css"/>
    <link

href="https://fonts.googleapis.com/css2?family=Roboto:wght@300&display=swap"
      rel="stylesheet"
    />
  </head>
  <body>
    <divclass="login-box"style="margin-top:175px ;">
      <h1>Login</h1>
      <form  action="action_page.html">
        <label>Email</label>
        <inputtype="email"placeholder=""/>
        <label>Password</label>
        <inputtype="password"placeholder=""/>
        <inputtype="submit"value="Submit"/>
      </form>
    </div>
    <pclass="para-2">
      Not have an account? <ahref="signup.html">Sign Up Here</a>
    </p>
  </body>
</head>
</html>
```

Setup.py:

```
fromsetuptoolsimportsetup

setup(
    name='mypackage',
    version='0.0.1',
    install_requires=[
        'requests',
        'importlib-metadata; python_version == "3.8"',
    ],
)

importcodecs
importos
importre

fromsetuptoolsimportsetup, find_packages


###################################################################

NAME = "attrs"
PACKAGES = find_packages(where="src")
META_PATH = os.path.join("src", "attr", "__init__.py")
KEYWORDS = ["class", "attribute", "boilerplate"]
CLASSIFIERS = [
    "Development Status :: 5 - Production/Stable",
    "Intended Audience :: Developers",
    "Natural Language :: English",
    "License :: OSI Approved :: MIT License",
    "Operating System :: OS Independent",
    "Programming Language :: Python",
    "Programming Language :: Python :: 2",
    "Programming Language :: Python :: 2.7",
    "Programming Language :: Python :: 3",
    "Programming Language :: Python :: 3.4",
    "Programming Language :: Python :: 3.5",
    "Programming Language :: Python :: 3.6",
    "Programming Language :: Python :: 3.7",
    "Programming Language :: Python :: 3.8",
    "Programming Language :: Python :: Implementation :: CPython",
    "Programming Language :: Python :: Implementation :: PyPy",
    "Topic :: Software Development :: Libraries :: Python Modules",
]
INSTALL_REQUIRES = []
```

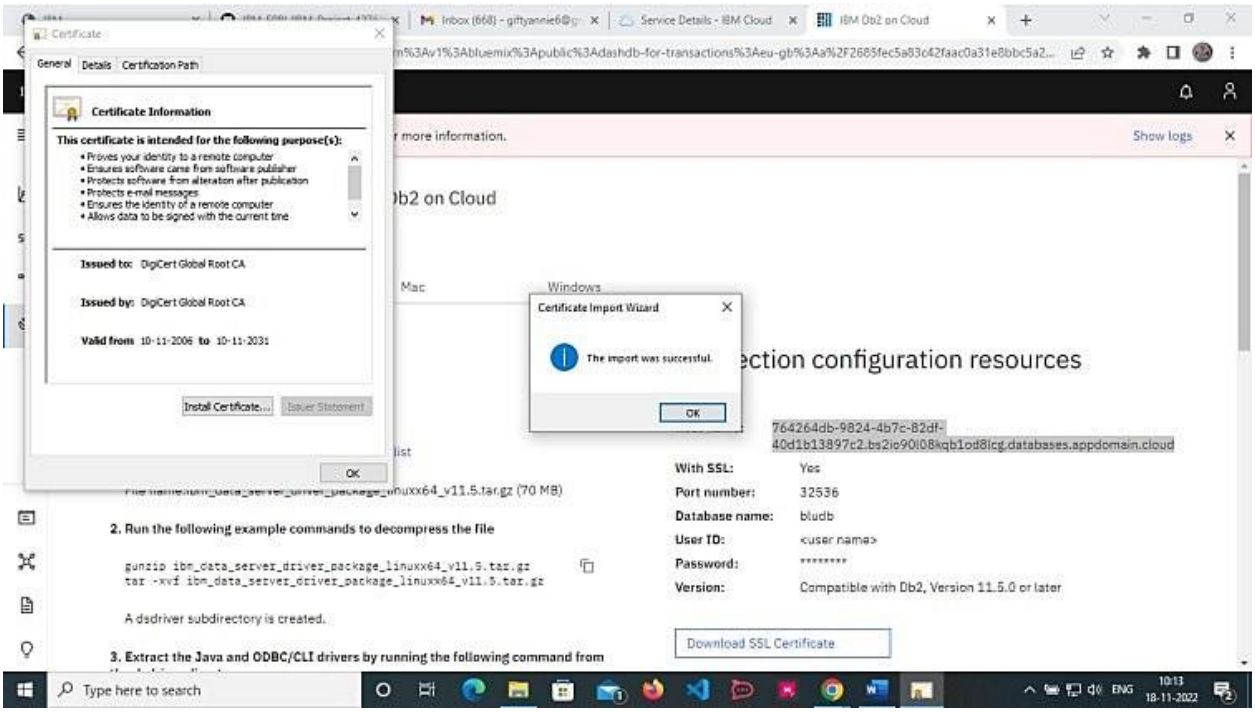
```
###################################################################

HERE = os.path.abspath(os.path.dirname(__file__))


defread(*parts):
    """
    Build an absolute path from *parts* and and return the contents of the
    resulting file.  Assume UTF-8 encoding.
    """
    withcodecs.open(os.path.join(HERE, *parts), "rb", "utf-8") asf:
        returnf.read()


META_FILE = read(META_PATH)


deffind_meta(meta):
    """
    Extract __*meta*__ from META_FILE.
    """
    meta_match = re.search(
        r"^__{meta}__ = ['\"]([^'\"]*)['\"]".format(meta=meta),
        META_FILE, re.M
    )
    ifmeta_match:
        returnmeta_match.group(1)
    raiseRuntimeError("Unable to find __{meta}__ string.".format(meta=meta))


if__name__ == "__main__":
    setup(
        name=NAME,
        description=find_meta("description"),
        license=find_meta("license"),
        url=find_meta("uri"),
        version=find_meta("version"),
        author=find_meta("author"),
        author_email=find_meta("email"),
        maintainer=find_meta("author"),
        maintainer_email=find_meta("email"),
        keywords=KEYWORDS,
        long_description=read("README.rst"),
        long_description_content_type="text/x-rst",
        packages=PACKAGES,
        package_dir={"": "src"},
        zip_safe=False,
```

```
        classifiers=CLASSIFIERS,
        install_requires=INSTALL_REQUIRES,
        options={"bdist_wheel": {"universal": "1"}},
    )
```

7.3 DATABASE SCHEMA

IBMDB2 WITH PYTHON:

import
ibm_db
hostname="
" uid=""
pwd=""
driver="{IBM DB2 ODBC
DRIVER}" db="bludb" port=""
protocol="TCPIP"
cert="Certificate.crt"
dsn=("DATABASE={0};"
"HOSTNAME={1};"
"PORT={2};"
"UID={3};"
"SECURITY=SSL;"
"SSLServerCertificate={4};"
"PWD={5};"
).format(db,hostname,port,uid,cert,pwd)print(dsn)
try:
db2=ibm_db.connect(dsn,"","",
) print("connected to data
base") except: print("Unable
to connect",ibm_db)



CHAPTER - 8

8.1 TEST CASES

SYSTEM TESTING

Testing is a set activity that can be planned and conducted systematically. Testing begins at the module level and work towards the integration of entire computers based system. Nothing is complete without testing, as it is vital success of the system.

Testing Objectives:

There are several rules that can serve as testing objectives, they are

a. Testing is a process of executing a program with the intent of finding an error

b. A good test case is one that has high probability of finding an undiscovered error.

c. A successful test is one that uncovers an undiscovered error.

If testing is conducted successfully according to the objectives as stated above, it would uncover errors in the software. Also testing demonstrates that software functions appear to the working according to the specification, that performance requirements appear to have been met. There are three ways to test a program

- For Correctness
- For Implementation efficiency
- For Computational Complexity.

Testing Correctness

The following ideas should be a part of any testing plan:

- Preventive Measures
- Spot checks
- Testing all parts of the program
- Test Data
- Looking for trouble
- Time for testing
- Re Testing

UNIT TESTING

As this system was partially GUI based WINDOWS application, the following were tested in this phase

- Tab Order
- Reverse Tab Order
- Fie id length
- Front end validations

INTEGRATION TESTING

Test data should be prepared carefully since the data only determines the efficiency and accuracy of the system. Artificial data are prepared solely for testing. Every program validates the input data.

VALIDATION TESTING

In this, all the Code Modules were tested individually one after the other. In our case all the modules were combined and given the test data. The combined module works successfully without any side effect on other programs. Everything was found fine working.

OUTPUT TESTING

This is the final step in testing. In this the entire system was tested as a whole with all forms, code, modules and class modules. This form of testing is popularly known as Black Box testing or system testing. Black Box testing methods focus on the functional requirement of the software.

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 Smart Fashion Recommender Application 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.

3. Test Case Analysis

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

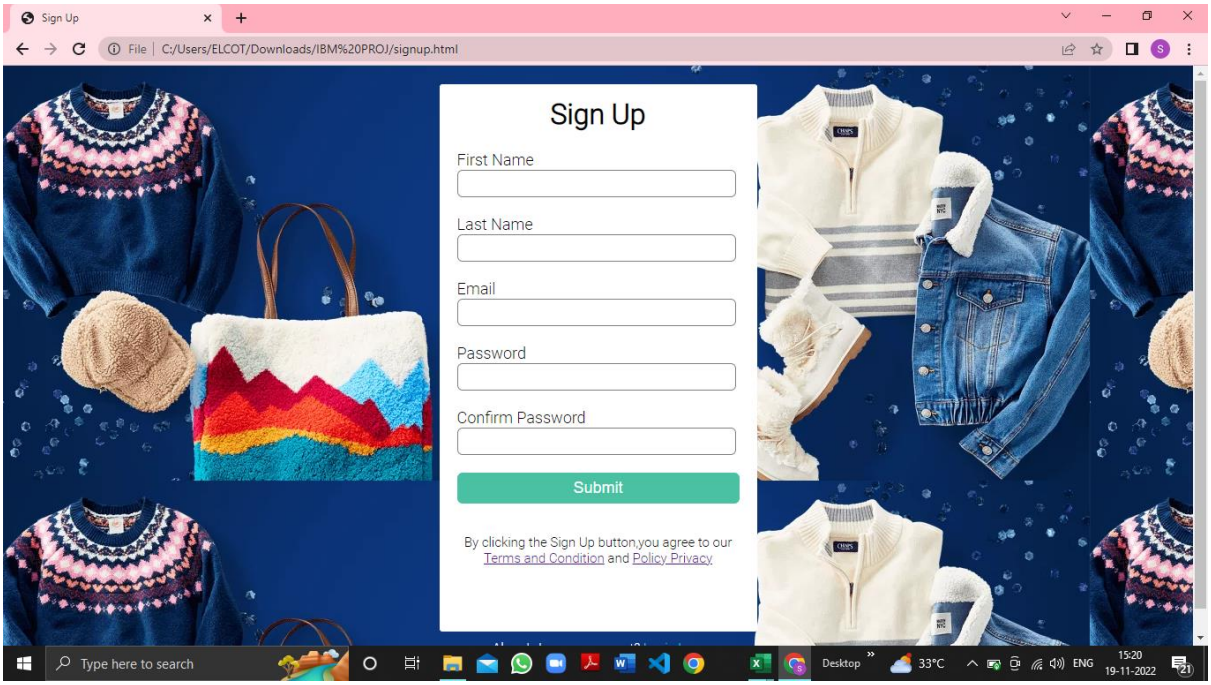
Resolution	Severity1	Severity2	Severity3	Severity4	Subtotal
ByDesign	12	3	5	4	24
Duplicate	1	4	2	3	10
External	2	3	0	1	6
Fixed	8	3	4	13	28
NotReproduced	1	0	1	0	2
Skipped	0	0	1	1	2
Won'tFix	2	3	2	1	8
Totals	26	16	15	23	80

Section	TotalCases	NotTested	Fail	Pass
PrintEngine	7	0	0	7
ClientApplication	51	0	1	50
Security	2	0	0	2
OutsourceShipping	3	0	0	3
ExceptionReporting	9	0	0	9
FinalReportOutput	4	0	1	3
VersionControl	2	0	0	2

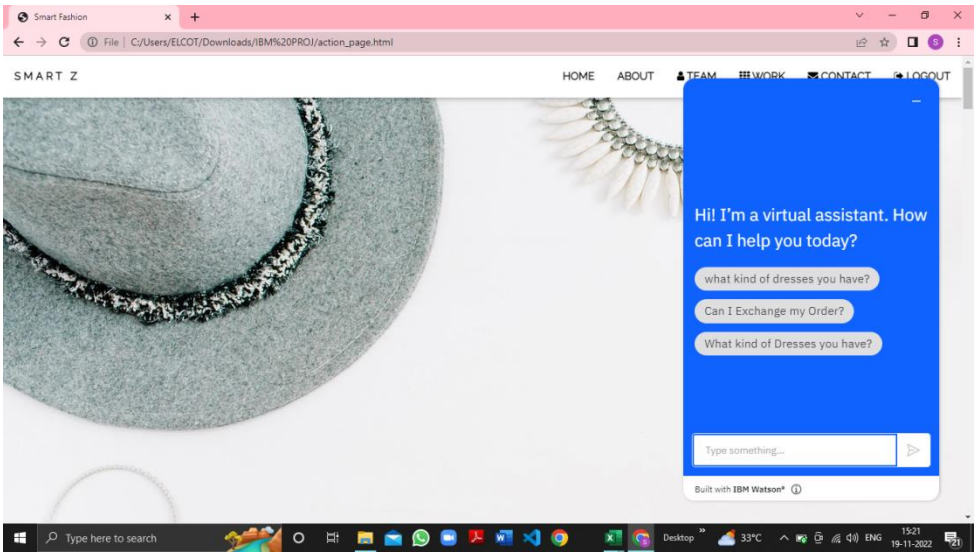
9. RESULTS

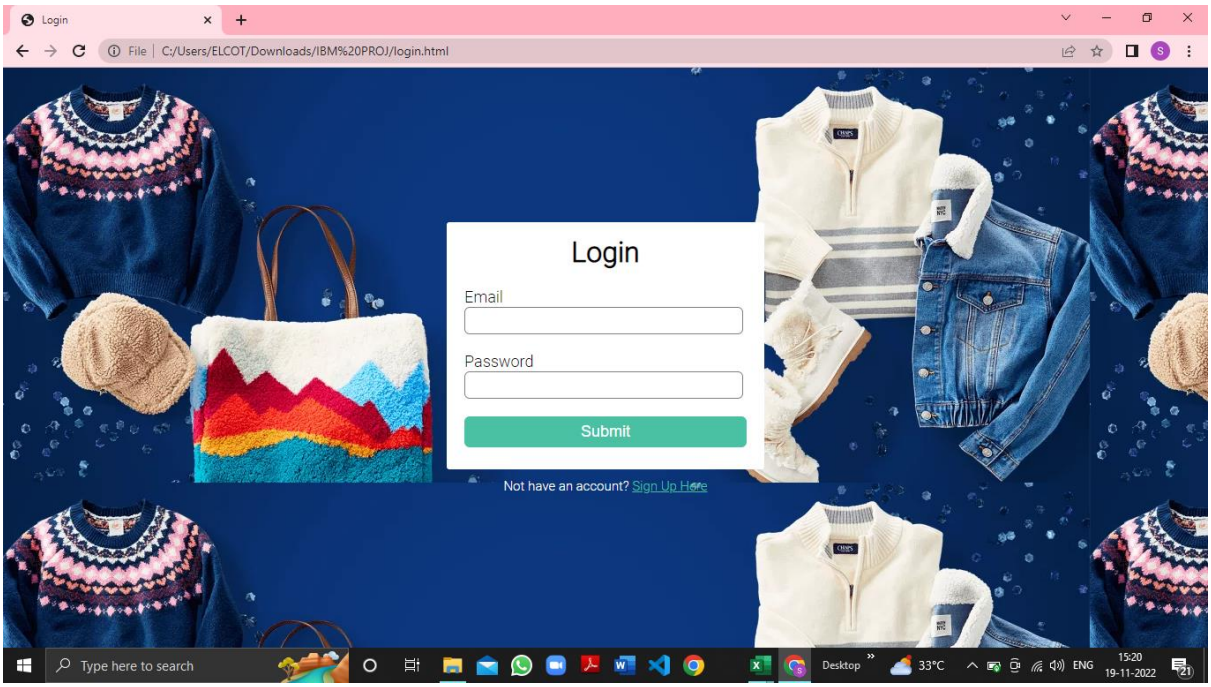
9.1 PERFORMANCE METRICS

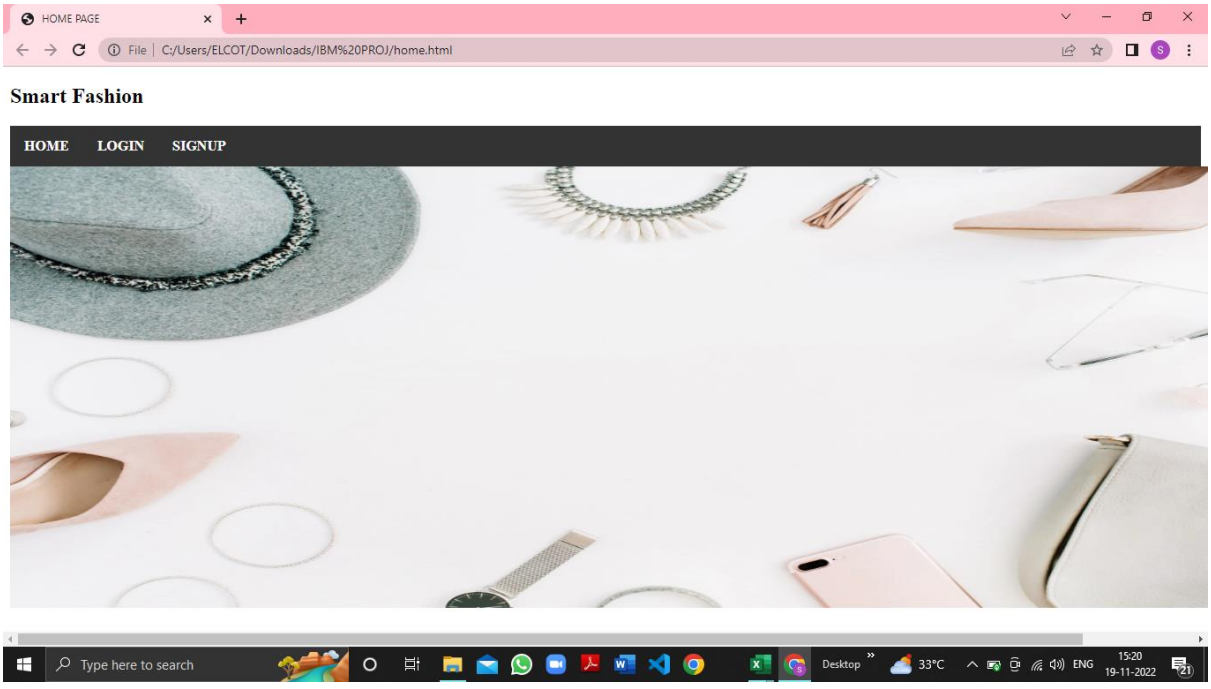
LOGIN PAGE



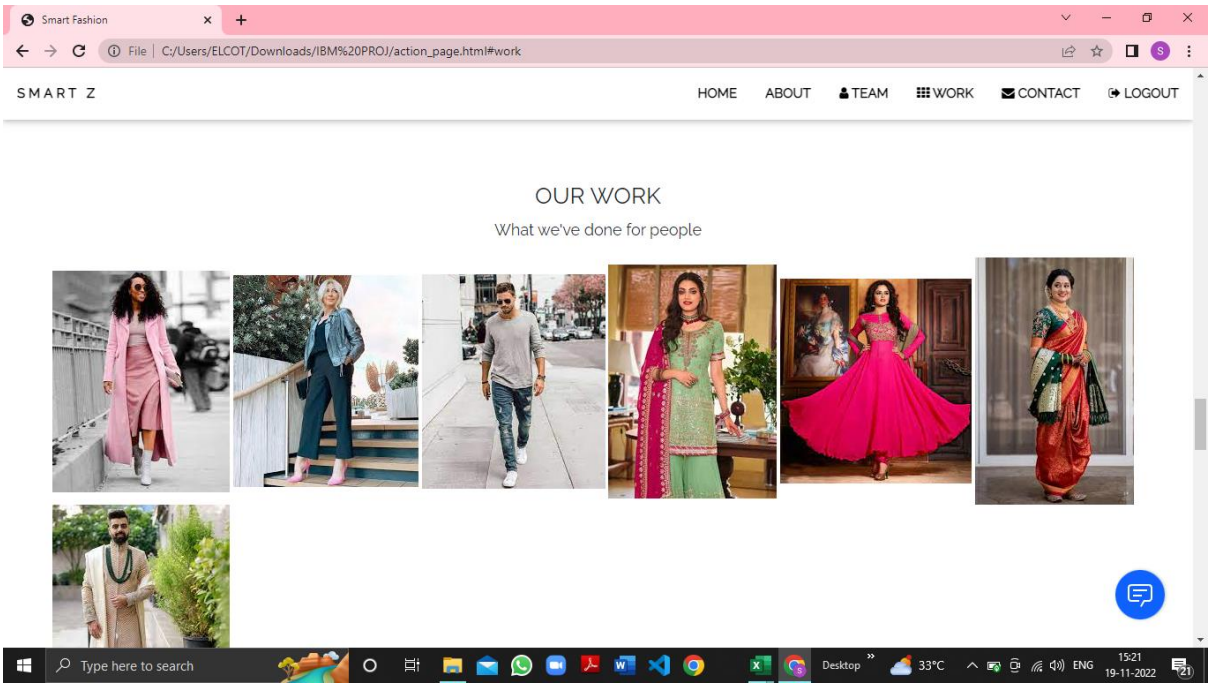
HOME PAGE




Login
File | C:/Users/ELCOT/Downloads/IBM%20PROJ/login.html
Login
Email
Password
Submit
Not have an account? Sign Up Here
Type here to search
Desktop
33°C
ENG
15:20
19-11-2022


HOME PAGE
File | C:/Users/ELCOT/Downloads/IBM%20PROJ/home.html
Smart Fashion
HOME
LOGIN
SIGNUP
Type here to search
Desktop
33°C
ENG
15:20
19-11-2022

PRODUCT PAGE



10.ADVANTAGES & DISADVANTAGES

ADVANTAGES

- Convenience
- Better prices
- Easy to send gifts
- Easy to send gifts
- More control
- Easy price comparisons
- No crowds
- Access to used or damaged inventory
- Privacy for discreet purchases
- The model can help users discover new interests.

DISADVANTAGES

- Lack of Data
- Shipping problems and delays
- Risk of fraud
- Less contact with your community
- Spending too much time online

CONCLUSION

Recommendation systems have the potential to explore new opportunities for retailers by enabling them to provide customized recommendations to consumer 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 thevariation in color, trend and clothing style in order to develop an effectiverecommendation system.

FUTURE SCOPE

Online selling and purchasing offer innumerable benefits to both sellers and buyers, and these advantages are also the reasons for the rising scope of eCommerceWell, to put it bluntly, the scope of e-business in the near future looks to be ever-increasing and growing, because the trend has really caught on here. E-commerce giant Amazon is keen to conquer the Indian market and has already invested a great deal, especially with its 49% stake in the Future Group. Indian online retail giant Flipkart has already opened a few offline stores and plans more stores in smaller cities. They plan to combine

online and offline stores to maximize their selling potential.Google and Tata Trust have launched a joint program ‘Saathi’ to increase internet and mobile penetration among rural women.The Government of India is also making a huge push for Ecommerce by providing numerous sops to startups, cyberparks, and so on through its Digital India program.As of now, there are close to 20,000 E-commerce companies in India, with many more expected to join the bandwagon every month.