# **Project Report Format**

#### 1. INTRODUCTION

- 1.1 Project Overview
- 1.2 Purpose

#### 2. LITERATURE SURVEY

- 2.1 Existing problem
- 2.2 References
- 2.3 Problem Statement Definition

### 3. IDEATION & PROPOSED SOLUTION

- 3.1 Empathy Map Canvas
- 3.2 Ideation & Brainstorming
- 3.3 Proposed Solution
- 3.4 Problem Solution fit

#### 4. REQUIREMENT ANALYSIS

- 4.1 Functional requirement
- 4.2 Non-Functional requirements

#### 5. PROJECT DESIGN

- 5.1 Data Flow Diagrams
- 5.2 Solution & Technical Architecture
- 5.3 User Stories

### 6. PROJECT PLANNING & SCHEDULING

- 6.1 Sprint Planning & Estimation
- 6.2 Sprint Delivery Schedule
- 6.3 Reports from JIRA

### 7. CODING & SOLUTIONING (Explain the features added in the project along with code)

- 7.1 Login
- 7.2 Signup
- 7.3 Mainpage
- 7.4 IBM DB2

#### 8. TESTING

- 8.1 Test Cases
- 8.2 User Acceptance Testing

#### 9. RESULTS

9.1 Performance Metrics

### 10. ADVANTAGES & DISADVANTAGES

- 11. CONCLUSION
- 12. FUTURE SCOPE
- 13. APPENDIX

Source Code

### Introduction

### **Project Overview**

User is buy the product online by chatbot instead of keyboard search. Keeyboard Search Is not all time recommends correct product. Chatbot is normally recommends the product by user interest. The keyboard may not recommend the product user interest. The chat also manage the order details in the project. It is very easy the user is to order without any worry about. The user is only focus on the product not all other things in the website. The user is login the webpage. After the dashboard page is shows the dress. In the side the chatbot is here. The chatbot is use the user order the product. The is user selected. The chatbot is sent the mail to user email. Chatbot is send the notification when the product is arrived in the user location. The admin is login the website then the admin dashboard is open. The admin dashboard is gives the user product. The admin can view the user details. The admin dashboard have the update stock. The admin can update the stock using to update the stock. The website use the external chatbot. The chatbot are IBM Watson Assistance. The Website store data at the cloud databse. The database are IBM DB2. It is sql based database. The Website is upload the project in the cloud. It the project is accessed using the IBM Object Storage. The Object storage is use bucket to store the project. The website use the container. The container is Docker. It is used to upload the project to the cloud. The user is click the website to manage the massive amount of user.

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Users to buy product to chatbot. It is very easy the user is use the website.

User can manage the order by chatbot. User can display the product by the user interest.

User can find the product with less time.

### 2.1 Exsisting Problem

Title	Year	Technology	Problem
Outfit Recommender	2018	E-Commerce,	Grey-sheep problem
System		Collaborative filtering, Cloud	refers to users with
		Computing	unique preferences
		EngCine,Python,html.	and tastes that make it
			difficult to develop
			accurate profiles.
Clothing fashion	2020	Singular value Decomposition	Some offer up too
Recommendation		method,Azure ML	many lowest common
system		Studio, Collaborative filtering.	denominator
			recommendation
			artificially.
Image base fashion	2021	Cross domain recommendation	Some don't support
recommender system		system,Flask,DevOps,Html,Css	the long tail enough
			and just recommend
			obivious
			items, outliers can be a
			problem.
Modern Fashion	2022	AWS,Docker,Artificial	Inaccurately estimate
recommender system		Intelligence,python,google	consumer's true
		cloud computing engine.	preference stand to
			pull down willingness
			to pay for some items
			and increase of the
			likehood of actual it.

### 2.2 References

[1] Mohamed Elleuch, Anis Mezghani, Mariem Khemakhem, Monji Kherallah "Clothing Classification using Deep CNN Architecture based on Transfer Learning", 2021 DOI:10.1007/978-3-030-49336-3\_24 [2] Saurabh Gupta, Siddartha Agarwal, Apoorve Dave. "Apparel Classifier and Recommender using Deep Learning."

(2015). [3] Bossard, Lukas, Matthias Dantone, Christian Leistner, Christian Wengert, Till Quack and Luc Van Gool. "Apparel Classification with Style." ACCV (2012). [4] Krizhevsky, Alex, Ilya Sutskever and Geoffrey E. Hinton. "ImageNet classification with deep convolutional neural networks." Communications of the ACM 60 (2012): 84 - 90. [5] Congying Guan, Shengfeng Qin, Yang Long, (2019) \"Apparel-based deep learning system design for apparel style recommendation\", International Journal of Clothing Science and Technology. [6] Stephen Marsland, ?Machine Learning – An Algorithmic Perspective?, Second Edition, Chapman and Hall/CRC Machine Learning and Pattern Recognition Series, 20

#### 2.3 Problem Definition Statement

User is enter the wrong keyword to search keyboard it is recommend wrong product.

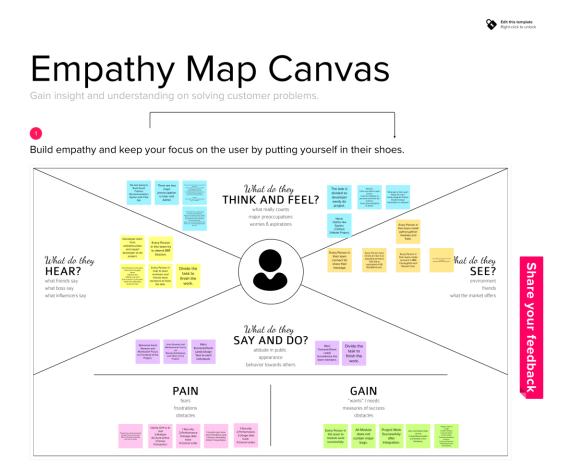
Users is give the option to the chatbot to recommend the correct product.

### Ideation and Proposed Solution

### 3.1 Empathy map & Canvas

Empathy Map Canvas: An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes. It is a useful tool to helps teams better understand their users. Creating an effective

solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.



#### Reference:

https://app.mural.co/invitation/mural/ibmproject0250/1663489514513?sender=u11a15f7b9d6bacf44a890331&key=9 537ddbf-520c-44a0-8c57-37939aba8c63

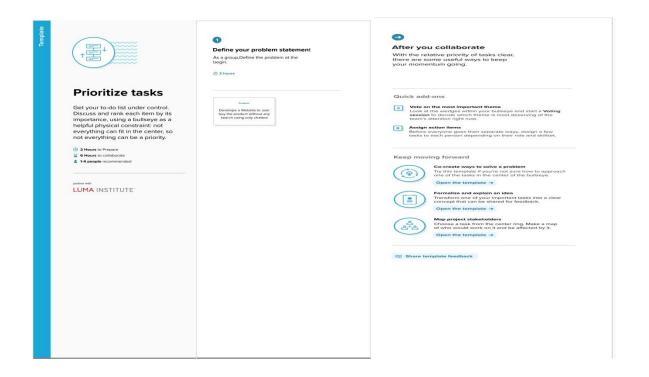
#### 3.2 Brainstorm & Ideation

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

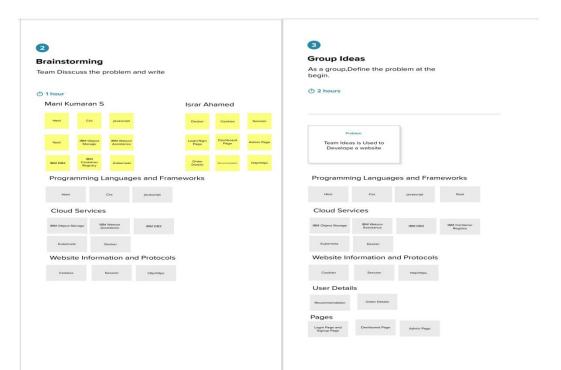
amount of creative solutions. Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room

Reference: https://app.mural.co/t/ibmproject0250/m/ibmproject0250/1668146454106/db7d236756f3 2bba505a2712c7ba94299cc51e2e?sender=ud60e8640702a4e97caed3020

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

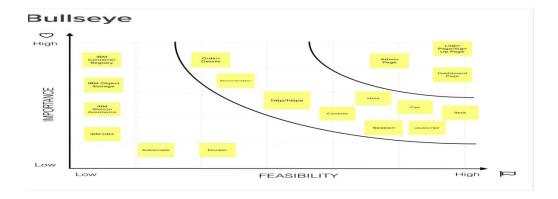


Step-2: Brainstorm, Idea Listing and Grouping



### **Step-3: Idea Prioritization**





### 3.3 Proposed Solution

Project team shall fill the following information in proposed solution template

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Many of the website is use a keyboard search for searching the correct product. The customer is type the wrong word it would recommend wrong product. It is major problem most of the online purchasing website.
2.	Idea / Solution description	We have a chatbot it is choose the option to display the product by the recommendation the correct product.

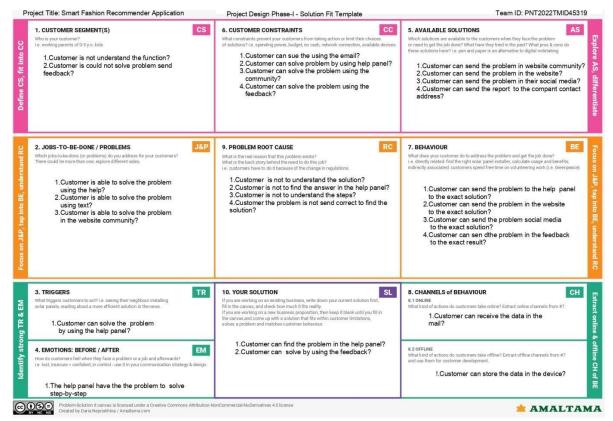
3.	Novelty / Uniqueness	It Provides the correct product in the online purchasing website. Customer can find the product using the recommendation.
4.	Social Impact / Customer Satisfaction	Customer can easily to find the product using chatbot.
5.	Business Model (Revenue Model)	It provide more sales because that gives the good result. The website display ads and purchase get the commission.
6.	Scalability of the Solution	At starting it is website and after we develop to application for all platform.

3.4 Proposed Solution Fit

The Problem-Solution Fit simply means that you have found a problem with your customer and that the solution you have realized for it actually solves the customer's problem. It helps entrepreneurs, marketers and corporate innovators identify behavioral patterns and recognize what would work and why.

### Purpose:

- Solve complex problems in a way that fits the state of your customers.
- Succeed faster and increase your solution adoption by tapping into existing mediums and channels of behavior.
- Sharpen your communication and marketing strategy with the right triggers and messaging.
- Increase touch-points with your company by finding the right problem-behavior fit and building trust by solving frequent annoyances, or urgent or costly problems.
- Understand the existing situation in order to improve it for your target group



#### References:

- 1. <a href="https://gustdebacker.com/problem-solution-fit/#:~:text=What%20is%20a,the%20customer%E2%80%99s%20problem">https://gustdebacker.com/problem-solution-fit/#:~:text=What%20is%20a,the%20customer%E2%80%99s%20problem</a>.
- 2. <a href="https://www.feedough.com/problem-solution-fit/#:~:text=Why%20Achieving%20A,guessing%20their%20needs.">https://www.feedough.com/problem-solution-fit/#:~:text=Why%20Achieving%20A,guessing%20their%20needs.</a>
- 4. Requirement Analysis

### 4.1 Functional Requirements

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 Interaction	Interact through the Chat Bot
FR-3	Buying Products	Through the chat Bot Recommendation
FR-4	Track Products	Ask the Chat Bot to Track my Orders
FR-5	Return Products	Through the chat Bot
FR_6	New Collections	Recommended from chat Bot

### 4.2 Non Functional Requirements

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

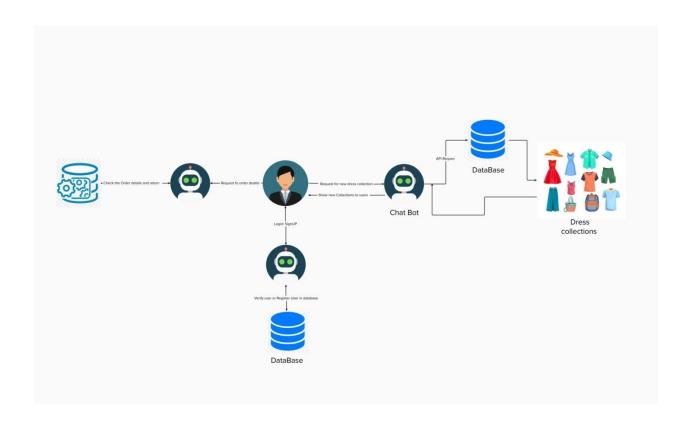
FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Using Android or IOS or windows applications.
NFR-2	Security	The user data is stored securely in IBM cloud.
NFR-3	Reliability	The Quality of the services are trusted.
NFR-4	Performance	Its Provide smooth user experience.
NFR-5	Availability	The services are available for 24/7.
NFR-6	Scalability	Its easy to scalable size of users and products.

5.Project Design

5.1 Data Flow Diagrams

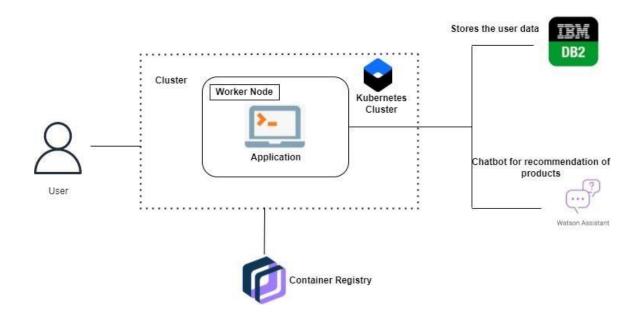
# **Data Flow Diagrams:**

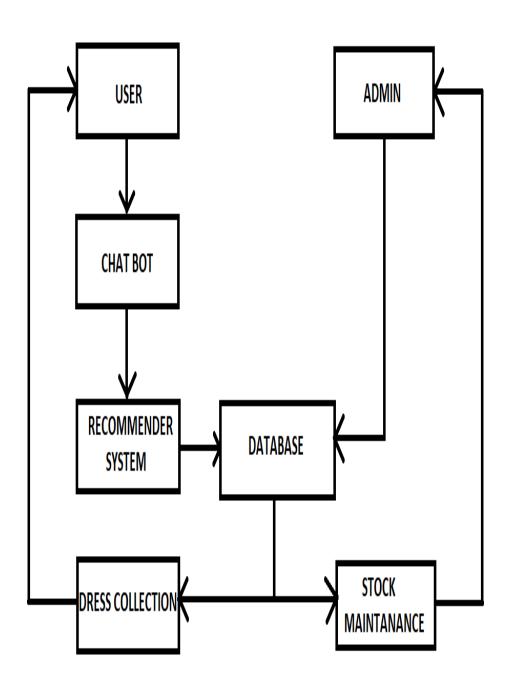
A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the rightamount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.



### 5.2 Solution & Technical Architecture

### Solution Architecture:





### 5.3 User Stories

Spirint	Functional Requirement(Epic)	User Story Number	User Story/Task	Story Points	Priority	Team Members
Spirint-1	User Panel	USN-1	The User will login into the website and go through the products available on the website	20	High	1.MANIKUMARAN S 2.ISRAR AHAMED M 3.MOHAMED ASRAF NASEEM S 4.MUHIBULLA M
Spirint-2	Admin Panel	USN-2	The role of the admin is to check out the database about the stock and have a track of all the things that the users are purchasing.	20	High	1.MANIKUMARAN S 2.ISRAR AHAMED M 3.MOHAMED ASRAF NASEEM S 4.MUHIBULLA M
Spirint-3	Chat Bot	USN-3	The User can directly talk to Chatbot regarding the products.Get the recommendations based on information provided by the user.	20	High	1.MANIKUMARAN S 2.ISRAR AHAMED M 3.MOAHMED ASRAF NASEEM S 4.MUHIBULLA M
Spirint-4	Final delivery	USN-4	Container of applications using docker kubernets and deployment the application. Create the documentation and final submit the application	20	High	1.MANIKUMARAN S 2.ISRAR AHAMED M 3.MOHAMED ASRAF NASEEM S 4.MUHIBULLA M

# 6.Project Planning & Scheduling

# 6.1 Spirint Planning & Estimation

Spirint	Functional Requirement(Epic)	User Story Number	User Story/Task	Story Points	Priority	Team Members
Spirint-1	User Panel	USN-1	The User will login into the website and go through the products available on the website	20	High	1.MANIKUMARAN S 2.ISRAR AHAMED M 3.MOHAMED ASRAF NASEEM S 4.MUHIBULLA M
Spirint-2	Admin Panel	USN-2	The role of the admin is to check out the database about the stock and have a track of all the things that the users are purchasing.	20	High	1.MANIKUMARAN S 2.ISRAR AHAMED M 3.MOHAMED ASRAF NASEEM S 4.MUHIBULLA M
Spirint-3	Chat Bot	USN-3	The User can directly talk to Chatbot regarding the products.Get the recommendations based on information provided by the user.	20	High	1.MANIKUMARAN S 2.ISRAR AHAMED M 3.MOAHMED ASRAF NASEEM S 4.MUHIBULLA M

Spirint-4	Final delivery	USN-4	Container of	20	High	1.MANIKUMARAN
			applications using			S
			docker kubernets			2.ISRAR AHAMED
			and deployment			M
			the			3.MOHAMED
			application.Create			ASRAF NASEEM S
			thedocumentation			4.MUHIBULLA M
			and final submit			
			the application			

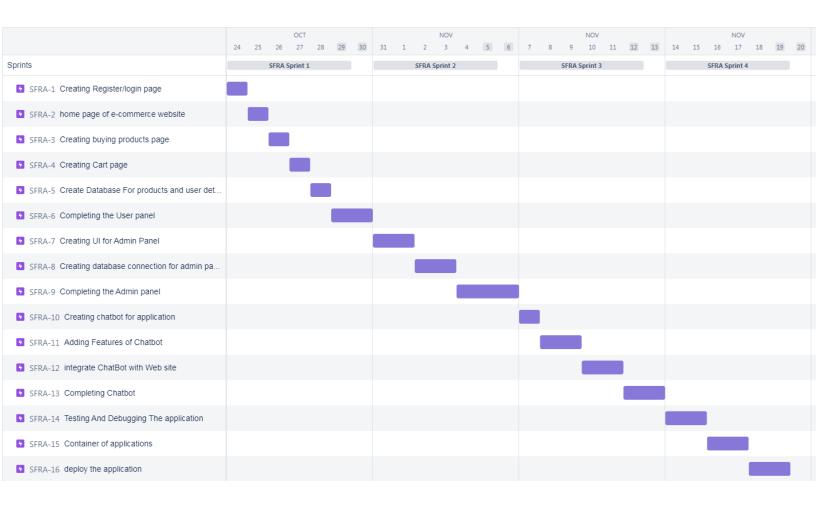
6.2 Sprint Delivery & Schedule

# Project Tracker, Velocity & Burndown Chart: (4 Marks)

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

### 6.3 Report Jira Files

## **Burndown Chart:**



```
7. Coding & Solution
  7.1 Login
  Customer is login using this module
  login.html
  <!DOCTYPE html>
  <html lang="en">
    <head>
       <meta content="text/html;charset=utf-8" http-equiv="Content-Type">
       <meta content="utf-8" http-equiv="encoding">
       <meta charset="utf-8">
       <meta name="viewport" content="width=device-width, initial-scale=1,</pre>
shrink-to-fit=no">
      <meta name="theme-color" content="#000000">
```

```
<link rel="shortcut icon" href="%PUBLIC_URL%/favicon.ico">
       <link rel="stylesheet"</pre>
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
integrity="sha384-
Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJlSAwiGgFAW/dAiS6JXm"
         crossorigin="anonymous">
       <link href="{{ url_for('static',filename='css/custom.css') }}" rel="stylesheet"</pre>
type="text/css" />
       <script defer
src="https://use.fontawesome.com/releases/v5.0.6/js/all.js"></script>
       <script src="https://code.jquery.com/jquery-1.11.0.min.js"></script>
       <title>Legendry Fashion - Log In</title>
     </head>
```

```
<body>
    <header>
      <nav class="navbar fixed-top navbar-dark bg-dark navbar-expand-sm box-
shadow">
        <a href="/" class="navbar-brand d-flex align-items-center">
          <strong><i class="fa fa-cart-plus"></i>Online Clothing Store</strong>
        </a>
      </nav>
    </header><br />
    <main>
       <div class="container">
         <div class="row">
           <div class="col-sm">
```

```
<h2>Log In to Buy</h2>
            {{ msg }}
            <div>
              <form action="/logged/" class="form" method="post">
                <div>
                   <input type="text" name="username" autofocus
placeholder="Username">
                   <input type="password" name="password"</pre>
placeholder="Password">
                   <button type="submit" class="btn btn-
primary">Login</button>
                </div>
              </form>
            </div>
```

```
</div>
      </div>
    </div>
  </main>
  </body>
</html>
7.2 Signup
Users is signup in the signup Module
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta content="text/html;charset=utf-8" http-equiv="Content-Type">
    <meta content="utf-8" http-equiv="encoding">
```

```
<meta charset="utf-8">
       <meta name="viewport" content="width=device-width, initial-scale=1,</pre>
shrink-to-fit=no">
       <meta name="theme-color" content="#000000">
       <link rel="shortcut icon" href="%PUBLIC URL%/favicon.ico">
       <link rel="stylesheet"</pre>
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
integrity="sha384-
Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJlSAwiGgFAW/dAiS6JXm"
         crossorigin="anonymous">
       <link href="{{ url for('static',filename='css/custom.css') }}" rel="stylesheet"</pre>
type="text/css" />
       <script defer
src="https://use.fontawesome.com/releases/v5.0.6/js/all.js"></script>
```

```
<script src="https://code.jquery.com/jquery-1.11.0.min.js"></script>
       <title>Trendy Clothing Store - Register</title>
    </head>
    <body>
       <header>
         <nav class="navbar fixed-top navbar-dark bg-dark navbar-expand-sm"
box-shadow">
          <a href="/" class="navbar-brand d-flex align-items-center">
            <strong><i class="fa fa-shopping-bag"></i> Sample Clothing
Store</strong>
         </nav>
```

```
</header><br />
      <main>
        <div class="container">
          <div class="row">
             <div class="col-sm">
               <h2>Register</h2>
               {{msg}}
               <form action="/register/" class="form" method="post">
                 <input type="text" name="username" id="username"
placeholder="Username" autofocus required > <span id="user-msg" class="alert
alert-danger"></span><br /><br />
                 <input type="password" name="password" id="password"</pre>
placeholder="Password" required > <span id="password-msg" class="alert alert-
danger"></span><br /><br />
```

<input type="password" name="confirm" id="confirm"
placeholder="Confirm Password" required> <span id="confirm-msg" class="alert
alert-danger"></span><br />

<input type="text" name="fname" id="fname"
placeholder="First Name" required> <span id="fname-msg" class="alert alert-danger"></span><br /><br />

<input type="text" name="Iname" id="Iname"
placeholder="Last Name" required> <span id="Iname-msg" class="alert alert-danger"></span><br /><br />

<input type="email" name="email" id="email"
placeholder="Email" required> <span id="email-msg" class="alert alert-danger"></span><br /><br />

```
<button type="submit" id="submit" class="btn btn-
primary">Register</button>
               </form>
             </div>
           </div>
         </div>
       </main>
    <!-- Custom JS Scripts -->
       <script src="{{ url_for('static',filename='js/validate.js') }}"></script>
    </body>
  </html>
  7.3 Mainpage
```

Customer order the product on the mainpage

```
index.html
  {% extends "base.html" %}
  {% block title %}
  Legendry Fashion- Home
  {% endblock %}
  {% block body %}
  <!-- Main Store Body -->
    {% if session['user'] %}
       <div class="alert alert-warning alert-dismissible fade show" role="alert">
        <button type="button" class="close" data-dismiss="alert" aria-
label="Close">
```

```
<span aria-hidden="true">&times;</span>
        </button>
         <strong>Welcome, {{ session['user'] }}</strong> Hope you have a
pleasant experience shopping with us.
      </div>
    {% endif %}
     <div class="row" id="shirtCard">
     {% for i in range(shirtsLen) %}
        <div class="col-sm">
          <div class="card text-center">
            <div class="card-body">
             <form action="/buy/" methods="POST">
```

```
<h5 class="card-title">{{shirts[i]["typeClothes"].capitalize()}}</h5>
               <img src="/static/img/{{shirts[i]["image"]}}" class="shirt" alt="" />
               <h5 class="card-text">{{shirts[i]["samplename"]}}</h5>
               {% if shirts[i]["onSale"] %}
                <img src="/static/img/sale-icon.png" width="26px" />
                <h4 class="card-text price" style="color:red; display:inline">{{
'{:,.2f}'.format(shirts[i]["onSalePrice"]) }}</h4>
               {% else %}
                <h4 class="card-text price">{{ '{:,.2f}'.format(shirts[i]["price"])
}}</h4>
               {% endif %}
               <div class="stepper-input">
                 <span class="decrement target">-</span>
```

```
<input class="quantity" name="quantity" value='0' />
                <span class="increment target">+</span>
              </div>
              <input type="hidden" name="id" value="{{shirts[i]["id"]}}" />
              {% if not session %}
              <input type="hidden" name="loggedin" value="0" />
              {% else %}
              <input type="hidden" name="loggedin" value="1" />
              {% endif %}
              <input type="submit" class="btn btn-primary addToCart"</pre>
value="Add To Cart" /><br />
```

<div class="alert alert-danger flashMessage" style="text-align:</pre>

center; display:none; font-size:0.9em;"></div>

</form>

</div>

</div>

</div>

{% endfor %}

</div>

</div>

</main>

{% endblock %}

7.4 IBM DB2

Customer data is stored in the IBM Cloud

```
{
"network":
{
"host":host,
"port":website port
}
"db"
{
"method":"direct",
"username":username,
"password":password
}
}
```

### 8.Testing

### 8.1 Test Cases

A test case has components that describe input, action, and an expected response, in order to determine if a feature of an application works correctly.

### 8.2 User Acceptance Testing

User Acceptance Testing (UAT), also known as beta or end-user testing, is defined as testing the software by the user or client to determine whether it can be accepted or not. This is the final testing performed once the functional, system and regression testing are completed.

9.Results

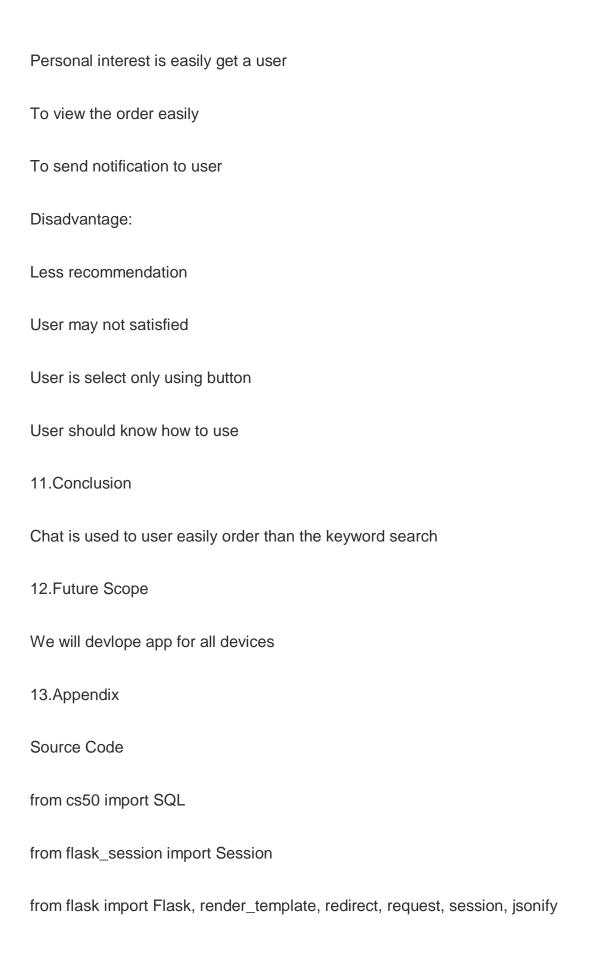
#### 9.1 Performance & Metrics

Performance Metrics track and measure how well employees are performing in their jobs. HRs, Managers, and leaders use tools and their own methods to measure productivity and efficiency against set parameters. These parameters can vary from employee to employee and also from one department to another. Employee performance metrics benefit both the organization and the employee by aligning them towards a single direction and company goals.

10. Advantage & Disadvantage

Advantage:

East to user order



```
from datetime import datetime
## Instantiate Flask object named app
app = Flask(__name___)
## Configure sessions
app.config["SESSION_PERMANENT"] = False
app.config["SESSION_TYPE"] = "filesystem"
Session(app)
# Creates a connection to the database
db = SQL ( "sqlite:///data.db" )
@app.route("/")
def index():
```

shirts = db.execute("SELECT \* FROM shirts ORDER BY onSalePrice")

```
shirtsLen = len(shirts)
  # Initialize variables
  shoppingCart = []
  shopLen = len(shoppingCart)
  totltems, total, display = 0, 0, 0
  if 'user' in session:
    shoppingCart = db.execute("SELECT samplename, image, SUM(qty), SUM(subTotal), price,
id FROM cart GROUP BY samplename")
     shopLen = len(shoppingCart)
    for i in range(shopLen):
       total += shoppingCart[i]["SUM(subTotal)"]
       totItems += shoppingCart[i]["SUM(qty)"]
    shirts = db.execute("SELECT * FROM shirts ORDER BY onSalePrice ASC")
     shirtsLen = len(shirts)
    return render_template ("index.html", shoppingCart=shoppingCart, shirts=shirts,
shopLen=shopLen, shirtsLen=shirtsLen, total=total, totltems=totltems, display=display,
session=session)
```

```
return render_template ( "index.html", shirts=shirts, shoppingCart=shoppingCart,
shirtsLen=shirtsLen, shopLen=shopLen, total=total, totltems=totltems, display=display)
@app.route("/buy/")
def buy():
  # Initialize shopping cart variables
  shoppingCart = []
  shopLen = len(shoppingCart)
  totltems, total, display = 0, 0, 0
  qty = int(request.args.get('quantity'))
  if session:
     # Store id of the selected shirt
     id = int(request.args.get('id'))
     # Select info of selected shirt from database
     goods = db.execute("SELECT * FROM shirts WHERE id = :id", id=id)
     # Extract values from selected shirt record
```

```
# Check if shirt is on sale to determine price
    if(goods[0]["onSale"] == 1):
       price = goods[0]["onSalePrice"]
    else:
       price = goods[0]["price"]
    samplename = goods[0]["samplename"]
    image = goods[0]["image"]
    subTotal = qty * price
    # Insert selected shirt into shopping cart
    db.execute("INSERT INTO cart (id, gty, samplename, image, price, subTotal) VALUES (:id,
:qty, :samplename, :image, :price, :subTotal)", id=id, qty=qty, samplename=samplename,
image=image, price=price, subTotal=subTotal)
    shoppingCart = db.execute("SELECT samplename, image, SUM(qty), SUM(subTotal), price,
id FROM cart GROUP BY samplename")
    shopLen = len(shoppingCart)
    # Rebuild shopping cart
    for i in range(shopLen):
```

```
total += shoppingCart[i]["SUM(subTotal)"]
       totItems += shoppingCart[i]["SUM(qty)"]
     # Select all shirts for home page view
    shirts = db.execute("SELECT * FROM shirts ORDER BY samplename ASC")
     shirtsLen = len(shirts)
     # Go back to home page
    return render_template ("index.html", shoppingCart=shoppingCart, shirts=shirts,
shopLen=shopLen, shirtsLen=shirtsLen, total=total, totltems=totltems, display=display,
session=session)
@app.route("/update/")
def update():
  # Initialize shopping cart variables
  shoppingCart = []
  shopLen = len(shoppingCart)
  totltems, total, display = 0, 0, 0
```

```
qty = int(request.args.get('quantity'))
if session:
  # Store id of the selected shirt
  id = int(request.args.get('id'))
  db.execute("DELETE FROM cart WHERE id = :id", id=id)
  # Select info of selected shirt from database
  goods = db.execute("SELECT * FROM shirts WHERE id = :id", id=id)
  # Extract values from selected shirt record
  # Check if shirt is on sale to determine price
  if(goods[0]["onSale"] == 1):
     price = goods[0]["onSalePrice"]
  else:
     price = goods[0]["price"]
  samplename = goods[0]["samplename"]
  image = goods[0]["image"]
  subTotal = qty * price
  # Insert selected shirt into shopping cart
```

```
db.execute("INSERT INTO cart (id, qty, samplename, image, price, subTotal) VALUES (:id,
:qty, :samplename, :image, :price, :subTotal)", id=id, qty=qty, samplename=samplename,
image=image, price=price, subTotal=subTotal)
    shoppingCart = db.execute("SELECT samplename, image, SUM(qty), SUM(subTotal), price,
id FROM cart GROUP BY samplename")
    shopLen = len(shoppingCart)
    # Rebuild shopping cart
    for i in range(shopLen):
       total += shoppingCart[i]["SUM(subTotal)"]
       totItems += shoppingCart[i]["SUM(qty)"]
    # Go back to cart page
    return render_template ("cart.html", shoppingCart=shoppingCart, shopLen=shopLen,
total=total, totltems=totltems, display=display, session=session)
@app.route("/filter/")
def filter():
  if request.args.get('typeClothes'):
```

```
query = request.args.get('typeClothes')
    shirts = db.execute("SELECT * FROM shirts WHERE typeClothes = :query ORDER BY
samplename ASC", query=query)
  if request.args.get('sale'):
    query = request.args.get('sale')
    shirts = db.execute("SELECT * FROM shirts WHERE on Sale = :query ORDER BY
samplename ASC", query=query)
  if request.args.get('id'):
    query = int(request.args.get('id'))
    shirts = db.execute("SELECT * FROM shirts WHERE id = :query ORDER BY samplename
ASC", query=query)
  if request.args.get('kind'):
    query = request.args.get('kind')
    shirts = db.execute("SELECT * FROM shirts WHERE kind = :query ORDER BY
samplename ASC", query=query)
  if request.args.get('price'):
    query = request.args.get('price')
    shirts = db.execute("SELECT * FROM shirts ORDER BY onSalePrice ASC")
```

```
shirtsLen = len(shirts)
  # Initialize shopping cart variables
  shoppingCart = []
  shopLen = len(shoppingCart)
  totltems, total, display = 0, 0, 0
  if 'user' in session:
    # Rebuild shopping cart
    shoppingCart = db.execute("SELECT samplename, image, SUM(qty), SUM(subTotal), price,
id FROM cart GROUP BY samplename")
     shopLen = len(shoppingCart)
     for i in range(shopLen):
       total += shoppingCart[i]["SUM(subTotal)"]
       totItems += shoppingCart[i]["SUM(qty)"]
     # Render filtered view
    return render_template ("index.html", shoppingCart=shoppingCart, shirts=shirts,
shopLen=shopLen, shirtsLen=shirtsLen, total=total, totltems=totltems, display=display,
session=session)
```

```
# Render filtered view
  return render_template ( "index.html", shirts=shirts, shoppingCart=shoppingCart,
shirtsLen=shirtsLen, shopLen=shopLen, total=total, totltems=totltems, display=display)
@app.route("/checkout/")
def checkout():
  order = db.execute("SELECT * from cart")
  # Update purchase history of current customer
  for item in order:
    db.execute("INSERT INTO purchases (uid, id, samplename, image, quantity) VALUES(:uid,
:id, :samplename, :image, :quantity)", uid=session["uid"], id=item["id"],
samplename=item["samplename"], image=item["image"], quantity=item["qty"])
  # Clear shopping cart
  db.execute("DELETE from cart")
  shoppingCart = []
  shopLen = len(shoppingCart)
```

```
totltems, total, display = 0, 0, 0
  # Redirect to home page
  return redirect('/')
@app.route("/remove/", methods=["GET"])
def remove():
  # Get the id of shirt selected to be removed
  out = int(request.args.get("id"))
  # Remove shirt from shopping cart
  db.execute("DELETE from cart WHERE id=:id", id=out)
  # Initialize shopping cart variables
  totltems, total, display = 0, 0, 0
  # Rebuild shopping cart
  shoppingCart = db.execute("SELECT samplename, image, SUM(qty), SUM(subTotal), price, id
FROM cart GROUP BY samplename")
  shopLen = len(shoppingCart)
```

```
for i in range(shopLen):
     total += shoppingCart[i]["SUM(subTotal)"]
     totItems += shoppingCart[i]["SUM(qty)"]
  # Turn on "remove success" flag
  display = 1
  # Render shopping cart
  return render_template ("cart.html", shoppingCart=shoppingCart, shopLen=shopLen,
total=total, totltems=totltems, display=display, session=session)
@app.route("/login/", methods=["GET"])
def login():
  return render_template("login.html")
@app.route("/new/", methods=["GET"])
def new():
```

```
# Render log in page
  return render_template("new.html")
@app.route("/logged/", methods=["POST"])
def logged():
  # Get log in info from log in form
  user = request.form["username"].lower()
  pwd = request.form["password"]
  #pwd = str(sha1(request.form["password"].encode('utf-8')).hexdigest())
  # Make sure form input is not blank and re-render log in page if blank
  if user == "" or pwd == "":
    return render_template ( "login.html" )
  # Find out if info in form matches a record in user database
  query = "SELECT * FROM users WHERE username = :user AND password = :pwd"
  rows = db.execute ( query, user=user, pwd=pwd )
```

```
# If username and password match a record in database, set session variables
  if len(rows) == 1:
     session['user'] = user
     session['time'] = datetime.now( )
     session['uid'] = rows[0]["id"]
  # Redirect to Home Page
  if 'user' in session:
     return redirect ( "/" )
  # If username is not in the database return the log in page
  return render_template ( "login.html", msg="Wrong username or password." )
@app.route("/history/")
def history():
  # Initialize shopping cart variables
  shoppingCart = []
  shopLen = len(shoppingCart)
```

```
totltems, total, display = 0, 0, 0
  # Retrieve all shirts ever bought by current user
  myShirts = db.execute("SELECT * FROM purchases WHERE uid=:uid", uid=session["uid"])
  myShirtsLen = len(myShirts)
  # Render table with shopping history of current user
  return render_template("history.html", shoppingCart=shoppingCart, shopLen=shopLen,
total=total, totltems=totltems, display=display, session=session, myShirts=myShirts,
myShirtsLen=myShirtsLen)
@app.route("/logout/")
def logout():
  # clear shopping cart
  db.execute("DELETE from cart")
  # Forget any user_id
  session.clear()
  # Redirect user to login form
```

```
return redirect("/")
@app.route("/register/", methods=["POST"])
def registration():
  # Get info from form
  username = request.form["username"]
  password = request.form["password"]
  confirm = request.form["confirm"]
  fname = request.form["fname"]
  lname = request.form["Iname"]
  email = request.form["email"]
  # See if username already in the database
  rows = db.execute( "SELECT * FROM users WHERE username = :username ", username =
username)
  # If username already exists, alert user
  if len(rows) > 0:
```

```
return render_template ( "new.html", msg="Username already exists!" )
  # If new user, upload his/her info into the users database
  new = db.execute ("INSERT INTO users (username, password, fname, Iname, email) VALUES
(:username, :password, :fname, :lname, :email)",
            username=username, password=password, fname=fname, lname=lname,
email=email)
  # Render login template
  return render_template ( "login.html" )
@app.route("/cart/")
def cart():
  if 'user' in session:
    # Clear shopping cart variables
     totltems, total, display = 0, 0, 0
     # Grab info currently in database
```

```
shoppingCart = db.execute("SELECT samplename, image, SUM(qty), SUM(subTotal), price,
id FROM cart GROUP BY samplename")
     # Get variable values
    shopLen = len(shoppingCart)
    for i in range(shopLen):
       total += shoppingCart[i]["SUM(subTotal)"]
       totItems += shoppingCart[i]["SUM(qty)"]
  # Render shopping cart
  return render_template("cart.html", shoppingCart=shoppingCart, shopLen=shopLen, total=total,
totltems=totltems, display=display, session=session)
templates/login.html
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta content="text/html;charset=utf-8" http-equiv="Content-Type">
    <meta content="utf-8" http-equiv="encoding">
     <meta charset="utf-8">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
    <meta name="theme-color" content="#000000">
    k rel="shortcut icon" href="%PUBLIC_URL%/favicon.ico">
    k rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css" integrity="sha384-
Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJISAwiGgFAW/dAiS6JXm"
       crossorigin="anonymous">
    <link href="{{ url_for('static',filename='css/custom.css') }}" rel="stylesheet" type="text/css" />
    <script defer src="https://use.fontawesome.com/releases/v5.0.6/js/all.js"></script>
    <script src="https://code.jquery.com/jquery-1.11.0.min.js"></script>
    <title>Legendry Fashion - Log In</title>
  </head>
  <body>
  <header>
    <nav class="navbar fixed-top navbar-dark bg-dark navbar-expand-sm box-shadow">
     <a href="/" class="navbar-brand d-flex align-items-center">
```

```
<strong><i class="fa fa-cart-plus"></i>Online Clothing Store</strong>
   </a>
  </nav>
</header><br />
<main>
  <div class="container">
    <div class="row">
       <div class="col-sm">
         <h2>Log In to Buy</h2>
         {{ msg }}
         <div>
           <form action="/logged/" class="form" method="post">
              <div>
                <input type="text" name="username" autofocus placeholder="Username">
                <input type="password" name="password" placeholder="Password">
                <button type="submit" class="btn btn-primary">Login</button>
              </div>
```

```
</form>
            </div>
         </div>
       </div>
     </div>
  </main>
  </body>
</html>
new.html
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta content="text/html;charset=utf-8" http-equiv="Content-Type">
    <meta content="utf-8" http-equiv="encoding">
     <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
     <meta name="theme-color" content="#000000">
```

```
k rel="shortcut icon" href="%PUBLIC_URL%/favicon.ico">
    k rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css" integrity="sha384-
Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJISAwiGgFAW/dAiS6JXm"
       crossorigin="anonymous">
    <link href="{{ url_for('static',filename='css/custom.css') }}" rel="stylesheet" type="text/css" />
    <script defer src="https://use.fontawesome.com/releases/v5.0.6/js/all.js"></script>
     <script src="https://code.jquery.com/jquery-1.11.0.min.js"></script>
    <title>Trendy Clothing Store - Register</title>
  </head>
  <body>
     <header>
       <nav class="navbar fixed-top navbar-dark bg-dark navbar-expand-sm box-shadow">
        <a href="/" class="navbar-brand d-flex align-items-center">
           <strong><i class="fa fa-shopping-bag"></i> Sample Clothing Store</strong>
        </a>
```

```
</nav>
    </header><br />
    <main>
       <div class="container">
         <div class="row">
            <div class="col-sm">
              <h2>Register</h2>
               {\{msg\}} 
              <form action="/register/" class="form" method="post">
                <input type="text" name="username" id="username" placeholder="Username"
autofocus required > <span id="user-msg" class="alert alert-danger"></span><br /><br />
                <input type="password" name="password" id="password"
placeholder="Password" required > <span id="password-msg" class="alert alert-
danger"></span><br /><br />
                <input type="password" name="confirm" id="confirm" placeholder="Confirm"
Password" required> <span id="confirm-msg" class="alert alert-danger"></span><br /><br />
                <input type="text" name="fname" id="fname" placeholder="First Name"
required> <span id="fname-msg" class="alert alert-danger"></span><br /><br />
```

```
<input type="text" name="Iname" id="Iname" placeholder="Last Name"
required> <span id="Iname-msg" class="alert alert-danger"></span><br /><br />
                 <input type="email" name="email" id="email" placeholder="Email" required>
<span id="email-msg" class="alert alert-danger"></span><br /><br /><br />
                 <button type="reset" class="btn btn-secondary">Clear</button>
                 <button type="submit" id="submit" class="btn btn-primary">Register</button>
               </form>
            </div>
          </div>
       </div>
     </main>
  <!-- Custom JS Scripts -->
     <script src="{{ url_for('static',filename='js/validate.js') }}"></script>
  </body>
</html>
index.html
{% extends "base.html" %}
```

```
{% block title %}
Legendry Fashion- Home
{% endblock %}
{% block body %}
<!-- Main Store Body -->
  {% if session['user'] %}
    <div class="alert alert-warning alert-dismissible fade show" role="alert">
      <button type="button" class="close" data-dismiss="alert" aria-label="Close">
       <span aria-hidden="true">&times;</span>
      </button>
       <strong>Welcome, {{ session['user'] }}</strong> Hope you have a pleasant experience
shopping with us.
     </div>
  {% endif %}
```

```
<div class="row" id="shirtCard">
   {% for i in range(shirtsLen) %}
      <div class="col-sm">
         <div class="card text-center">
           <div class="card-body">
             <form action="/buy/" methods="POST">
               <h5 class="card-title">{{shirts[i]["typeClothes"].capitalize()}}</h5>
              <img src="/static/img/{{shirts[i]["image"]}}" class="shirt" alt="" />
              <h5 class="card-text">{{shirts[i]["samplename"]}}</h5>
              {% if shirts[i]["onSale"] %}
               <img src="/static/img/sale-icon.png" width="26px" />
               <h4 class="card-text price" style="color:red; display:inline">{{
'{:,.2f}'.format(shirts[i]["onSalePrice"]) }}</h4>
              {% else %}
               <h4 class="card-text price">{{ '{:,.2f}'.format(shirts[i]["price"]) }}</h4>
              {% endif %}
              <div class="stepper-input">
```

```
<input class="quantity" name="quantity" value='0' />
                <span class="increment target">+</span>
              </div>
              <input type="hidden" name="id" value="{{shirts[i]["id"]}}" />
              {% if not session %}
              <input type="hidden" name="loggedin" value="0" />
              {% else %}
              <input type="hidden" name="loggedin" value="1" />
              {% endif %}
              <input type="submit" class="btn btn-primary addToCart" value="Add To Cart" /><br/><br/>
/><br />
              <div class="alert alert-danger flashMessage" style="text-align: center; display:none;</pre>
font-size:0.9em;"></div>
             </form>
           </div>
```

<span class="decrement target">-</span>

```
</div>
      </div>
   {% endfor %}
   </div>
  </div>
 </main>
{% endblock %}
history.html
{% extends "base.html" %}
{% block title %}
Trendy Clothing Store - Home
{% endblock %}
{% block body %}
<!-- Main Store Body -->
```

```
<div class="row">
<div class="col-sm">
 <h2>Your Shopping History</h2>
 ltems you've bought in the past.
 <thead>
  #
  Item
  Name
  Quantity
  Date
  </thead>
 <!-- For Each shirt -->
```

```
{% for i in range(myShirtsLen) %}
       <th scope="row">{{ i + 1 }}
        <img src="/static/img/{{ myShirts[i]["image"] }}" width="30px" alt="{{
myShirts[i]["samplename"] }}" />
        {{ myShirts[i]["samplename"] }}
        {{ myShirts[i]["quantity"] }}
        {{ myShirts[i]["date"] }}
        <a href="/filter/?id={{ myShirts[i]["id"] }}"><button type="button" class="btn btn-
warning">Buy Again</button></a>
       {% endfor %}
      <tfoot>
      </tfoot>
     </div>
```

```
</div>
  </div>
 </main>
{% endblock %}
cart.html
{% extends "base.html" %}
{% block title %}
Trendy Clothing Store - Home
{% endblock %}
{% block body %}
<!-- Main Store Body -->
 <div aria-hidden="true">
  <div>
   <div>
```

```
<div>
<h5 class="modal-title" id="exampleModalLongTitle">Shopping Cart</h5>
<button type="button" class="close" data-dismiss="modal" aria-label="Close">
</button>
</div>
<div>
<div id="shoppingCart">
 <div class="container">
  <div class="row">
   <div class="col-sm">
    <thead>
      #
      Item
      samplename
      Quantity
```

```
Unit Price
           Sub-Total
           </thead>
         <!-- For Each shirt -->
         {% if shopLen != 0 %}
         {% for i in range(shopLen) %}
          <th scope="row">{{ i + 1 }}
           <img src="/static/img/{{ shoppingCart[i]["image"] }}" width="30px" alt="{{
shoppingCart[i]["samplename"] }}" />
           {{ shoppingCart[i]["samplename"] }}
           <form action="/update/">
             <input type="hidden" name="id" value="{{shoppingCart[i]["id"]}}" />
```

```
<input type="number" name="quantity" min="1" max="10" size="5" value="{{</pre>
shoppingCart[i]['SUM(qty)'] }}">
                <button type="submit" class="btn btn-warning checkout">Update</button>
               </form>
             {{ '${:,.2f}'.format(shoppingCart[i]["price"]) }}
             {{ '${:,.2f}'.format(shoppingCart[i]['SUM(subTotal)']) }}
             <form action="/remove/" methods="GET">
                <input type="hidden" name="id" value="{{ shoppingCart[i]["id"] }}" />
                <button type="submit" class="btn btn-secondary btn-sm"
id="removeFromCart">Remove</button>
               </form>
             {% endfor %}
           <tfoot>
```

```
Total: {{ '${:,.2f}'.format(total) }}<br /><br />
             <div class="modal-footer">
              <a href="/"><button type="button" class="btn btn-primary checkout">Continue
Shopping</button></a>
              <a href="/checkout/"><button type="button" class="btn btn-success"
checkout">Proceed to Checkout</button></a>
             </div>
            </tfoot>
          {% else %}
           <h3>Your cart is empty :\</h3>
           <tfoot>
```

```
Get some shirts now!<br />
             <div>
              <a href="/"><button type="button" class="btn btn-secondary" data-
dismiss="modal">Continue Shopping</button></a>
             </div>
            </tfoot>
          {% endif %}
         </div>
       </div>
      </div>
     </div>
    </div>
   </div>
```

```
</div>
 </div>
  </div>
 </main>
{% endblock %}
base.html
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta content="text/html;charset=utf-8" http-equiv="Content-Type">
    <meta content="utf-8" http-equiv="encoding">
     <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
     <meta name="theme-color" content="#000000">
    k rel="shortcut icon" href="%PUBLIC_URL%/favicon.ico">
```

```
k rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css" integrity="sha384-
Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJISAwiGgFAW/dAiS6JXm"
       crossorigin="anonymous">
    k href="{{ url_for('static',filename='css/custom.css') }}" rel="stylesheet" type="text/css" />
     <script defer src="https://use.fontawesome.com/releases/v5.0.6/js/all.js"></script>
    <script src="https://code.jquery.com/jquery-1.11.0.min.js"></script>
    <title>{% block title %}{% endblock %}</title>
  </head>
  <body>
 <!-- Modal -->
 <div class="modal fade" id="modalCenter" tabindex="-1" role="dialog" aria-
labelledby="exampleModalCenterTitle" aria-hidden="true">
  <div class="modal-dialog modal-dialog-centered modal-lg" role="document">
   <div class="modal-content">
    <div class="modal-header">
```

```
<h5 class="modal-title" id="exampleModalLongTitle">Dashboard Page</h5>
 <button type="button" class="close" data-dismiss="modal" aria-label="Close">
 <span aria-hidden="true">&times;</span>
 </button>
</div>
<div class="modal-body">
<div id="shoppingCart">
 <div class="container">
  <div class="row">
   <div class="col-sm">
    <thead>
      #
       Item
       Name
       Quantity
```

```
Unit Price
           Sub-Total
           </thead>
         <!-- For Each shirt -->
         {% if shopLen != 0 %}
         {% for i in range(shopLen) %}
          {{ i + 1 }}
           <img src="/static/img/{{ shoppingCart[i]["image"] }}" width="30px" alt="{{
shoppingCart[i]["samplename"] }}" />
           {{ shoppingCart[i]["samplename"] }}
           {{ shoppingCart[i]['SUM(qty)'] }}
           {{ '${:,.2f}'.format(shoppingCart[i]["price"]) }}
           {{ '${:,.2f}'.format(shoppingCart[i]['SUM(subTotal)']) }}<!--
```

```
<form action="/remove/" methods="GET">
               <input type="hidden" name="id" value="{{ shoppingCart[i]["id"] }}" />
               <button type="submit" class="btn btn-secondary btn-sm"
id="removeFromCart">Remove</button>
              </form>
             -->
            {% endfor %}
           <tfoot>
            Total: {{ '${:,.2f}'.format(total) }}<br /><br />
              <div class="modal-footer">
               <a href="/cart/"><button type="button" class="btn btn-primary checkout">Make
Changes</button></a>
```

```
<buttoon type="button" class="btn btn-primary checkout" data-
dismiss="modal">Continue Shopping</button>
              <a href="/checkout/"><button type="button" class="btn btn-success"
checkout">Quick Checkout</button></a>
             </div>
            </tfoot>
          {% else %}
           <h3>Your cart is empty :\</h3>
           <tfoot>
           Get some shirts now!<br />
             <div class="modal-footer">
```

<button type="button" class="btn btn-primary" data-dismiss="modal">Continue

Shopping		
{% endif %}		

<header>

```
<nav class="navbar fixed-top navbar-dark bg-dark navbar-expand-sm box-shadow">
<a href="/" class="navbar-brand d-flex align-items-center">
  <strong><i class="fa fa-cart-plus">Trendy Clothing Store</i></strong>
 </a>
{% if session %}
 ul class="navbar-nav mr-auto">
 <a href="/logout/" class="nav-link">Logout</a>
 <a href="/history/" class="nav-link">You Bought</a>
{% else %}
 ul class="navbar-nav mr-auto">
 <a href="/new/" class="nav-link">Register</a>
 <a href="/login/" class="nav-link">Login</a>
{% endif %}
 <a class="nav-link dropdown-toggle" href="#" id="navbardrop" data-toggle="dropdown">
   Filter By
```

```
</a>
      <div class="dropdown-menu">
        <a class="dropdown-item" href="/">All</a>
        <a class="dropdown-item" href="/filter/?typeClothes=shirt">Shirts</a>
        <a class="dropdown-item" href="/filter/?typeClothes=pant">Trousers</a>
        <a class="dropdown-item" href="/filter/?typeClothes=shoe">Shoes</a>
        <a class="dropdown-item" href="/filter/?kind=casual">Casual Clothing</a>
        <a class="dropdown-item" href="/filter/?kind=formal">Formal Clothing</a>
        <a class="dropdown-item" href="/filter/?sale=1">On Sale</a>
        <a class="dropdown-item" href="/filter/?price=1">Price $0-$000</a>
      </div>
     <div>
    <button class="navbar-toggler" style="display:inline" type="button" data-toggle="modal"</pre>
data-target="#modalCenter">
      <span class="glyphicon glyphicon-shopping-cart" data-toggle="modal" data-target="">
```

```
<i class="fas fa-shopping-cart"></i>
      <span class="counter">No. of Items: {{ totItems }}</span>
      <span class="counter">Total: ${{ '{:,.2f}'.format(total) }}</span>
     </span>
   </button>
  </div>
 </nav>
</header><br />
<main>
 <div class="container">
  {% if display == 1 %}
  <div class="alert alert-success flashMessage" style="text-align:center">
   <strong>Your item was successfully removed from shopping cart!</strong>
  </div>
  {% endif %}
{% block body %}{% endblock %}
 <footer>
```

```
<div class="container">
       <div class="row">
         <div class="col-md">
            <hr />
            © <a href="/">Trendy Clothing Store</a>
         </div>
       </div>
    </div>
  </footer>
    <!-- jQuery first, then Popper.js, then Bootstrap JS -->
    <script src="https://code.jquery.com/jquery-1.11.0.min.js"></script>
    <!-- <script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"
integrity="sha384-
ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q"
       crossorigin="anonymous"></script>-->
```