

CUSTOMER CARE REGISTRY
TEAM ID:PNT2022TMID34857

CUSTOMER CARE REGISTRY

**NALAIYA THIRAN PROJECT BASED LEARNING ON PROFESSIONAL
READLINESS FOR INNOVATION, EMPLOYNMENT AND
ENTERPRENEURSHIP**

A PROJECT REPORT

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**BACHELOR OF ENGINEERING IN COMPUTER SCIENCE AND
ENGINEERING**

**UNIVERSITY COLLEGE OF ENGINEERING
NAGERCOIL - 629004**

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1. INTRODUCTION

1.1 Project Overview

Category: Cloud App Development

Team ID: PNT2022TMID34857

Skills Required:

IBM Cloud,HTML,Javascript,IBM Cloud Object Storage,Python-Flask,Kubernetes,Docker,IBM DB2,IBM Container Registry

Project Description:

This Application has been developed to help the customer in processing their complaints. The customers can raise the ticket with a detailed description of the issue. An Agent will be assigned to the Customer to solve the problem. Whenever the agent is assigned to a customer they will be notified with an email alert. Customers can view the status of the ticket till the service is provided.

Admin : The main role and responsibility of the admin are to take care of the whole process. Starting from Admin login followed by the agent creation and assigning the customer's complaints. Finally, He will be able to track the work assigned to the agent and a notification will be sent to the customer.

User: They can register for an account. After the login, they can create the complaint with a description of the problem they are facing. Each user will be assigned with an agent. They can view the status of their complaint.

1.2 Purpose

There are two sides to customer service objectives. First, there are the goals and KPIs customer service teams attempt to achieve. Then, there's customer service resume objectives. It's important to understand the connection between the two: Writing a strong customer service resume objective starts with understanding the objectives of the field and its depth and possibilities. To provide insight into both levels of customer service objectives. The prime objective of customer service is to answer customer questions quickly and effectively, resolve issues with empathy and care, document pain points to share with internal teams, nurture relationships, and improve brand credibility. Great customer service can make people loyal to your brand, products, and

services for years to come.

4 A strong customer service resume objective underscores your skills and experiences in contributing to customer service's overall goals and objectives. Meeting key customer service KPIs doesn't just involve answering phones and emails. It's a whole world of solutions development, intuition, empathy, brand management, time management-and the soft skills that help connect people and create trust. I guide my team toward giving the best service possible. Sometimes, we're not delivering good news. But the objective is to do that with compassion and empathy and in a way that we give the customer constructive next steps to move forward. We also know that as a newer, younger brand, customers may be wary of our credibility. It usually takes a few consistently excellent customer experiences to feel connected and loyal to the brand. That awesome experience starts from the very first touchpoint, whether it be web, email, brick and mortar, or Instagram, and carries through to when they're wearing our product

2. LITERATURE SURVEY

2.1 Existing problem

Service Quality Management

Service quality becomes the crucial issue for the education industry and the theory of service quality has evolved over long period of time through testing and trials in service sector. The demanding customers and increased sense of customer satisfaction led to the use of the new service parameters making education institutions to implement quality management as an effective aid. During the last few decades there is phenomenal change experienced in the education industry and the reason being is Service Quality. Knowing that both service quality and value is difficult to measure, education institutions heavily rely on student's quality perception and expectations. It could be achieved by asking students questions related to expectations and their perceptions of the service quality through carefully designed surveys. Various studies have been carried out to consolidate the dimensions of service quality and servqual has been accepted as well constructed instrument to measure service quality. The empirical research in development of service quality theory suggests that improved service quality plays important role in overall customer satisfaction. Study would focus on various studies on Service Quality conducted by earlier researchers in an array of industries. Thus, present study is unique in the sense that it is new to Education industry. The paper explores the development of service quality theory and alternate scales of measuring service quality, its role in customer satisfaction and importance of servqual instrument.

The Role of Customer care in bringing Customer Satisfaction in Private Universities. A case of University of Arusha, Tanzania

This study sought to investigate customer care in bringing customers satisfaction at the University of Arusha. Its specific objectives included; to determine whether the University of Arusha is practicing customer care and customer satisfaction, to identify challenges of customer care and customer satisfaction at the University of Arusha and to identify mechanism to improve customer care and customer satisfaction at the University of Arusha. The study employed qualitative approach in collecting and analyzing data at the University of Arusha. Open ended questionnaires were used to collect data from 79 respondents. Findings revealed that respondents had a view that the University of Arusha is practicing customer care and customer satisfaction. Although, the study revealed that, employees in the office have less knowledge on customer care and skills that hindered effective provision of good customer care to customers and lack of commitment to offer a quality customer care service was also found to be a problem. Findings also indicated that there were mechanisms to remove the challenges such as training of customer care skills among the staff. The study concluded that,

the customer satisfaction between main and town campus differed. It was also concluded that, inadequacy of facilities such as computer lab equipment were among the source of dissatisfaction. It was recommended that, training the staff on the customer care skills is essential in improving the customer care, the University should balance the services between the main campus and Arusha extension center which seems to be ignored.

A Study on Customer Satisfaction Towards Online Shopping

In the era of globalization electronic marketing is a great revolution. Over the last decade maximum business organizations are running with technological change. Online shopping or marketing is the use of technology (i.e., computer) for better marketing performance. And retailers are devising strategies to meet the demand of online shoppers; they are busy in studying consumer behavior in the field of online shopping, to see the consumer attitudes towards online shopping. Therefore we have also decided to study consumer's attitudes towards online shopping and specifically studying the factors influencing consumers to shop online.

Online Food Ordering System

Food Industry has always been a profitable industry not only for manufacturers, suppliers, but also for the users, distributors. The online food delivery system is the need of hour because of the recent changes in the industry and the increasing use of the internet. A Real-time online food ordering system for the customer is our proposed system. The traditional queueing system drawbacks and disadvantages are overcome by our system application. Food can be ordered online in a hassle-free manner through our proposed system from restaurants as well as mess services. Users can rate the food items over the feedback system provided by the system. Also, restaurants and mess services are recommended to the new customers based on the user ratings through the proposed system and for the improvements with the quality, the restaurant/mess staff will be informed.

Measuring Customer Satisfaction

Customer satisfaction (CS) has attracted serious research attention in the recent past. This paper reviews the research on how to measure the level of CS, and classify research articles according to their approaches and methodologies. This paper also tries to supply some insights about the state of measuring CS in Vietnam. The main objective is to provide a conceptual basic to understand existing methodologies used for measuring CS. A total of 103 articles from more than 50 journals and international conferences are reviewed. A number of important methodologies used for measuring CS are defined and classified into two different approaches based on their nature. Another important contribution of this study is to suggest some criteria which should be considered to make CS measurement as a leading indicator of

the financial performance. This paper can be helpful for managers to gain basic conceptual ideas of the methodologies used for measuring CS and also the criteria which make CS measurements more likely as a driver of financial performance when they are satisfied.

2.2 References

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Vu Minh Ngo

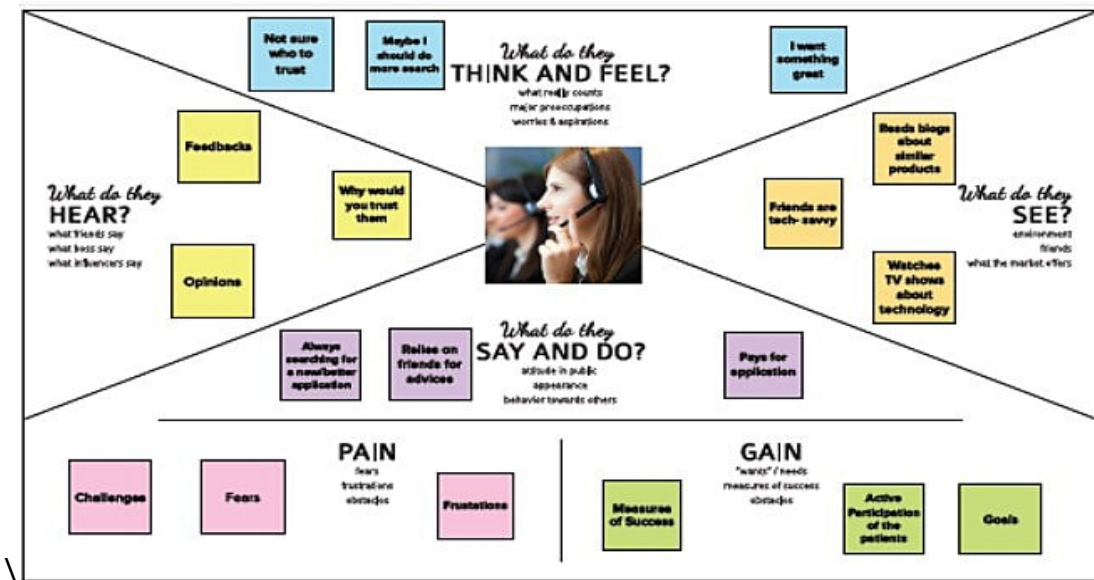
2.3 Problem Statement Definition

PROBLEM STATEMENT

To develop a application for solving customer problems that customers faces daily life. It helps you figure out how your product or service will solve this problem for them. The statement helps you understand the experience you want to offer your customers. It can also help you understand a new audience when creating a new product or service. A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face. Throughout the process, you'll also be able to empathize with your customers, which helps you better understand how they perceive your product or service. It's important to validate your customer's problems by running user research. This template is a way of crafting your problem statement, not analyzing your customer profile or needs.

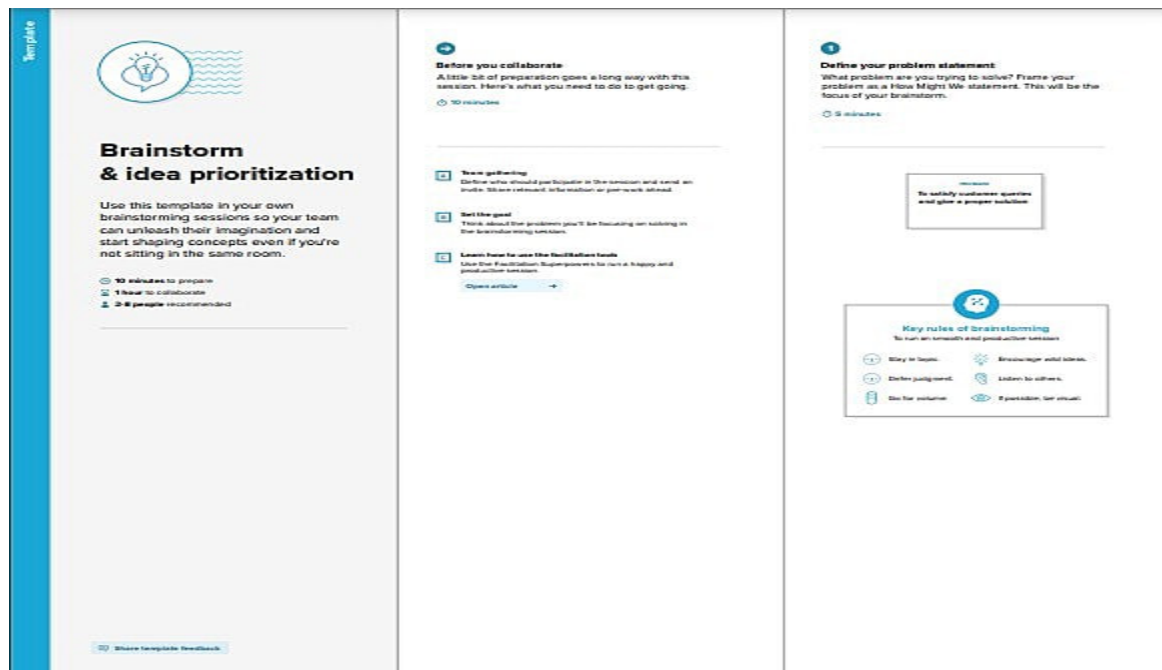
3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas



3.2 Ideation & Brainstorming

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



Step-2 : Brainstorm,Idea Listing and Grouping

Brainstorm

Write down any ideas that come to mind that address your problem statement.

10 minutes

Marshall M.

Example Y

Personality B

John Thomas

Person B

Person B

Person Y

Person B

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. In the last 10 minutes, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

20 minutes

Refund the payment

Feedback

Responding to customer

Respond during customer

Updating customer case

Step-3: Idea Prioritization

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes

After you collaborate

You can export the mural as an image or pdf to share with members of your company who might find it helpful.

Quick add-ons

- Share the mural: Share a link to the mural with collaborators to keep them in the loop about the outcomes of the session.
- Export the mural: Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or share to your drive.

Keep moving forward

- Strategy Blueprint: Outline the components of a new idea or strategy.
- Customer experience journey map: Understand customer needs, emotions, and behaviors for an experience.
- Strengths, weaknesses, opportunities & threats: Identify strengths, weaknesses, opportunities, and threats (SWOT) for a business or plan.

Share template feedback

3.3 Proposed Solution

Proposed Solution Template:

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

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The recruitment of customer care is solving customer problems that customers face in daily life. It helps you figure out how your product or service will solve this problem for them. The statement helps you understand the experience you want to offer your customers. It can also help you understand a new audience when creating a new product or service. A well-articulated customer problem statement allows you and your team to find the ideal solution for the challenges your customers face.
2.	Idea / Solution description	The proposed solution implements a cloud based web application as a problem. The details of the customer information will be embedded with the cloud storage. The administrator will fastly react to the queries and rectify them. The refund will be converted into the next fee of the customer. Thus the application satisfies customer queries and gives a proper solution.
3.	Novelty / Uniqueness	The refund will be converted into the next travelling fee of the customer.
4.	Social Impact / Customer Satisfaction	Customer Care Registry can provide fast, convenient customer support and immediately react to the customer queries.
5.	Business Model (Revenue Model)	This application can be linked with industrial organizations and could be used in their support format.
6.	Scalability of the Solution	As this is an web application and uses cloud storage ,any further enhancements in technology can be incorporated within this application.

3.4 Problem Solution fit

Project Title: CUSTOMER CARE REGISTRY

Project Design Phase-I - Solution Fit Template

Team ID: PNT2022TMD34857

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS Web users, mainly persons who makecompliant through online.	6. CUSTOMER CONSTRAINTS CC Client information gets stored and gets received when required.	5. AVAILABLE SOLUTIONS AS The users can login to the platform and just give the information required and they can explain their issues. Employee will assign tosolve their issues.	Explore AS, differentiate Focus on J&P, tap into BE, understand RC
	2. JOBS-TO-BE-DONE / PROBLEMS J&P Customer service representatives work directly with clients or customers to provide assistance, resolve complaints, answers questions. If you enjoy helping people, a customer service jobs to be done.	9. PROBLEM ROOT CAUSE RC 1. Probably the server is overloaded or unreachable because of a network problem. 2. Cancellation tickets can be done either through the user login in the website or mobile application. 3. Dealing with angry customers.	7. BEHAVIOUR BE Effective customer service starts by listening to what customers have to say about their needs, wants or concerns. If you can provide complete and honest answers to their questions, you begin to gain their trust.	

Identify triggers & emotions	3. TRIGGERS TR Not knowing the criteria for solving the queries. User can know about the platform through browsing or via friends	10. YOUR SOLUTION SL Our solution to solving the queries. To solve the queries agent is assign to the user. User explains theirqueries so the agent will solve the problem.	8.CHANNELS of BEHAVIOUR CH Online: login to the website and explaintheir issues of the product.
	4. EMOTIONS: BEFORE / AFTER EM Before: Getting fault product from the online Website. After: Queries clear for the fault product.		

4. REQUIREMENT ANALYSIS

4.1 Functional requirement

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 Registration through Gmail
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Unique Password	Every User have individual password to access the application
FR-4	User Request	For asking the queries about the service/products
FR-5	Agent Response	Replying the customer queries and Solving them

4.2 Non-Functional requirements

Non-functional Requirements:

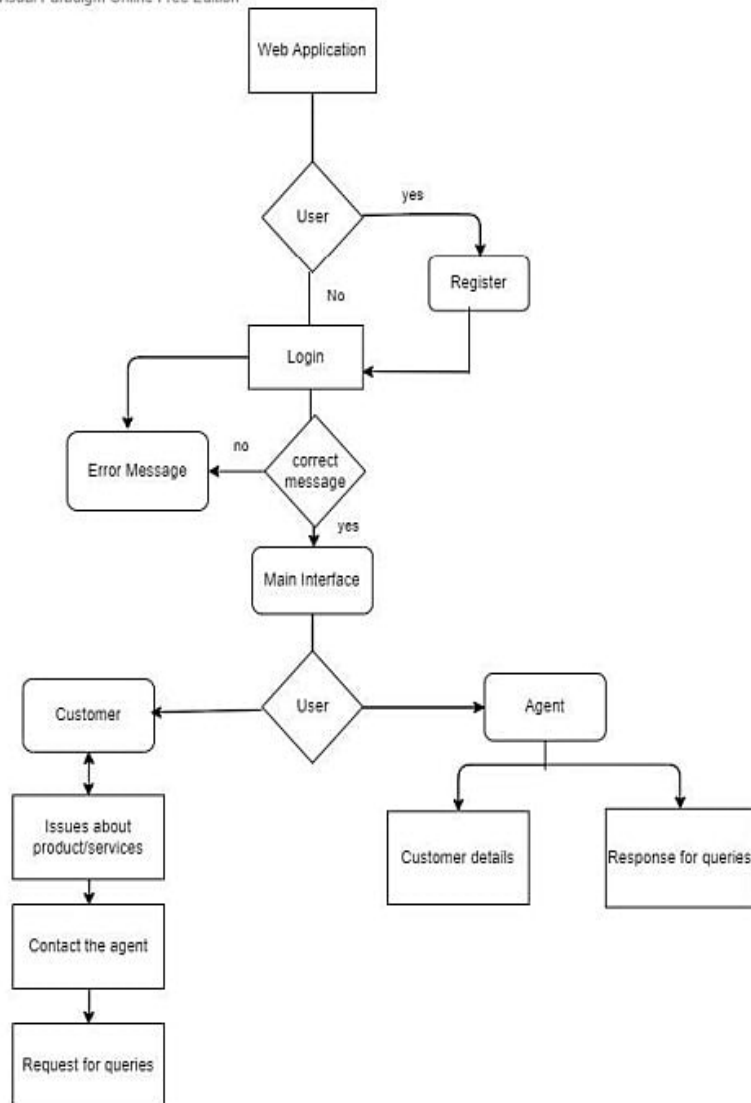
Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Easily used by everyone , not complicated
NFR-2	Security	High end security to users data
NFR-3	Reliability	Increased reliability and measure portability
NFR-4	Performance	Developed for better performance
NFR-5	Availability	Available to anyone registered in the application, database for storage of data
NFR-6	Scalability	Improved scalability

5. PROJECT DESIGN

5.1 Data Flow Diagrams

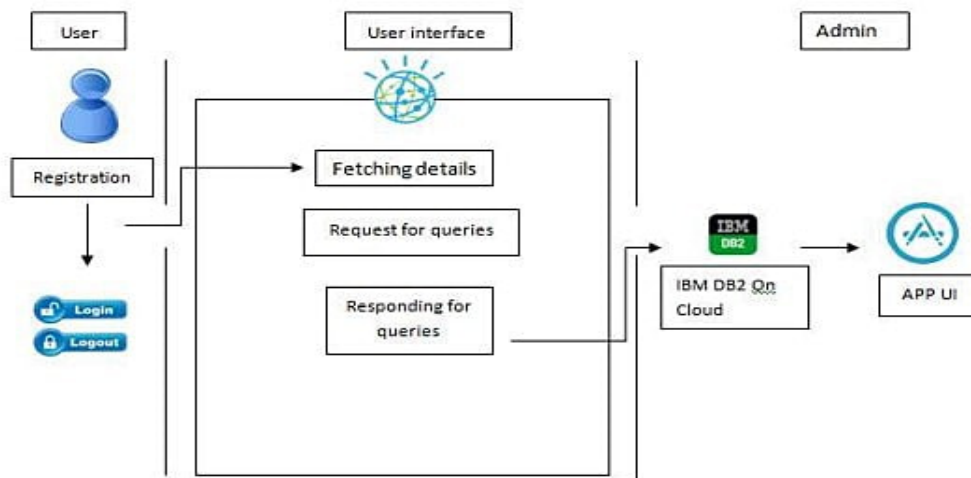
Visual Paradigm Online Free Edition



Visual Paradigm Online Free Edition

5.2 Solution & Technical Architecture

Technical Architecture



Solution Architecture



5.3 User Stories

User Stories

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

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Applicant (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
Applicant (Web user)	Email confirmation	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
Applicant (Web user)	Login	USN-3	As a user, I can log into the application by entering email & password	I can login into the website for further details	High	Sprint-2
Customer (Web user)	Details	USN-4	As a customer, I can fill my personal details.	I can submit my personal details	High	Sprint-1
Agent	Login	USN-5	As a user, I can log into the application by entering email & password	I can request for a particular customer	High	Sprint-2
Administrator	Cloud Database	USN-6	As an administrator, I can store the donor details into the cloud database	I can store the data into cloud database	High	Sprint-2
Administrator	Cloud Database	USN-7	I can store the data into cloud database	I can store the data into cloud database	High	Sprint-3
Customer (Web user)	Details	USN-8	As a customer, I can send request the website for a product/services issues	I can request for a product/services issues	High	Sprint-3
Administrator	Assign task	USN-9	As an administrator, can assign the task to the particular agent	I assign the task for the agent	High	Sprint-3
Agent	Details	USN-10	As an agent, take the customer details from the cloud database	I can take the data into cloud database	High	Sprint-4
Agent	Details	USN-11	As a customer, I can send response the website for a product/services issues	I can response for a product/services issues	High	Sprint-4
Customer (Web user)	Email	USN-12	As a customer, I can receive the response	I can receive the response	High	Sprint-4

6. PROJECT PLANNING & SCHEDULING

6.1 Sprint Planning & Estimation

Product Backlog, Sprint Schedule, and Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story points	Priority	Team Members
Sprint 1	Registration	USN-1	As a user, I can register for the web page by entering my email then password and confirming my password.	10	High	Monisha, Lavanya
Sprint 1	Email Confirmation	USN-2	As a user, the web user will receive confirmation email once I have registered for the application.	10	High	Monisha, Lavanya
Sprint 2	Login	USN-3	As a user, I can login to the application by entering email and password.	10	High	Monisha , Lavanya
Sprint 2	Details	USN-4	As a customer I can fill my details and personal information.	10	High	Alric, Prabavathi
Sprint 3	Cloud Database	USN-5	As an administrator I can stored a details in the cloud database administrator can stored data into the database cloud.	10	High	Monisha , Alric, Praba
Sprint 3	Details	USN-6	As a customer, I can send request to the website for booking or service issue and any other problem requires.	5	low	lavanya , Alric, Monisha

Sprint 3	Assign task	USN-7	As an administrator, can assign task to particular agent.	10	High	lavanya , Monisha
Sprint 4	Details	USN-8	As an agent take the customer details from the cloud database as a customer I can send the website for the booking or service issue.	5	Low	lavanya , Alric,Praba
Sprint 4	Email	USN-9	As a customer, I can receive the response.	10	High	lavanya , Praba

Project Tracker, Velocity & Burndown Chart:

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	8 days	28-10-2022	4-11-2022	20	4-11-2022
Sprint 2	10	8 days	6-11-2022	13-11-2022	10	13-11-2022
Sprint 3	20	8 days	16-11-2022	23-11-2022	20	23-11-2022
Sprint 4	10	8 days	23-11-2022	30-11-2022	10	30-11-2022

Velocity:

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

$$\begin{aligned}
 AV &= \text{Velocity} / \text{Sprint Duration} \\
 &= 20 / 8 \\
 &= 2.5
 \end{aligned}$$

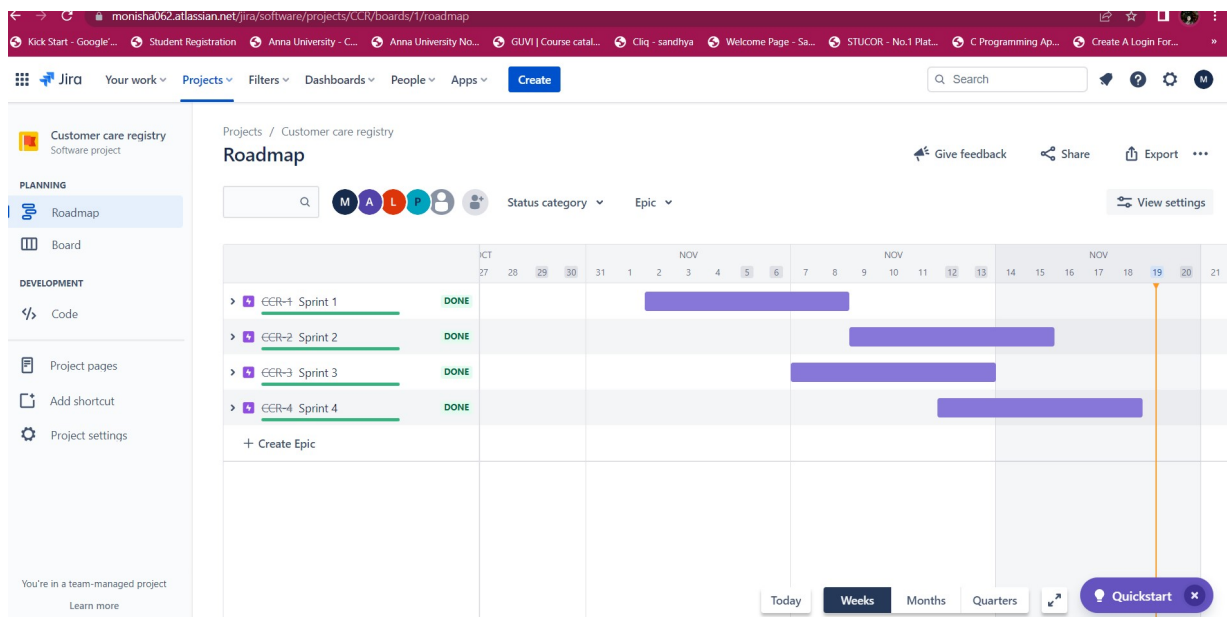
$$\begin{aligned}
 AV &= 10 / 8 \\
 &= 1.25
 \end{aligned}$$

6.2 Sprint Delivery Schedule

Milestone Template:

Sprint	Sprint Topic	Start Date	Expected Delivery
Sprint 1	User Registration	24-10-2022	29-10-2022
Sprint 2	User Confirmation	31-10-2022	05-11-2022
Sprint 3	Unique Password	07-11-2022	12-11-2022
Sprint 4	User Request	10-11-2022	13-11-2022
Sprint 5	Agent Response	15-11-2022	19-11-2022

6.3 Reports from JIRA



← → monisha062.atlassian.net/jira/software/projects/CCR/boards/1

Kick Start - Google... Student Registration Anna University - C... Anna University No... GUVI | Course catal... Cliq - sandhya Welcome Page - Sa... STUCOR - No.1 Plat... C Programming Ap... Create A Login For...

Jira Your work ▾ Projects ▾ Filters ▾ Dashboards ▾ People ▾ Apps ▾ Create

Q Search 🔔 ? ⚙️ M

Customer care registry
Software project

PLANNING
Roadmap
Board

DEVELOPMENT
Code
Project pages
Add shortcut
Project settings

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Projects / Customer care registry

CCR board

Q M P L A Epic ▾

GROUP BY None ▾

TO DO
+ Create issue

IN PROGRESS

DONE 4 ISSUES ✓

Login page
SPRINT 1
✓ CCR-5 ✓ P

Dashboard
SPRINT 2
✓ CCR-6 ✓ M

← → monisha062.atlassian.net/jira/software/projects/CCR/boards/1

Kick Start - Google... Student Registration Anna University - C... Anna University No... GUVI | Course catal... Cliq - sandhya Welcome Page - Sa... STUCOR - No.1 Plat... C Programming Ap... Create A Login For... »

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Add shortcut
Project settings

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Projects / Customer care registry

CCR board

Q M P L A Epic ▾

GROUP BY None ▾

TO DO

IN PROGRESS

DONE 4 ISSUES ✓

SPRINT 1
✓ CCR-6 ✓ M

Issue creation
SPRINT 3
✓ CCR-7 ✓ L

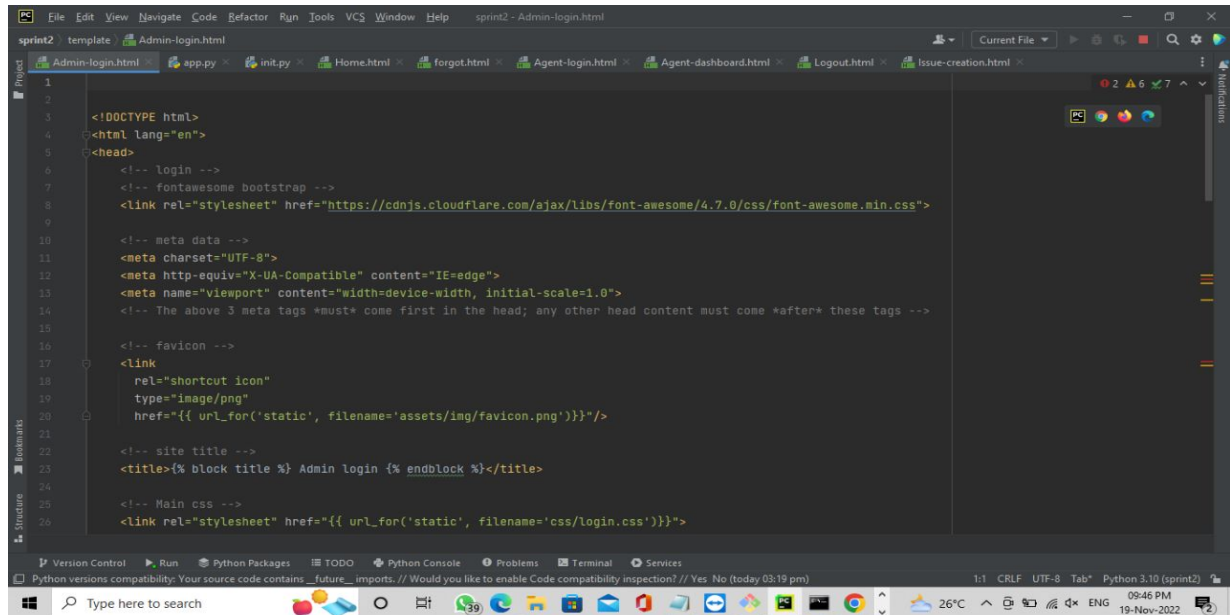
Logout
SPRINT 4
✓ CCR-8 ✓ A

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[Learn more](#)

Quickstart X

7. CODING & SOLUTIONING

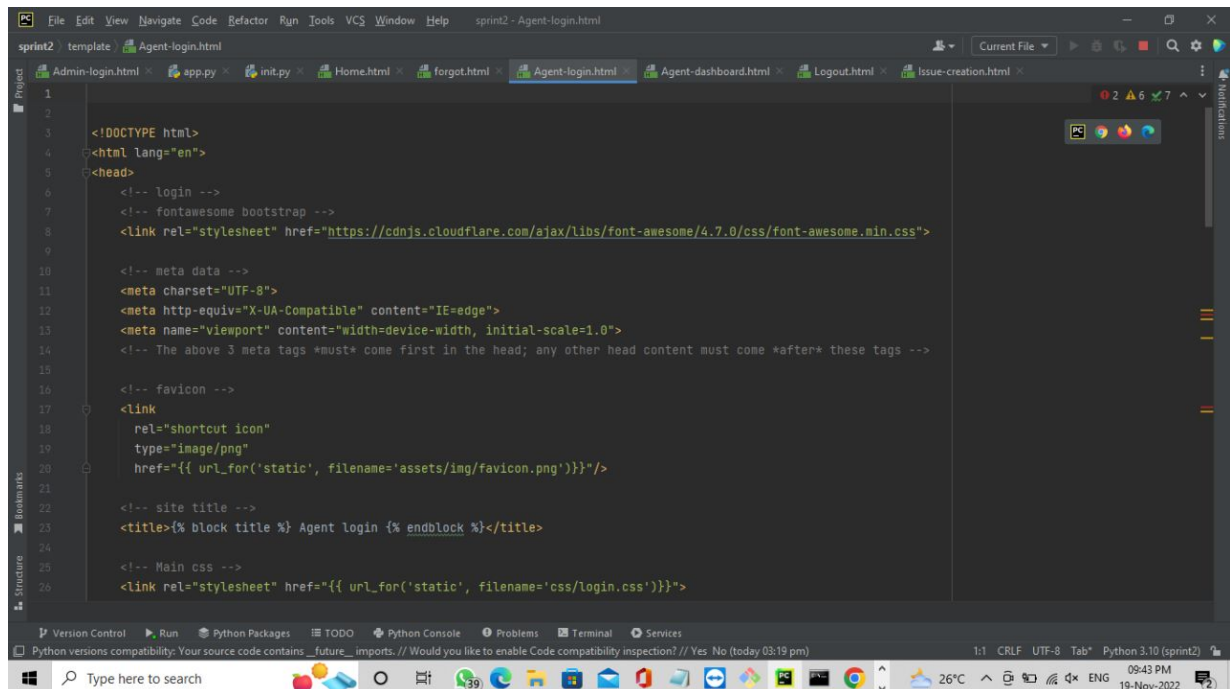
Admin-login.html



The screenshot shows the VS Code editor with the file 'Admin-login.html' open. The code is as follows:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <!-- login -->
5   <!-- fontawesome bootstrap -->
6   <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
7
8   <!-- meta data -->
9   <meta charset="UTF-8">
10  <meta http-equiv="X-UA-Compatible" content="IE=edge">
11  <meta name="viewport" content="width=device-width, initial-scale=1.0">
12  <!-- The above 3 meta tags *must* come first in the head; any other head content must come *after* these tags -->
13
14  <!-- favicon -->
15  <link
16    rel="shortcut icon"
17    type="image/png"
18    href="{{ url_for('static', filename='assets/img/favicon.png')}}"/>
19
20  <!-- site title -->
21  <title>{% block title %} Admin login {% endblock %}</title>
22
23  <!-- Main css -->
24  <link rel="stylesheet" href="{{ url_for('static', filename='css/login.css')}}">
```

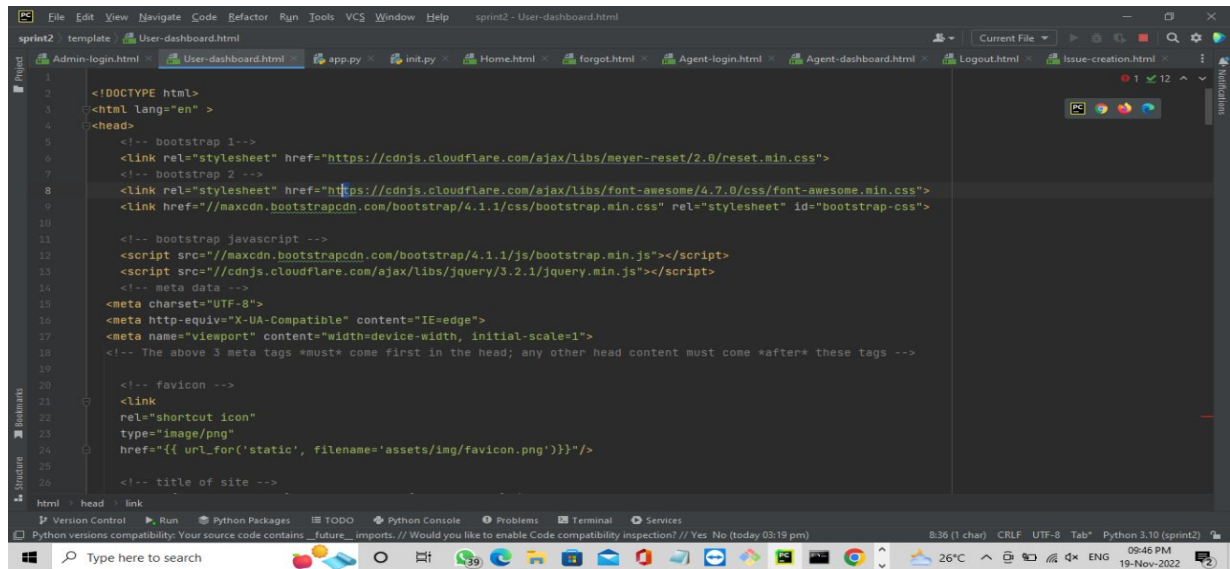
Agent-login.html



The screenshot shows the VS Code editor with the file 'Agent-login.html' open. The code is as follows:

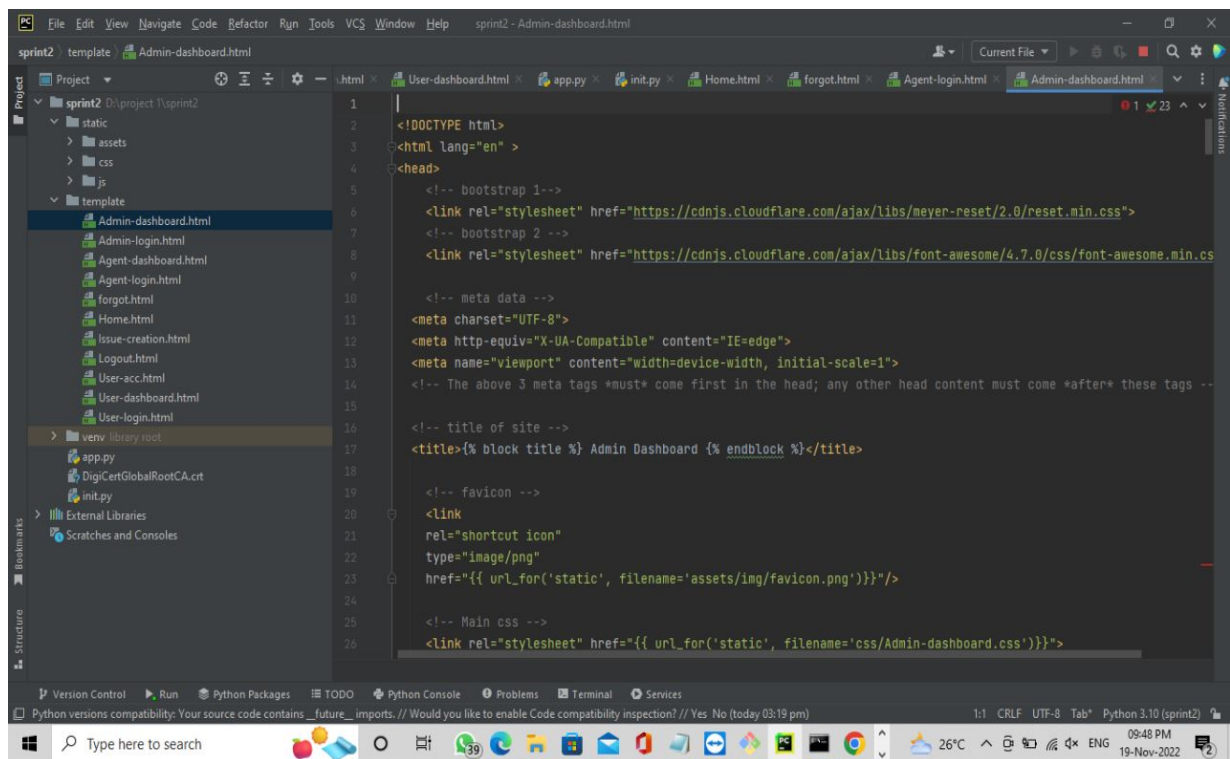
```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <!-- login -->
5   <!-- fontawesome bootstrap -->
6   <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
7
8   <!-- meta data -->
9   <meta charset="UTF-8">
10  <meta http-equiv="X-UA-Compatible" content="IE=edge">
11  <meta name="viewport" content="width=device-width, initial-scale=1.0">
12  <!-- The above 3 meta tags *must* come first in the head; any other head content must come *after* these tags -->
13
14  <!-- favicon -->
15  <link
16    rel="shortcut icon"
17    type="image/png"
18    href="{{ url_for('static', filename='assets/img/favicon.png')}}"/>
19
20  <!-- site title -->
21  <title>{% block title %} Agent login {% endblock %}</title>
22
23  <!-- Main css -->
24  <link rel="stylesheet" href="{{ url_for('static', filename='css/login.css')}}">
```

User-dashboard.html



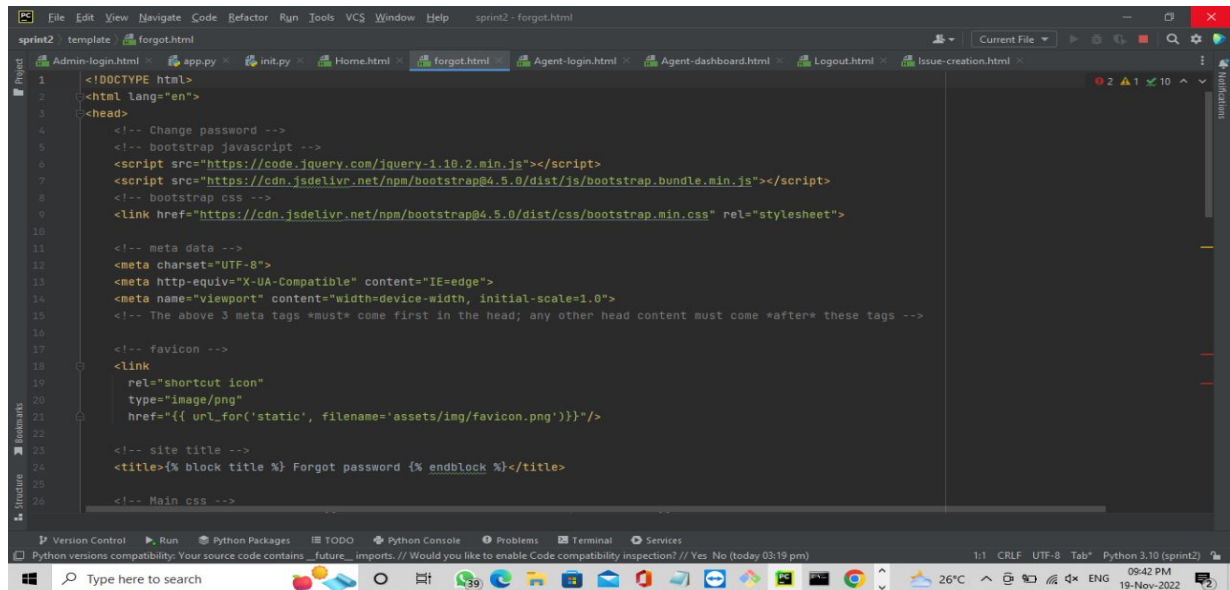
```
1 <!DOCTYPE html>
2 <html lang="en" >
3 <head>
4
5 <!-- bootstrap 1-->
6 <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/meyer-reset/2.0/reset.min.css">
7 <!-- bootstrap 2 -->
8 <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
9 <link href="//maxcdn.bootstrapcdn.com/bootstrap/4.1.1/css/bootstrap.min.css" rel="stylesheet" id="bootstrap-css">
10
11 <!-- bootstrap javascript -->
12 <script src="//maxcdn.bootstrapcdn.com/bootstrap/4.1.1/js/bootstrap.min.js"></script>
13 <script src="//cdnjs.cloudflare.com/ajax/libs/jquery/3.2.1/jquery.min.js"></script>
14
15 <!-- meta data -->
16 <meta charset="UTF-8">
17 <meta http-equiv="X-UA-Compatible" content="IE=edge">
18 <meta name="viewport" content="width=device-width, initial-scale=1">
19 <!-- The above 3 meta tags *must* come first in the head; any other head content must come *after* these tags -->
20
21 <!-- favicon -->
22 <link
23   rel="shortcut icon"
24   type="image/png"
25   href="{{ url_for('static', filename='assets/img/favicon.png')}}"/>
26
27 <!-- title of site -->
```

Admin-dashboard.html



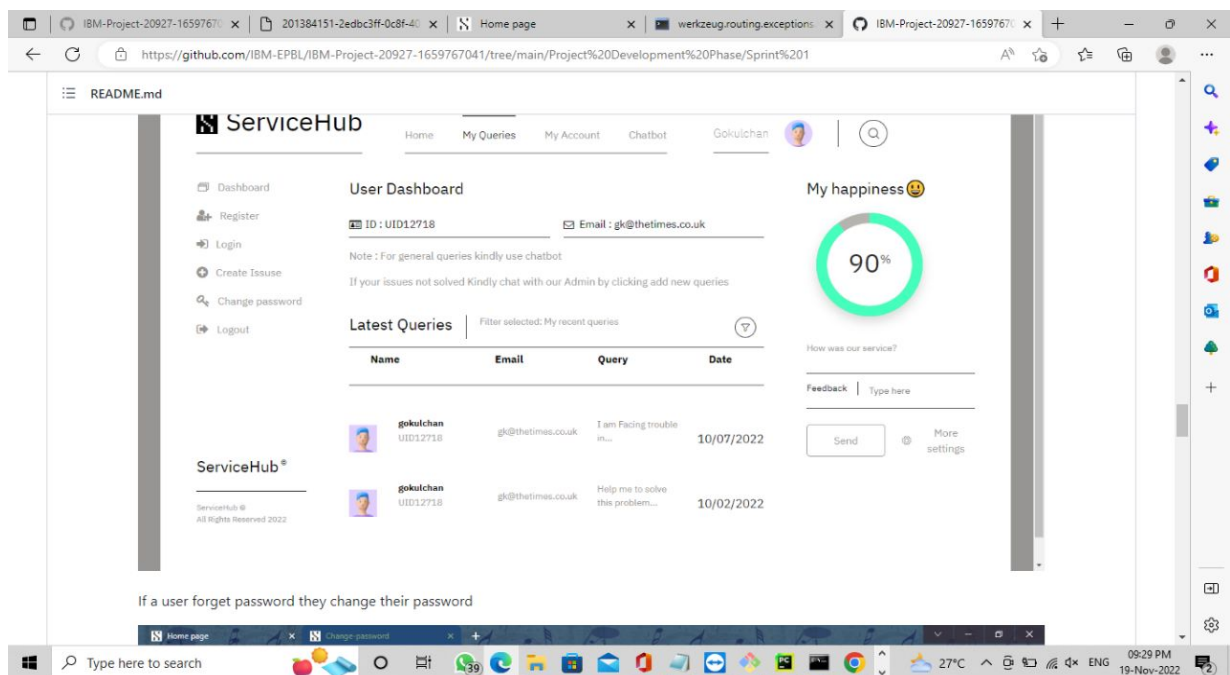
```
1
2 <!DOCTYPE html>
3 <html lang="en" >
4 <head>
5
6 <!-- bootstrap 1-->
7 <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/meyer-reset/2.0/reset.min.css">
8 <!-- bootstrap 2 -->
9 <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
10
11 <!-- meta data -->
12 <meta charset="UTF-8">
13 <meta http-equiv="X-UA-Compatible" content="IE=edge">
14 <meta name="viewport" content="width=device-width, initial-scale=1">
15 <!-- The above 3 meta tags *must* come first in the head; any other head content must come *after* these tags -->
16
17 <!-- title of site -->
18 <title>{{ block title }} Admin Dashboard {{ endblock }}</title>
19
20 <!-- favicon -->
21 <link
22   rel="shortcut icon"
23   type="image/png"
24   href="{{ url_for('static', filename='assets/img/favicon.png')}}"/>
25
26 <!-- Main css -->
27 <link rel="stylesheet" href="{{ url_for('static', filename='css/Admin-dashboard.css')}}"/>
```


forgot.html



```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <!-- Change password -->
5   <!-- bootstrap javascript -->
6   <script src="https://code.jquery.com/jquery-1.10.2.min.js"></script>
7   <script src="https://cdn.jsdelivr.net/npm/bootstrap@4.5.0/dist/js/bootstrap.bundle.min.js"></script>
8   <!-- bootstrap css -->
9   <link href="https://cdn.jsdelivr.net/npm/bootstrap@4.5.0/dist/css/bootstrap.min.css" rel="stylesheet">
10
11   <!-- meta data -->
12   <meta charset="UTF-8">
13   <meta http-equiv="X-UA-Compatible" content="IE=edge">
14   <meta name="viewport" content="width=device-width, initial-scale=1.0">
15   <!-- The above 3 meta tags *must* come first in the head; any other head content must come *after* these tags -->
16
17   <!-- favicon -->
18   <link
19     rel="shortcut icon"
20     type="image/png"
21     href="{{ url_for('static', filename='assets/img/favicon.png')}}" />
22
23   <!-- site title -->
24   <title>{% block title %} Forgot password {% endblock %}</title>
25
26   <!-- Main css -->
```

output



8. TESTING

8.1 Test Cases

Testcases Report

Batch ID	B2-2M4E
Team ID	PNT2022TMID34857
Project Name	Customer Care Registry

Test case ID	Feature Type	Component	Test Scenario	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Comments	TC for Automation(Y/N)	BUG ID	Executed By
loginPage_TC_001	Functional	Home Page	Verify user is able to see the Login/Signup popup when user clicked on My account button	1.Enter URL and click go 2.Scroll down 3.Verify login/Signup popup displayed or not	http://169.51.204.215:30100/	Login/Signup popup should display	Working as expected	PASS	Successful	Y		JAYACHANDRAN
loginPage_TC_002	UI	Home Page	Verify the UI elements in Login/Signup popup	1.Enter URL and click go 2.Click on Signup button for user 3.Verify login/Signup popup with below UI elements: a. id test box b.password text box c.Login button d.New customer? Create account link e.Last password? Recovery password link	http://169.51.204.215:30100/	Application should show below UI elements: a.email text box b.password text box c.Login button with orange color d.New customer? Create account link e.Last password? Recovery password link	Working as expected	PASS	Successful	Y		KAARTHIBK, THIRANAVESHWARAN
loginPage_TC_003	Functional	Home page	Verify user is able to log into application with Valid credentials	1.Enter URL 2.Click on My Account dropdown button 3. Enter Valid ID in ID test box 4.Enter valid password in password test box 5.Click on login button	ID: 1542 password: Testing123	User should navigate to user account homepage	Working as expected	PASS	Successful	Y		JAYACHANDRAN, SOUNDHARYAN

Test case ID	Feature Type	Component	Test Scenario	Steps To Execute	Test Data	Expected Result	Actual Result	Status	Comments	TC for Automation(Y/N)	BUG ID	Executed By
loginPage_TC_001	Functional	Home Page	Verify user is able to see the Login/Signup popup when user clicked on My account button	1.Enter URL and click go 2.Scroll down 3.Verify login/Signup popup displayed or not	http://169.51.204.215:30100/	Login/Signup popup should display	Working as expected	PASS	Successful	Y		THIRANAVESHWARAN, SOUNDHARYAN
loginPage_TC_002	UI	Home Page	Verify the UI elements in Login/Signup popup	1.Enter URL and click go 2.Click on Signup button for user 3.Verify login/Signup popup with below UI elements: a. id test box b.password text box c.Login button d.New customer? Create account link e.Last password? Recovery password link	http://169.51.204.215:30100/	Application should show below UI elements: a.email text box b.password text box c.Login button with orange color d.New customer? Create account link e.Last password? Recovery password link	Working as expected	PASS	Successful	Y		JAYACHANDRAN, KAARTHIBK
loginPage_TC_003	Functional	Home page	Verify user is able to log into application with Valid credentials	1.Enter URL 2.Click on My Account dropdown button 3. Enter Valid ID in ID test box 4.Enter valid password in password test box 5.Click on login button	ID: 1542 password: Testing123	User should navigate to user account homepage	Working as expected	PASS	Successful	Y		JAYACHANDRAN, SOUNDHARYAN

8.2 User Acceptance Testing

Acceptance Testing UAT Execution & Report Submission

Date	03 November 2022
Team ID	PNT2022TMID34857
Project Name	Customer Care Registry
Maximum Marks	4 Marks

1. Purpose of Document

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

2. Defect Analysis

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

Resolution	Severity 1	Severity 2	Severity 3	Severity 4	Subtotal
By Design	10	4	1	4	19
Duplicate	1	1	2	0	4
External	2	3	2	0	7
Fixed	11	5	3	21	40
Not Reproduced	0	0	1	1	2
Skipped	0	0	2	1	3
Won't Fix	0	3	2	1	6
Totals	24	16	13	28	81

3. Test Case Analysis

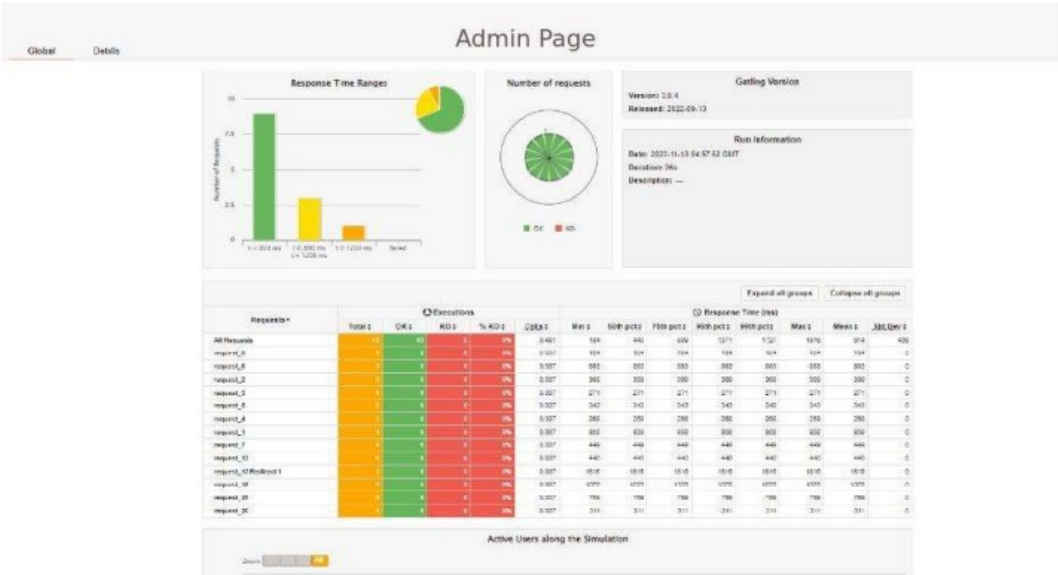
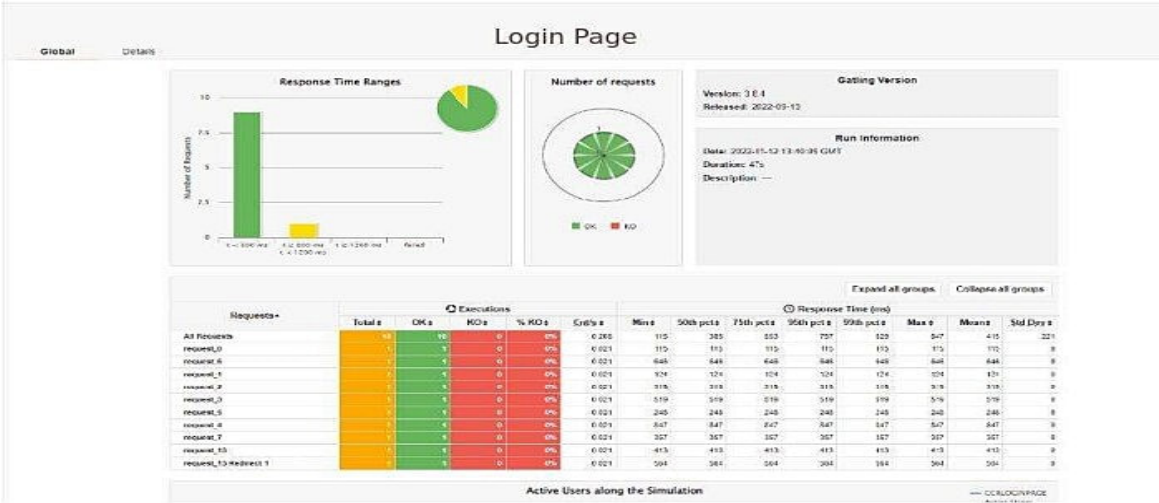
This report shows the number of test cases that have passed, failed, and untested

Section	Total Cases	Not Tested	Fail	Pass
Print Engine	10	0	0	10
Client Application	51	0	0	51
Security	2	0	0	2
Outsource Shipping	3	0	0	3
Exception Reporting	8	0	0	8
Final Report Output	4	0	0	4
Version Control	3	0	0	3

9. RESULTS

9.1 Performance Metrics

9.1 PERFORMANCE METRICES



Global Details

Response Time Ranges

Number of Requests

< 200 ms >= 200 ms < 500 ms >= 500 ms < 1,000 ms >= 1,000 ms

Number of Requests

OK NOK

Version: 2.0.4
Released: 2022-05-15

Run Information

Date: 2022-11-13 05:30:18 GMT
Duration: 0m
Description: —

Resource*	Executions				Response Time (ms)										Expand all groups			Collapse all groups		
	Total	OK	NOK	% NOK	Min	Max	50th pctl	75th pctl	90th pctl	95th pctl	Max	Min	Max	50th pctl	75th pctl	90th pctl	95th pctl			
All Resources	10	9	1	10%	0.30	117	180	303	380	457	590	403	20							
request_0	1	1	0	0%	0.504	380	281	380	380	380	380	380	380							
request_1	1	1	0	0%	0.504	1000	1000	1000	1000	1000	1000	1000	1000							
request_2	1	1	0	0%	0.504	510	310	310	310	310	310	310	310							
request_3	1	1	0	0%	0.504	440	340	340	340	340	340	340	340							
request_4	1	1	0	0%	0.504	450	450	450	450	450	450	450	450							
request_5	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							
request_6	1	1	0	0%	0.504	360	360	360	360	360	360	360	360							
request_7	1	1	0	0%	0.504	408	408	408	408	408	408	408	408							
request_8	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							
request_9	1	1	0	0%	0.504	510	310	310	310	310	310	310	310							
request_10	1	1	0	0%	0.504	410	410	410	410	410	410	410	410							
request_11	1	1	0	0%	0.504	357	357	357	357	357	357	357	357							
request_12	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							
request_13	1	1	0	0%	0.504	510	310	310	310	310	310	310	310							
request_14	1	1	0	0%	0.504	410	410	410	410	410	410	410	410							
request_15	1	1	0	0%	0.504	357	357	357	357	357	357	357	357							
request_16	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							
request_17	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							
request_18	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							
request_19	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							
request_20	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							
request_21	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							
request_22	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							
request_23	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							
request_24	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							
request_25	1	1	0	0%	0.504	457	457	457	457	457	457	457	457							

Global	Details
--------	---------

Response Time Ranges

Response Time Range	Number of requests
0 - 100 ms	11.5
100 - 200 ms	10.5
200 - 300 ms	9.5
300 - 400 ms	8.5
400 - 500 ms	7.5
500 - 600 ms	6.5

Number of requests

Number of requests: 75

Version: 3.0.0

Release: 2020-05-15

Run Information:

Date: 2023-11-15 05:14:30 MS GMT
 Duration: 1m1s
 Description: --

Requests*	Conditions					Expanded all groups										Collapsed all groups
	Total	OK	NG	%OK	CHN	Min	50th pctl	75th pctl	90th pctl	95th pctl	Max	Min	50th pctl	Max		
AllRequests	12	9	3	75%	3.224	270	322	322	322	322	322	270	322	322		
request_0	9	9	0	100%	0.000	100	100	100	100	100	100	100	100	100		
request_1	3	3	0	100%	0.000	100	100	100	100	100	100	100	100	100		
request_2	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_3	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_4	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_5	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_6	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_7	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_8	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_9	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_10	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_11	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_12	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_13	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_14	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_15	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_16	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_17	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_18	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_19	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_20	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_21	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_22	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_23	0	0	0	0%	0.000	0	0	0	0	0	0	0	0	0		
request_24	0	0	0	0%	0.00											

10. ADVANTAGES & DISADVANTAGES

Advantage

- Flow sheet is a powerful tool to monitor clinical data and track trends
- Provides a dashboard of who needs what
- Provides total population data reporting with no chart abstraction
- Generates revenue (it shows when services are needed)
- Provides outreach information at fingertips
- Improves team-based care
- Smaller software package than EHRs
- Creating loyal customers through good customer service can provide businesses with lucrative long-term relationships.
- Customer loyalty. Loyal customers have many benefits for businesses

Disadvantage

- Disease-specific, not longitudinal
- Does not include information necessary for billing
- Requires hardware, software and maintenance
- Requires data entry and data maintenance
- Parallel documentation system (i.e., some information has to be entered in two systems)
- Can't stand alone, must have an additional documentation system.
- Experience burnout and stress. Working as a customer service representative requires you to maintain a friendly demeanour at all times, regardless of how customers act or how you personally feel

11. CONCLUSION

Companies today are modernizing customer care, using advanced AI to ensure a positive customer experience starting from the first interaction and throughout the buyer's journey. To properly manage customer care, companies must understand how they are succeeding and what needs improvement. This requires establishing key performance indicators (KPIs) for customer service and creating a system of gathering metrics across channels. In conclusion, customer

care, involves the use of basic ethics and any company who wants to have success and grow, needs to remember, that in order to do so, it must begin with establishing a code of ethics in regards to how each employee is to handle the dealing with customers. Customers are at the heart of the company and its growth or decline. Customer care involves, the treatment, care, loyalty, trust the employee should extend to the consumer, as well in life. This concept can be applied to so much more than just customer care. People need to treat others with respect and kindness; people should try to take others into consideration when making any decision. If more people were to practice this policy, chances are the world would be a better, more understanding place for all to exist. Thereby, the customer care registry would be far helpful and approachable. It offers easy tracking, recording and notification than any other means

12. FUTURE SCOPE

The current state of customer care registry, in so many companies, looks something like this:

- Customer acquisition is prioritised over retention
- Customer service investment projects are sidelined.
- Departmental efficiency is of highest priority.
- Businesses see employees in the customer service department as short-term and disposable. They are there to fulfil a specific, repetitive, purpose.
- Employees are considered unskilled and leaders hire accordingly.
- New agents view customer service as a 'last resort' or 'short term' job. People often see careers in customer support as unambitious.
- Agent training rarely goes beyond product and people skills.

In the next 3-5 years, we expect to see these future customer care registry trends:

- The shift from a primarily 'cost centre' to primarily 'growth centre' worldview.
- The job desk for a customer care registry director will focus more on leadership, innovation, and ability to drive company-wide improvement.
- Customer service will shift to become a strategic partner of marketing, sales, and product development. CS will help with direction, project prioritisation, and impact.
- A need for customer service leaders to take a highly strategic seat at the table. They'll need to argue for investment in talent, technology, and innovation.
- A shift in performance metrics. Forget of resolved tickets. In the future, we'll

measure performance based on of customers saved from the precipice of churn.

- A career in customer care registry will not be a last resort. Top graduates will prioritise getting an education in strategic customer interaction.
- Focus on ticket deflection will reduce because brands will view each customer interaction as an opportunity to learn, build a relationship, and grow profits. They deserve a well-trained, human touch.

13. APPENDIX

Source Code

```
# importing packages
# Install these package before running
# pip install sib_api_v3_sdk
# pip install ibm_db
# pip install future
# pip install pprintpp
```

```
from _future_ import print_function
from audioop import add
import datetime
from unicodedata import name
from sib_api_v3_sdk.rest import ApiException
from pprint import pprint
from flask import Flask, render_template, request, redirect, url_for, session, flash
from markupsafe import escape
from flask import *
import ibm_db
import sib_api_v3_sdk
from init import random
from init import id
from init import hello
```

```
conn = ibm_db.connect(
    "DATABASE=bludb;HOSTNAME=815fa4db-dc03-4c70-869a-
a9cc13f33084.bs2io90l08kqb1od8lcg.databases.appdomain.cloud;PORT=30367;SEC
URITY=SSL;SslServerCertificate=DigiCertGlobalRootCA.crt;UID=bbz16966;PWD=jESJ4
```

```
suiH0pnlo8w;",  
    "", "")
```

```
print(conn)
```

```
app = Flask(__name__, template_folder='template')  
# app.secret_key = 'your secret key'
```

```
@app.route('/')  
def default():  
    return render_template('Home.html')
```

```
@app.route('/home')  
def home():  
    return render_template('Home.html')
```

```
@app.route('/user-login', methods=['POST', 'GET'])  
def userLogin():  
    return render_template('User-login.html')
```

```
@app.route('/admin-login', methods=['POST', 'GET'])  
def adminLogin():  
    return render_template('Admin-login.html')
```

```
@app.route('/agent-login', methods=['POST', 'GET'])  
def agentLogin():  
    return render_template('Agent-login.html')
```

```
@app.route('/forgot-password', methods=['POST', 'GET'])  
def forgot():  
    return render_template('forgot.html')
```

```
@app.route('/admin-dashboard')  
def adminDashboard():  
    return render_template('Admin-dashboard.html')
```

```
@app.route('/agent-dashboard')
```

```

def agentDashboard():
    return render_template('Agent-dashboard.html')

@app.route('/user-dashboard')
def userDashboard():
    return render_template('User-dashboard.html')

@app.route('/logout')
def logout():
    return render_template('Logout.html')

@app.route('/user-account')
def userAccount():
    return render_template('User-acc.html')

@app.route('/issue', methods=['POST', 'GET'])
def issueuse(name):
    name = name
    return render_template('Issue-creation.html',msg=name)

@app.route('/forgot', methods=['POST', 'GET'])
def forgot1():
    try:
        global randomnumber
        ida = request.form['custid']
        print(ida)
        global id
        id = ida
        sql = " SELECT USERNAME, USERSEMAIL FROM BBZ16966.USERS WHERE id=?"
        stmt = ibm_db.prepare(conn, sql)
        ibm_db.bind_param(stmt, 1, ida)
        ibm_db.execute(stmt)
        emailf = ibm_db.fetch_both(stmt)
        while emailf != False:
            e = emailf[0]
            n = emailf[1]
            break

```



```

configuration = sib_api_v3_sdk.Configuration()
configuration.api_key['api-key'] = ""

api_instance = sib_api_v3_sdk.TransactionalEmailsApi(
    sib_api_v3_sdk.ApiClient(configuration))
subject = "Verification for Password"
html_content = "<html><body><h1>Your verification Code is : <h2>" + \
    str(randomnumber)+"</h2> </h1> </body></html>"
sender = {"name": "IBM CUSTOMER CARE REGISTRY",
    "email": "ibmdemo6@yahoo.com"}
to = [{"email": e, "name": n}]
reply_to = {"email": "ibmdemo6@yahoo.com", "name": "IBM"}
headers = {"Some-Custom-Name": "unique-id-1234"}
params = {"parameter": "My param value",
    "subject": "Email Verification"}
send_smtp_email = sib_api_v3_sdk.SendSmtpEmail(
    to=to, reply_to=reply_to, headers=headers, html_content=html_content,
params=params, sender=sender, subject=subject)

api_response = api_instance.send_transac_email(send_smtp_email)

pprint(api_response)
message = "Email send to:"+e+" for password"
flash(message, "success")

except ApiException as e:
    print("Exception when calling SMTPApi->send_transac_email: %s\n" % e)
    flash("Error in sending mail")
except:
    flash("Your didn't Signin with this account")
finally:
    return render_template('forgot.html')

@app.route('/verifyemail', methods=['POST', 'GET'])
def verifyemail():
    try:

```

```

email = request.form['verifyemail']
sql = "SELECT USERSID,USERSNAME FROM BBZ16966.USERS WHERE email=?"
stmt = ibm_db.prepare(conn, sql)
ibm_db.bind_param(stmt, 1, email)
ibm_db.execute(stmt)
emailf = ibm_db.fetch_both(stmt)
while emailf != False:
    id = emailf[0]
    name = emailf[1]
    break
configuration = sib_api_v3_sdk.Configuration()
configuration.api_key['api-key'] = ""

api_instance = sib_api_v3_sdk.TransactionalEmailsApi(
    sib_api_v3_sdk.ApiClient(configuration))
subject = "Regarding of your Customer Id"
html_content = "<html><body><h1>Your Customer Id is : <h2>" + \
    str(id)+"</h2> </h1> </body></html>"
sender = {"name": "IBM CUSTOMER CARE REGISTRY",
    "email": "ibmdemo6@yahoo.com"}
to = [{"email": email, "name": name}]
reply_to = {"email": "ibmdemo6@yahoo.com", "name": "IBM"}
headers = {"Some-Custom-Name": "unique-id-1234"}
params = {"parameter": "My param value",
    "subject": "Email Verification"}
send_smtp_email = sib_api_v3_sdk.SendSmtpEmail(
    to=to, reply_to=reply_to, headers=headers, html_content=html_content,
    params=params, sender=sender, subject=subject)

api_response = api_instance.send_transac_email(send_smtp_email)

```

GitHub link

<https://github.com/IBM-EPBL/IBM-Project-30646-1660151961>

Project Demo Link

<https://youtu.be/j2SsXtkIA30>

