

# **SRI RAMAKRISHNA INSTITUTE OF TECHNOLOGY**

**(An Autonomous Institution)**

**COIMBATORE-10**

(Approved by AICTE, New Delhi – Affiliated to Anna University, Chennai)

Accredited by NAAC with , 'A' Grade and All UG Engineering Programmes are Accredited by NBA

**DEPARTMENT OF INFORMATION TECHNOLOGY**

**TEAM: PNT2022TMID07906**

## **CUSTOMER CARE REGISTRY**

<b>POONKAWIN S</b>	<b>71381906029</b>
<b>RAGHUL R</b>	<b>71381906032</b>
<b>SAM DAVID JUDE R</b>	<b>71381906037</b>
<b>THARUNRAJ R</b>	<b>71381906044</b>

**VII SEMESTER - B.TECH. INFORMATION TECHNOLOGY**

**ACADEMIC YEAR 2022-2023**

# **SRI RAMAKRISHNA INSTITUTE OF TECHNOLOGY**

**PACHAPALAYAM - PERUR CHETTIPALAYAM**

**COIMBATORE -10**

**Department of Information Technology**

## **Certificate**

Certified that the project titled **CUSTOMER CARE REGISTRY** is the bonafide work done by **POONKAWIN S (71381906029), RAGHUL R (71381906032), SAM DAVID JUDE R (71381906037), THARUN RAJ (71381906044)**

Project Supervisor

Head of the Department

Internal Examiner

External Examiner

# TABLE OF CONTENTS

<b>ABSTRACT .....</b>	<b>v</b>
<b>LIST OF FIGURES .....</b>	<b>vi</b>
<b>ABBREVIATIONS &amp; ACRONYMS .....</b>	<b>viii</b>
<b>CHAPTER 1 - INTRODUCTION .....</b>	<b>1</b>
1.1 PROBLEM STATEMENT .....	1
1.2 PURPOSE .....	1
1.3 SCOPE .....	1
1.4 PROJECT CHARTER .....	2
<b>CHAPTER 2 - SYSTEM REQUIREMENTS .....</b>	<b>4</b>
2.1 MODERN BROWSER .....	4
2.2 HTML .....	4
2.3 CSS .....	4
2.4 PYTHON .....	4
<b>CHAPTER 3 - SYSTEM ARCHITECTURE .....</b>	<b>5</b>
3.1 PYTHON .....	5
3.2 MySQL .....	5
3.3 SCHEMATA .....	6
3.4 FRONT-END .....	7
3.4.1 HTML .....	7
<b>CHAPTER 4 - OVERALL DESCRIPTION .....</b>	<b>8</b>
4.1 WORKING MODULE .....	8
4.2 TECHNOLOGIES USED .....	8
4.3 TOOLS USED .....	9
4.4 PRODUCT PERSPECTIVE .....	9

4.5 SYSTEM FUNCTIONS .....	9
4.6 CONSTRAINTS .....	9
<b>CHAPTER 5 - UML DIAGRAMS .....</b>	<b>11</b>
5.1 USE CASE DIAGRAM .....	11
5.2 ER DIAGRAM .....	12
5.3 CLASS DIAGRAM .....	12
5.4 DATA FLOW DIAGRAMS .....	13
<b>CHAPTER 6 - OUTPUT .....</b>	<b>15</b>
<b>CHAPTER 7 - CONCLUSION .....</b>	<b>28</b>
<b>REFERENCES .....</b>	<b>29</b>

## **ABSTRACT**

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.

## LIST OF FIGURES

<b>Fig no</b>	<b>Name of the Fig</b>	<b>Page No</b>
1.1	Project charter	9
1.2	Project charter	10
5.1	Use case diagram	11
5.2	ER diagram	12
5.3	Class diagram	12
5.4	User data flow	13
5.5	Update data flow	13
5.6	Agent data flow	14
5.7	Admin data flow	14
6.1	User Registration Page	15
6.2	Registration Mail	15
6.3	User Login Page	16
6.4	User Dashboard	16
6.5	Create Ticket	17
6.6	Raised New Ticket	17
6.7	Mail For Raising New Ticket	18
6.8	Ticket Detail	18
6.9	Admin Login	19
6.10	Admin Dashboard	19
6.11	All Tickets	20
6.12	Ticket Detail	20
6.13	Assign Agent	21

6.14	Agent Assigned	21
6.15	Agent Assigned Mail	22
6.16	All Admins	22
6.17	Registered Admins	23
6.18	Accepted New Admin	23
6.19	Accepted New Admin Mail	24
6.20	All Agents	24
6.21	Agent Login	25
6.22	Agent Dashboard	25
6.23	Assigned Tickets	26
6.24	Ticket Detail	26
6.25	Solved Ticket	27
6.26	Solved Ticket Mail To User	27

## **ABBREVIATIONS & ACRONYMS**

<b>Abbreviation</b>	<b>Expansion</b>
HTML	Hypertext Markup Language
CSS	Cascading Style Sheets
PYTHON	Python
DB	DataBase



# **CHAPTER 1 - INTRODUCTION**

Customer Care Registry is the interface between the user, agent and admin. The customer care registry's primary goal is to decrease human effort and speed up the process. The project will fix the problem for the user. As a result, the administrator will find it simple to assign the agent to the user.

## **1.1 PROBLEM STATEMENT**

Customer facing difficulties while raising an issue or a complaint. If a customer raise a complaint, he/she does not aware about the status of the complaint that whether the complaint is closed or processing. The Status will be updated only when the complaint is fixed or solved.

## **1.2 PURPOSE**

The main purpose of Customer Care Registry is to make the complaints transparent.

## **1.3 SCOPE**

The scope of a Customer Care Registry is to to help the customer in processing their complaints in a transparent manner.

## 1.4 PROJECT CHARTER

### PROJECT CHARTER

<b>1. General Project Information</b>				
<b>Project Name:</b>	Customer care registry			
<b>Executive Sponsors:</b>				
<b>Department Sponsor:</b>				
<b>Impact of project:</b>	To solve the customer issues.			
<b>2. Project Team</b>				
	<b>Name</b>	<b>Department</b>	<b>Telephone</b>	<b>E-mail</b>
<b>Project Manager:</b>				
<b>Team Members:</b>	Chandru S	IT		<a href="mailto:chandru.1906006@srit.org">chandru.1906006@srit.org</a>
	Deepakpriyan B	IT		<a href="mailto:deepakpriyan.1906007@srit.org">deepakpriyan.1906007@srit.org</a>
	Poon kawin S	IT		<a href="mailto:poonkawin.1906029@srit.org">poonkawin.1906029@srit.org</a>
<b>3. Stakeholders (e.g., those with a significant interest in or who will be significantly affected by this project)</b>				
Chandru S , B.Tech IT IV yr				
Deepakpriyan B, B.Tech IT IV yr				
Poon kawin S, B.Tech IT IV yr				
<b>4. Project Scope Statement</b>				
<b>Project Purpose / Business Justification</b> Describe the business need this project addresses				
To record and solve customer's issue To assign an agent for customer's issue				
<b>Objectives (in business terms)</b> Describe the measurable outcomes of the project, e.g., reduce cost by xxxx or increase quality to yyyy				
Acts as interface between user, agent and administrator.				
<b>Deliverables</b> List the high-level "products" to be created (e.g., improved xxxx process, employee manual on yyyy)				
Add Ticket Assigning agent Update status of the ticket Delete ticket				
<b>Project Milestones</b> Propose start and end dates for Project Phases (e.g., Inception, Planning, Construction, Delivery) and other major milestones				

**Fig 1.1 Project Charter**

PHASE	PROJECT START	PROJECT END
Project Start	5/08/2022	9/08/2022
Gather Business Requirement	12/08/2022	18/08/2022
Develop of Data Base	19/08/2022	05/09/2022
Develop of the <u>User Interface</u>	06/09/2022	20/09/2022
Testing	21/09/2022	29/09/2022
Implementation	01/10/2022	15/10/2022

**Major Known Risks (including significant Assumptions)** *Identify obstacles that may cause the project to fail.*

Risk	Risk Rating (Hi, Med, Lo)
Network Traffic	Med
Financial issue	Med
Control of access	lo

**Constraints** *List any conditions that may limit the project team's options with respect to resources, personnel, or schedule (e.g., predetermined budget or project end date, limit on number of staff that may be assigned to the project).*

Time	3 months
Budget	-
Quality	The project be of high quality with assured data and integrity and UI
Scope	The scope shall be as defined previously in this document section titled'scope' and no more.

**External Dependencies** *Will project success depend on coordination of efforts between the project team and one or more other individuals or groups? Has everyone involved agreed to this interaction?*

**5. Communication Strategy** *(specify how the project manager will communicate to the Executive Sponsor, Project Team members and Stakeholders, e.g., frequency of status reports, frequency of Project Team meetings, etc.*

Meeting will conduct.  
Email Communication.

**6. Sign-off**

	Name	Signature	Date (MM/DD/YYYY)
Executive Sponsor			
Department Sponsor			
Project Manager			

**7. Notes**

**Fig 1.2 Project Charter**

## **CHAPTER 2 - SYSTEM REQUIREMENTS**

### **2.1 MODERN BROWSER**

The project was made using JS with the latest ES5 features. Most modern browsers will support ES5 features. Google Chrome, Mozilla Firefox, Safari, Microsoft Edge are some examples of modern browsers. The browser acts as a platform for the web application. The web application has a user-friendly interface.

### **2.2 HTML**

HTML is the standard markup language for creating web pages. It tells the browser how to display the content. We have used HTML5 for the front-end of our application.

### **2.3 CSS**

CSS is used to style a HTML document. It describes how HTML elements should be displayed. CSS3 introduced several new features like variables, flexbox, grid, etc that make it easier to create front-end for websites quickly and keep the code structured well.

### **2.4 PYTHON**

Python is a simple, general purpose, high level, and object-oriented programming language. Python is the best language for scripting and quick application development because of its syntax, dynamic typing, and nature as an interpreted language.

## CHAPTER 3 - SYSTEM ARCHITECTURE

### 3.1 PYTHON

Python supports a variety of programming patterns, including imperative, functional, and object-oriented programming patterns. Python is not designed to be used for a certain task, like web programming. Because it can be utilized with online, enterprise, 3D CAD, etc. It is known as a multipurpose programming language. Python makes development and debugging quick.

### 3.2 MySQL

MySQL is the most popular open source database software. It is easy to use, fast and reliable. Also it is a good match with Python.

The endpoints are as follows:

End Point	HTTP Method	Purpose	Returned data
/tickets	GET	To get list of all Tickets	get list /error message
/tickets	POST	To add a Ticket	Newly created Ticket/error message
/tickets	PATCH	To update a Ticket	Updated details of Ticket/error message
/tickets	DELETE	To delete a Ticket defined by the id	Confirmation message/error message
/ticket/<id>	GET	To get particular Ticket	Ticket Detail
/tickets/set-agent/<ticket_id>/<agent_id>	POST	To set agent to the ticket	Confirmation message/error message

### 3.3 SCHEMATA

#### **User:**

Id: Integer

Name: String

Email: String

Role: String

Created At: Date time

#### **User Authentication:**

User Id: Integer

Password: String

Secret Key: String

#### **Tickets:**

Id: Integer

Ticket Id: String

User Id: Integer

Agent Id: Integer

Priority: String

Status: String

Created At: Date time

#### **Ticket Details:**

Ticket Id: Integer

Short Description: String

Issue: String

## **3.4 FRONT-END**

Since only HTML is added, there is very little rendering time as Browsers are made to render HTML very quickly. This rendering time is not noticeable at all even on older devices.

We have also minimized animation in our application due to which it performs quite quickly.

### **3.4.1 HTML**

HTML is the language in which most websites are written. HTML is used to create pages and make them functional. "Hypertext" refers to links that connect web pages to one another, either within a single website or between websites. Links are a fundamental aspect of the Web. By uploading content to the Internet and linking it to pages created by other people, you become an active participant in the World Wide Web.

## **CHAPTER 4 - OVERALL DESCRIPTION**

### **4.1 WORKING MODULE**

Customer Care Registry will help the admin to maintain and assign. It consists of two modules

- Login page
- Admin page
- Agent page
- User Page

#### **4.1.1 Login**

The admin can login to the system using a provided unique username and password.

#### **4.1.2 Dashboard**

- The admin can view the list of all tickets.
- The admin can handle any type of tickets inside the list.
- The admin can update the status of the ticket.
- The admin can assign an agent for every ticket.
- The admin can log out by selecting the logout button.

### **4.2 TECHNOLOGIES USED**

- Python



## **4.3 TOOLS USED**

### **4.3.1 FLASK**

Flask is a web framework that provides libraries to build lightweight web applications in python.

### **4.3.2 VSCODE**

Visual Studio Code is a streamlined code editor with support for development operations like task running, and version control. It aims to provide just the tools a developer needs for a quick code-build-debug cycle and leaves more complex workflows to fuller featured IDEs, such as Visual Studio IDE.

## **4.4 PRODUCT PERSPECTIVE**

The Customer Care Registry system acts as an interface between the admin , agent and user.

## **4.5 SYSTEM FUNCTIONS**

- Add tickets to list
- Categorize ticket in list by admin
- Assigning agent by admin
- Delete ticket from list
- Update status of the ticket

## **4.6 CONSTRAINTS**

### **4.6.1 Quality**

The project needs to be of high quality with assured data integrity and intuitive UI.

### **4.6.2 Time**

The project has to be completed within the agreed upon timeline of a month spanning Aug 5 to oct 15th.

#### **4.6.3 Cost**

The project is to be delivered on a budget of exactly ₹ 0 as the payment is delivered in terms of exposure for the developers and the organization.

#### **4.6.4 Scope**

The scope of the project has been well defined. The end product should allow the administrator of the list to add, remove and update tickets in the list and should allow the addition and deletion of tickets.

## CHAPTER 5 - UML DIAGRAMS

### 5.1 USE CASE DIAGRAM

- **Login:** The admin can login to the system using provided a username and password.
- **Add ticket:** The admin can add the ticket for the user.
- **Assign agent:** The admin can select and assign the agent.
- **View ticket:** The admin can view the tickets..
- **Update ticket:** The admin can update the status of the ticket .
- **Delete ticket:** The admin can delete tickets present in the list.
- **Log out:** The admin can log out by selecting the logout button.

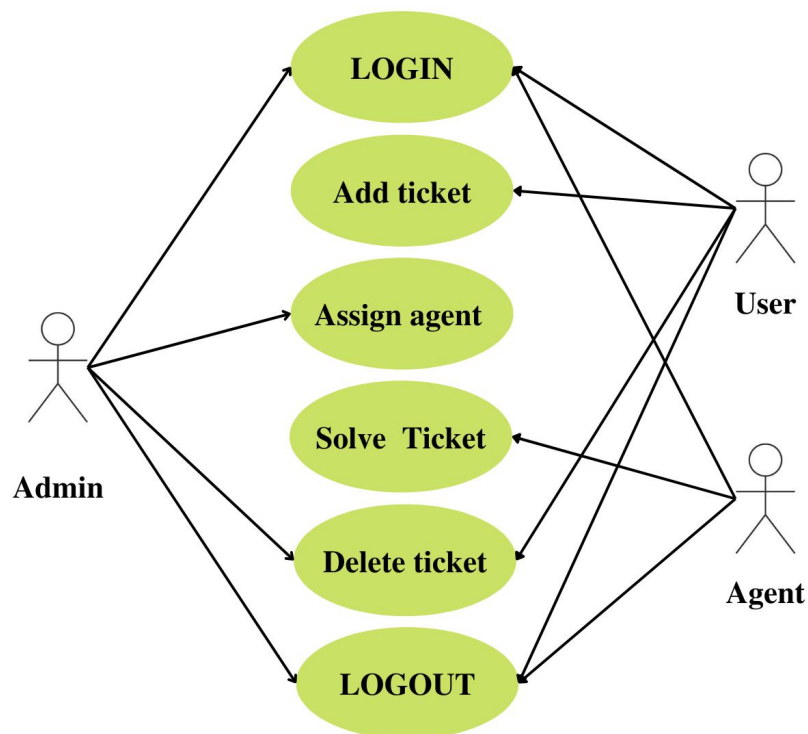
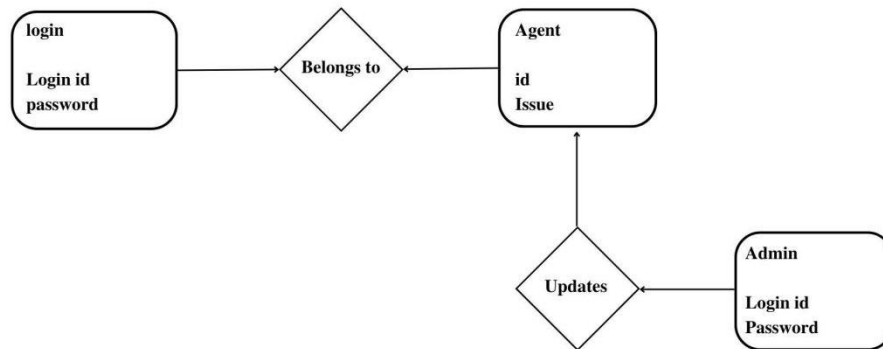


Fig: 5.1 Use case diagram

## 5.2 ER DIAGRAM



5.2 ER diagram

## 5.3 CLASS DIAGRAM

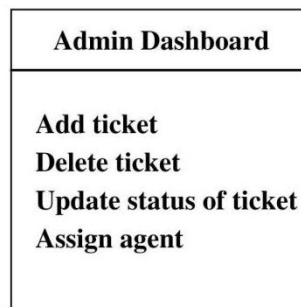
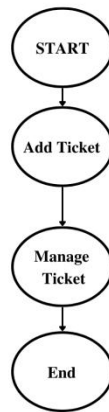
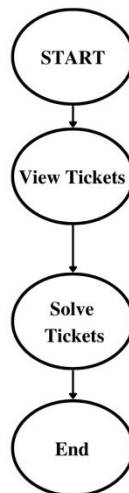


Fig 5.3 Class diagram

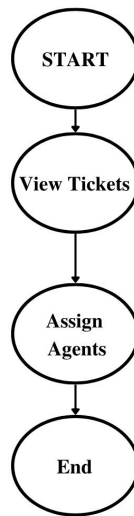
## 5.4 DATA FLOW DIAGRAMS



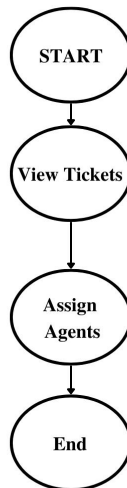
**Fig 5.4 User data flow**



**Fig 5.5 Update data flow**

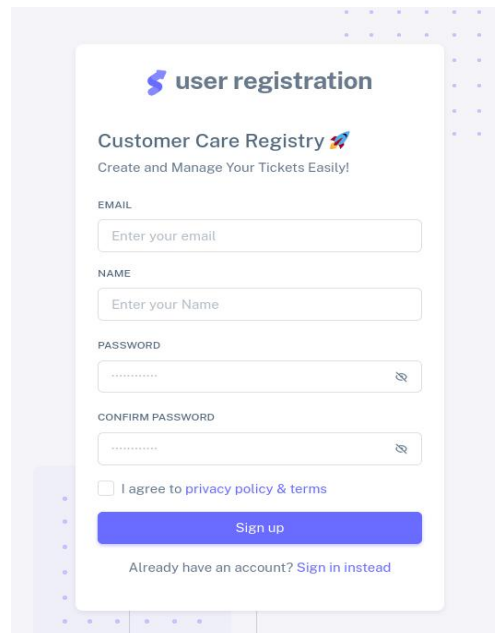


**Fig 5.6 Agent data flow**



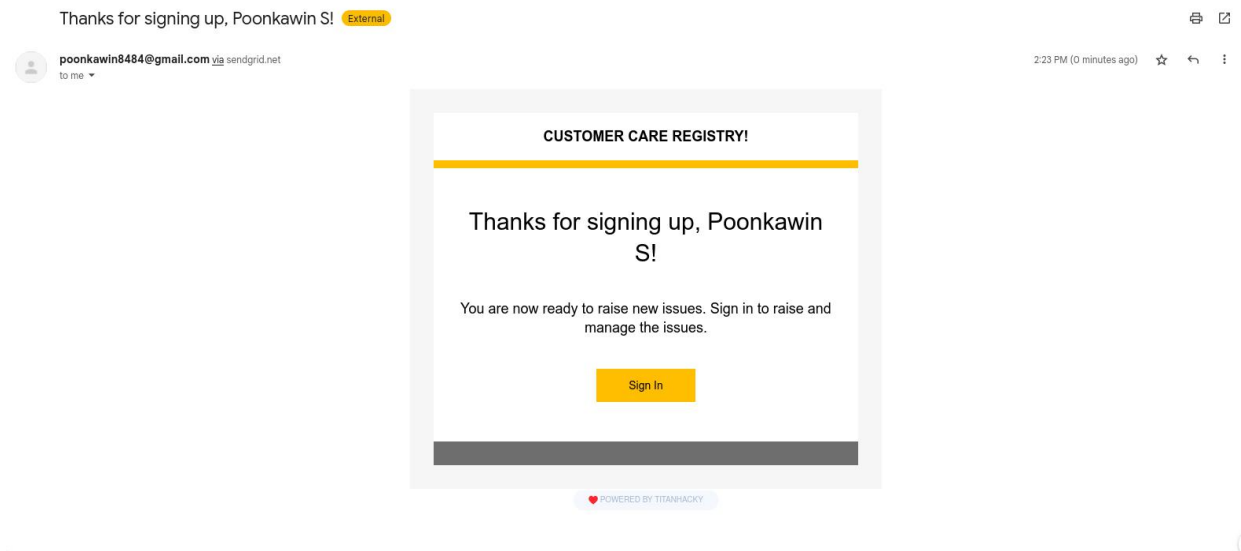
**Fig 5.7 Admin Data flow**

## CHAPTER 6 - OUTPUT

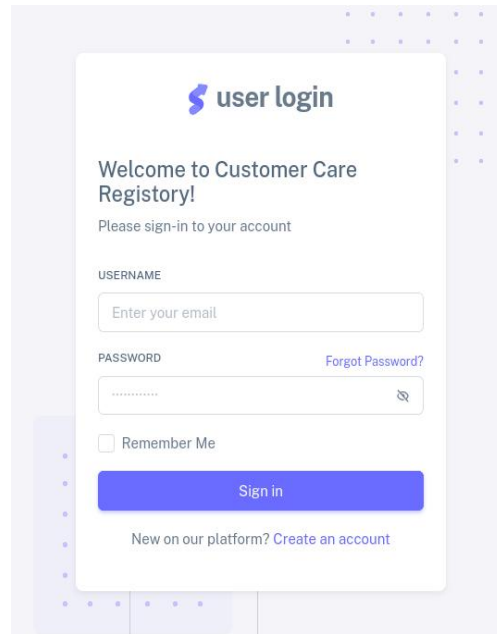


The image shows a user registration form titled "user registration" with a logo. Below the title is "Customer Care Registry" with a rocket icon and the tagline "Create and Manage Your Tickets Easily!". The form has four input fields: "EMAIL" (placeholder: "Enter your email"), "NAME" (placeholder: "Enter your Name"), "PASSWORD" (placeholder: "\*\*\*\*\*" with an eye icon), and "CONFIRM PASSWORD" (placeholder: "\*\*\*\*\*" with an eye icon). Below the fields is a checkbox labeled "I agree to privacy policy & terms". A blue "Sign up" button is at the bottom, followed by the text "Already have an account? Sign in instead".

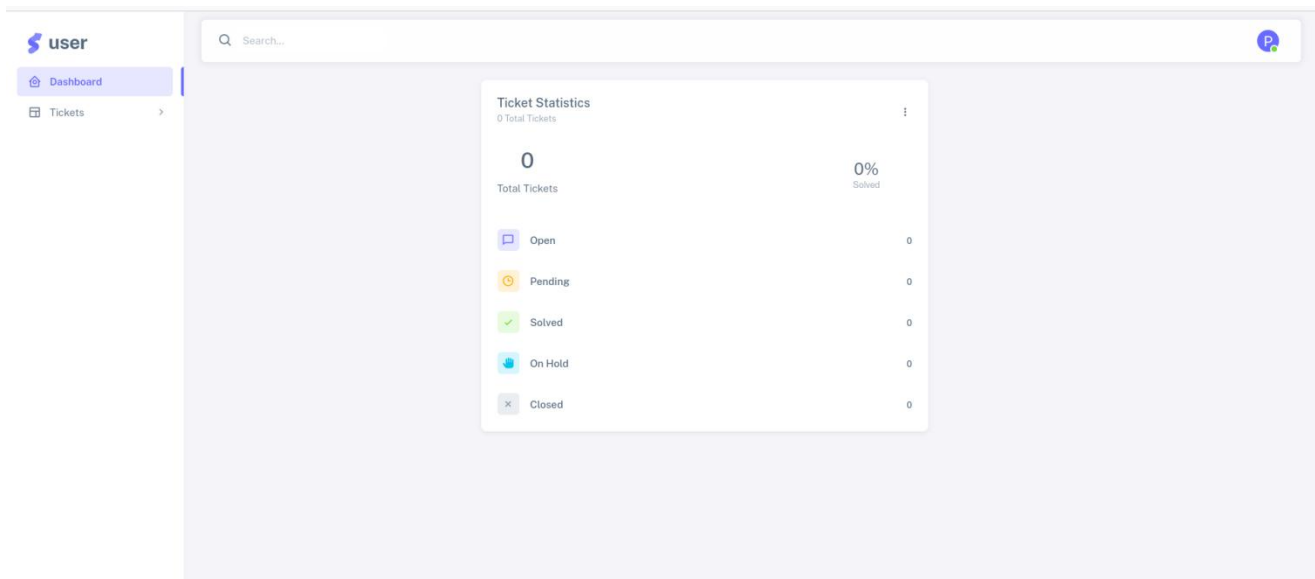
**Fig 6.1 User Registration page**



**Fig 6.2 Registration Mail**



**Fig 6.3 Login Page**



**Fig 6.4 User Dashboard**



user

Dashboard

Tickets

Search...

P

Tickets/Create New

Create Issue

Default label

SHORT DESCRIPTION

DETAILED ISSUE

Raise Issue

Fig 6.5 Create ticket

user

Dashboard

Tickets

All

Open

Pending

On Hold

Solved

Closed

Search...

P

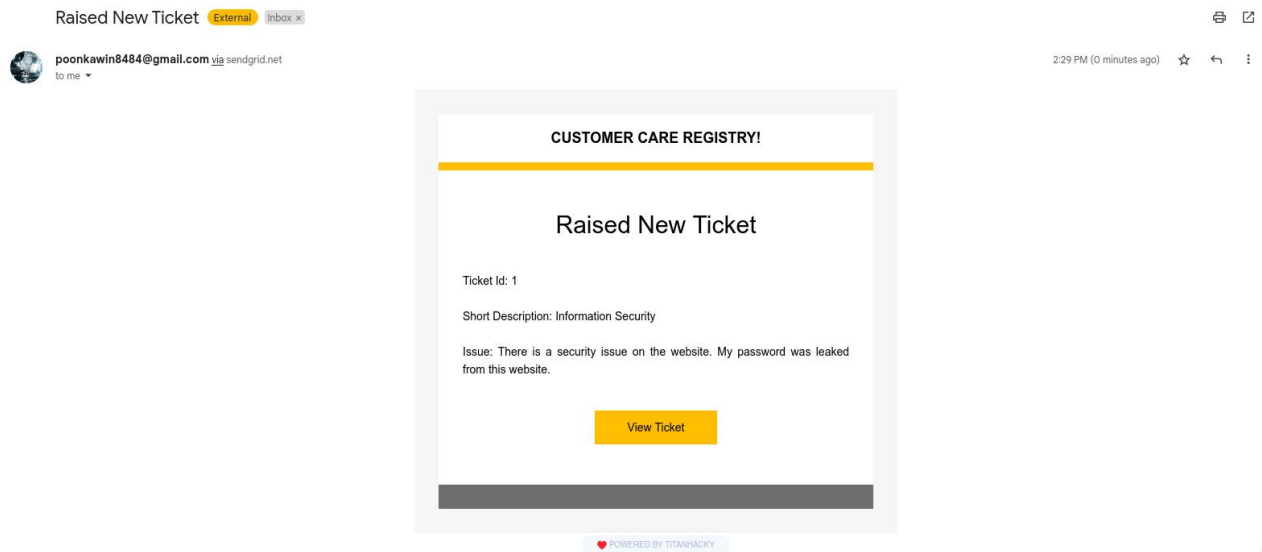
Tickets

Create New

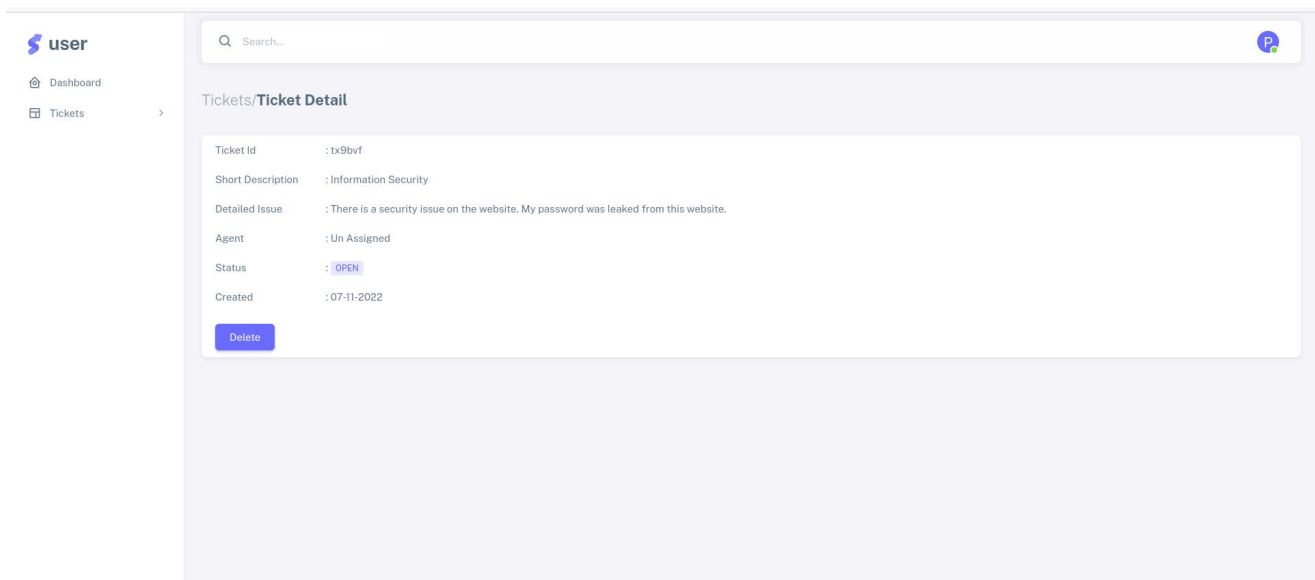
Raised new Ticket

DESCRIPTION	ISSUE	CREATED ON	VIEW
Information Security	There is a security issue on the website. My password was leaked from this website.	07-11-2022	<a href="#">View</a>

Fig 6.6 Raised New ticket



**Fig 6.7 Mail for Raising New ticket**



**Fig 6.8 Ticket Detail**

### admin login

Welcome to Customer Care Registry!

Please sign-in to your account

USERNAME

PASSWORD

[Forgot Password?](#)

☐ Remember Me

Sign in

New on our platform? [Create an account](#)

### admin registration

Customer Care Registry

Create and Manage Your Tickets Easily!

EMAIL

NAME

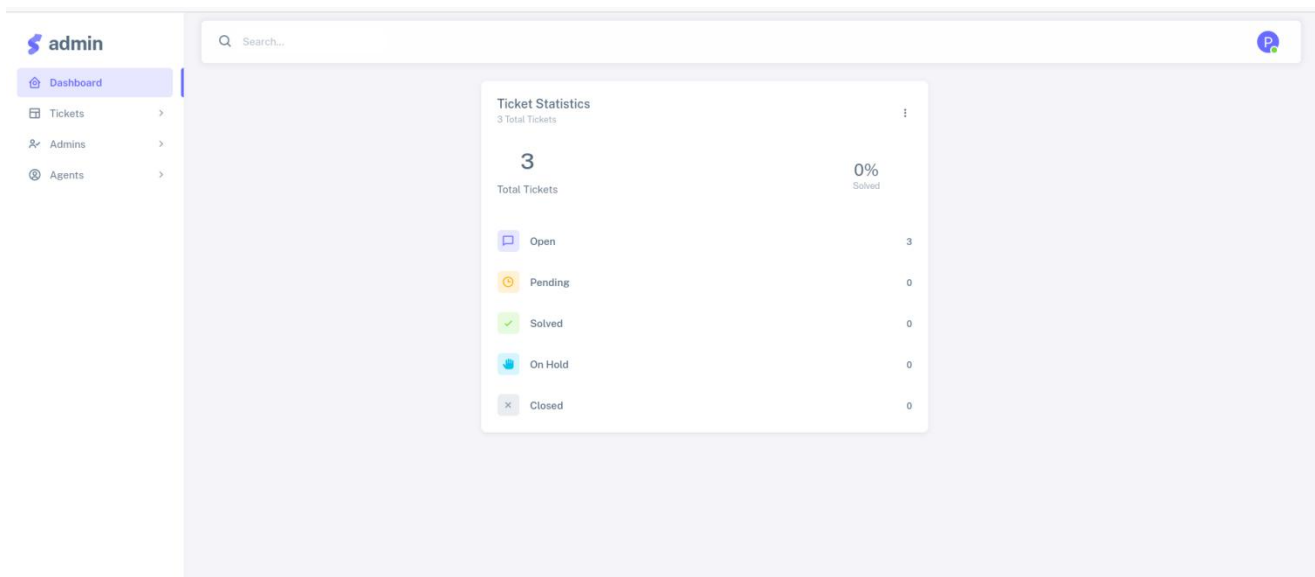
PASSWORD

CONFIRM PASSWORD

Sign up

Already have an account? [Sign in instead](#)

**Fig 6.9 Admin Login**



**Fig 6.10 Admin Dashboard**

DESCRIPTION	ISSUE	CREATED ON	VIEW
Information Security	There is a security issue on the website. My password was leaked from this website.	07-11-2022	<a href="#">View</a>
Poor Quality	Deliverables are low quality causing delays or rejection of deliverables.	07-11-2022	<a href="#">View</a>
Scope Creep	Requirements are interpreted in a broad way that goes beyond what was scoped.	07-11-2022	<a href="#">View</a>

**Fig 6.11 All Tickets**

**Tickets / Ticket Detail**

Ticket Id : tx9bvt

Short Description : Information Security

Detailed Issue : There is a security issue on the website. My password was leaked from this website.

Raised By : Poonkavin S

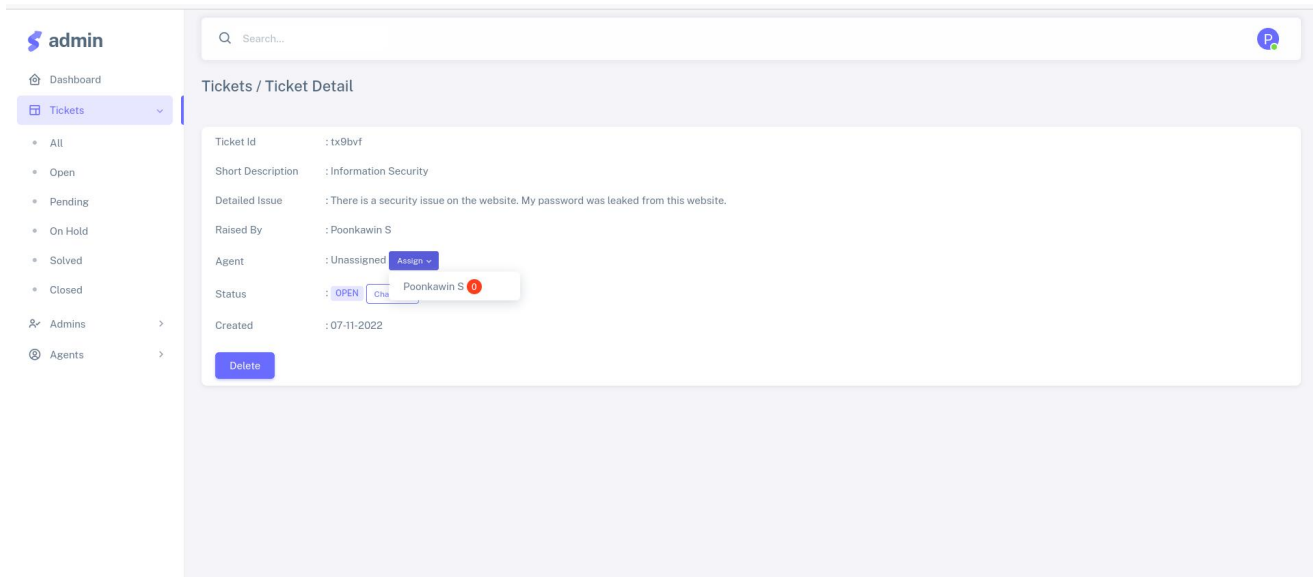
Agent : Unassigned [Assign](#)

Status : [OPEN](#) [Change](#)

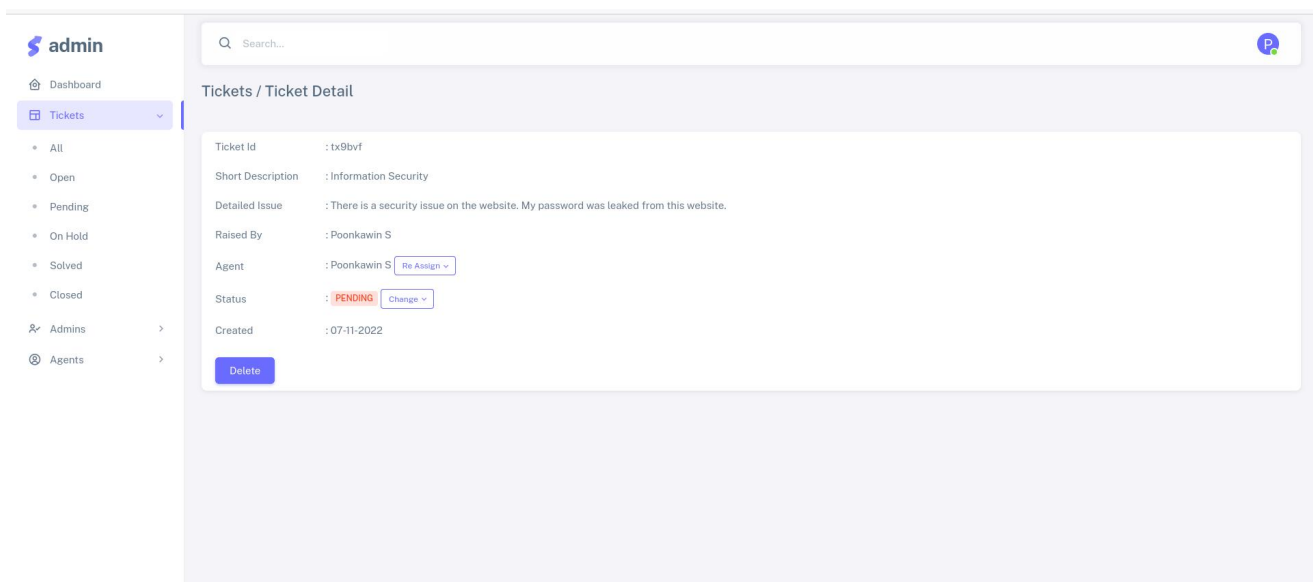
Created : 07-11-2022

[Delete](#)

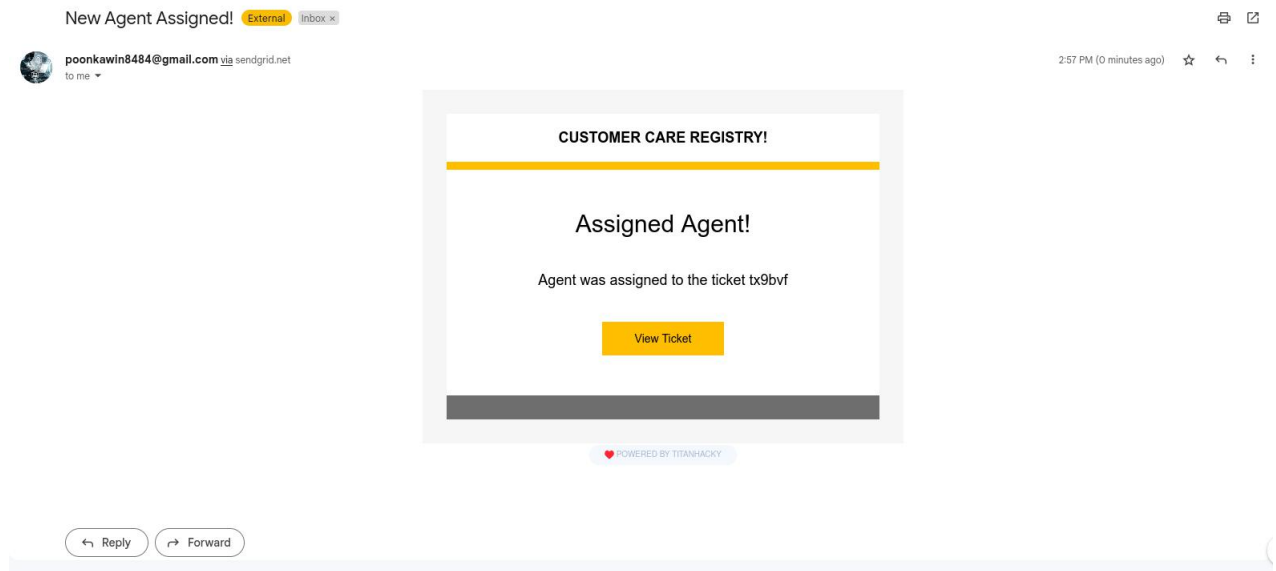
**Fig 6.12 Ticket Detail**



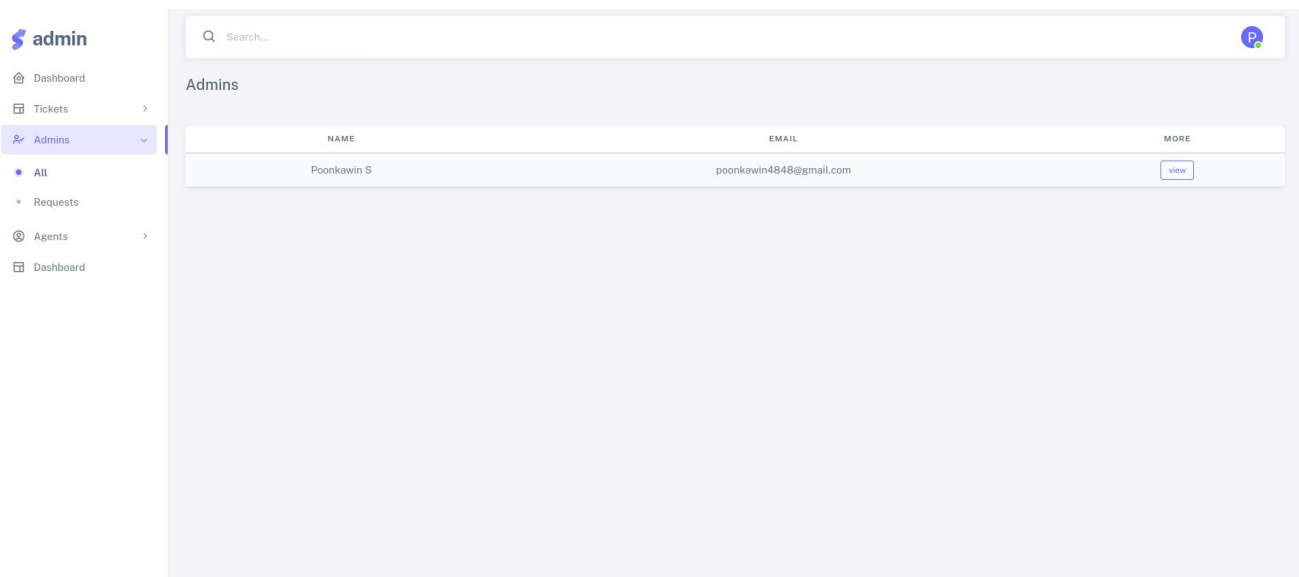
**Fig 6.13 Assign Agent**



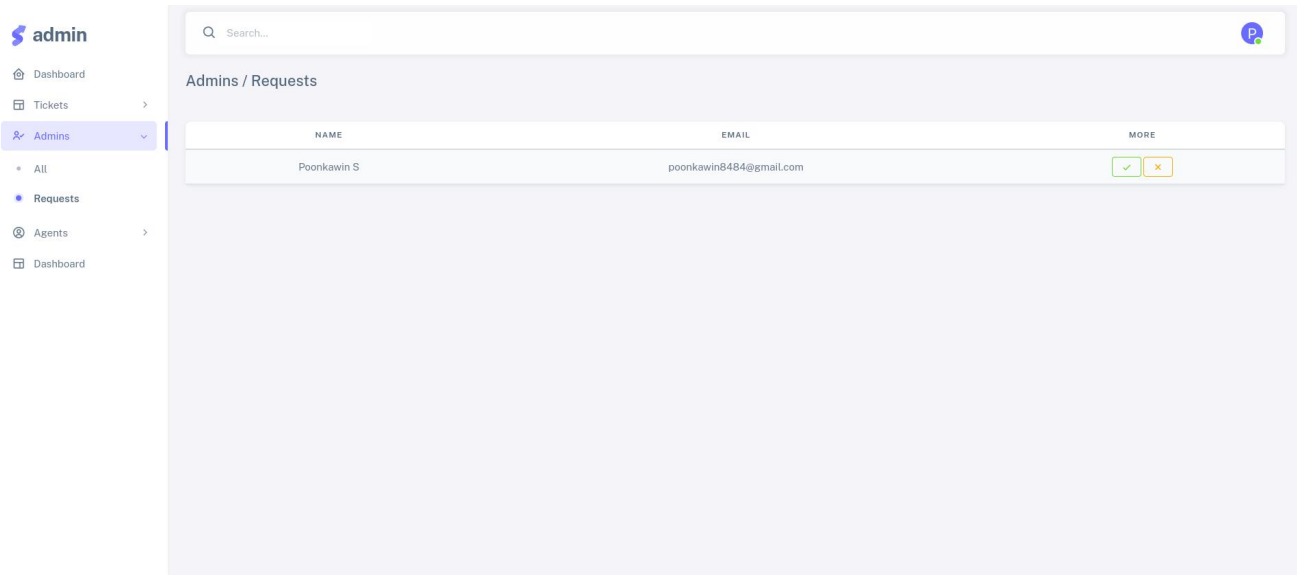
**Fig 6.14 Agent Assigned**



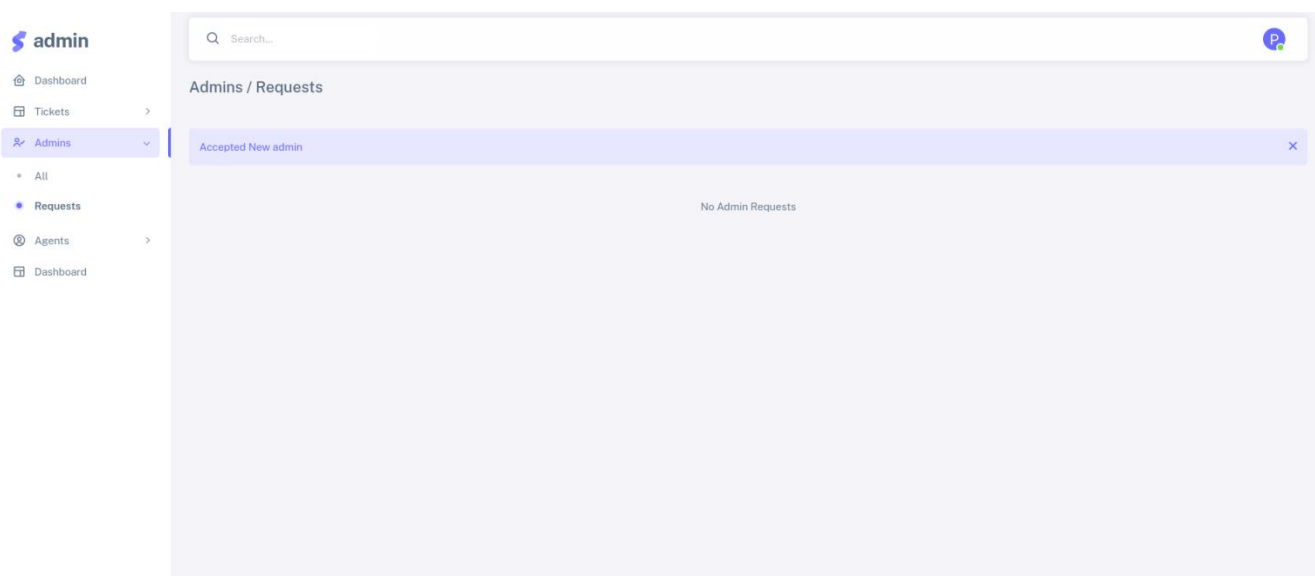
**Fig 6.15 Agent Assigned Mail**



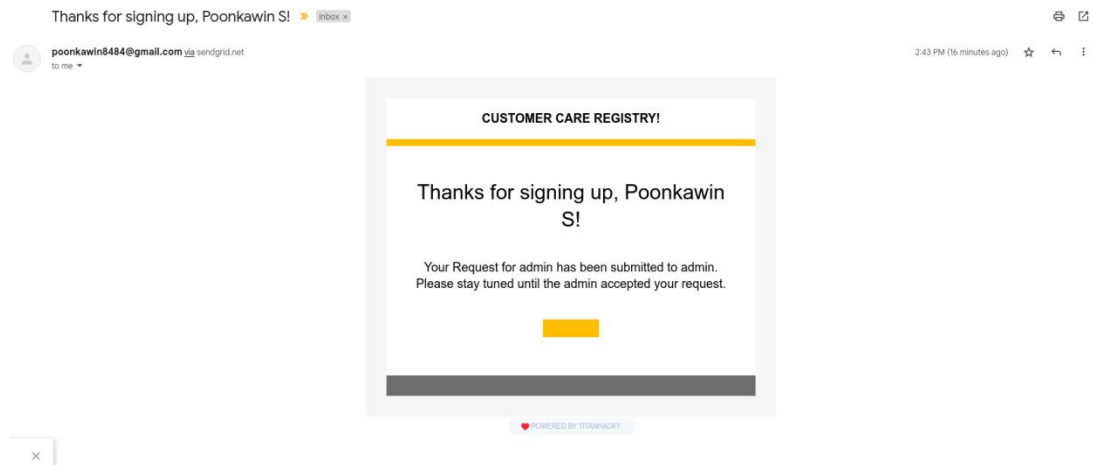
**Fig 6.16 All Admins**



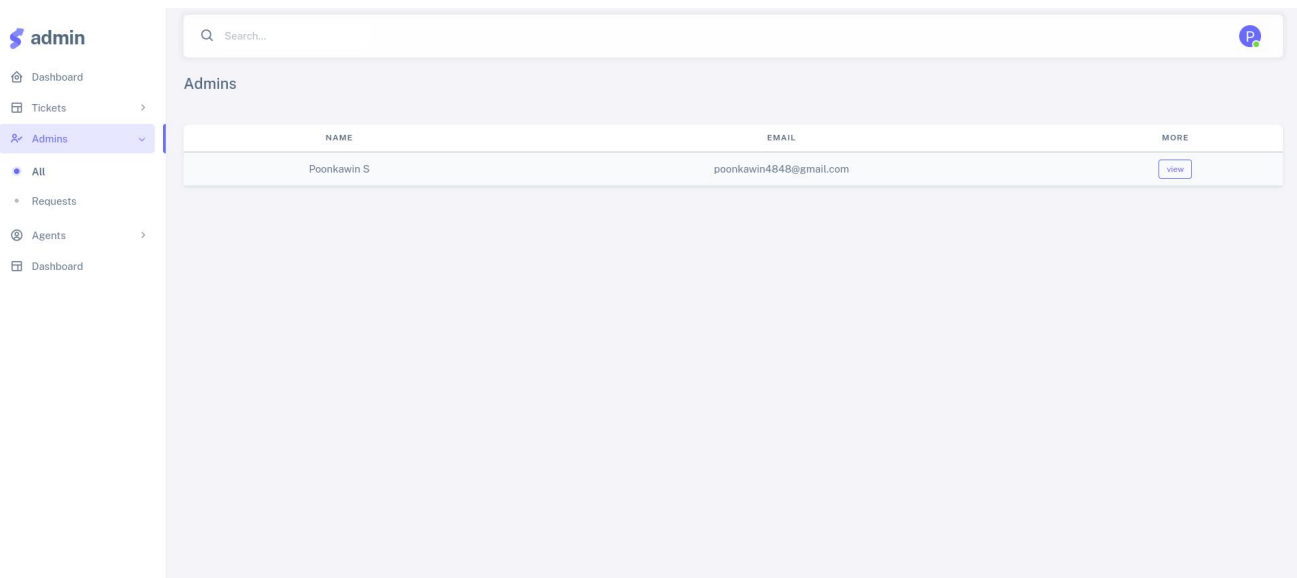
**Fig 6.17 Registered Admins**



**Fig 6.18 Accepted New Admin**

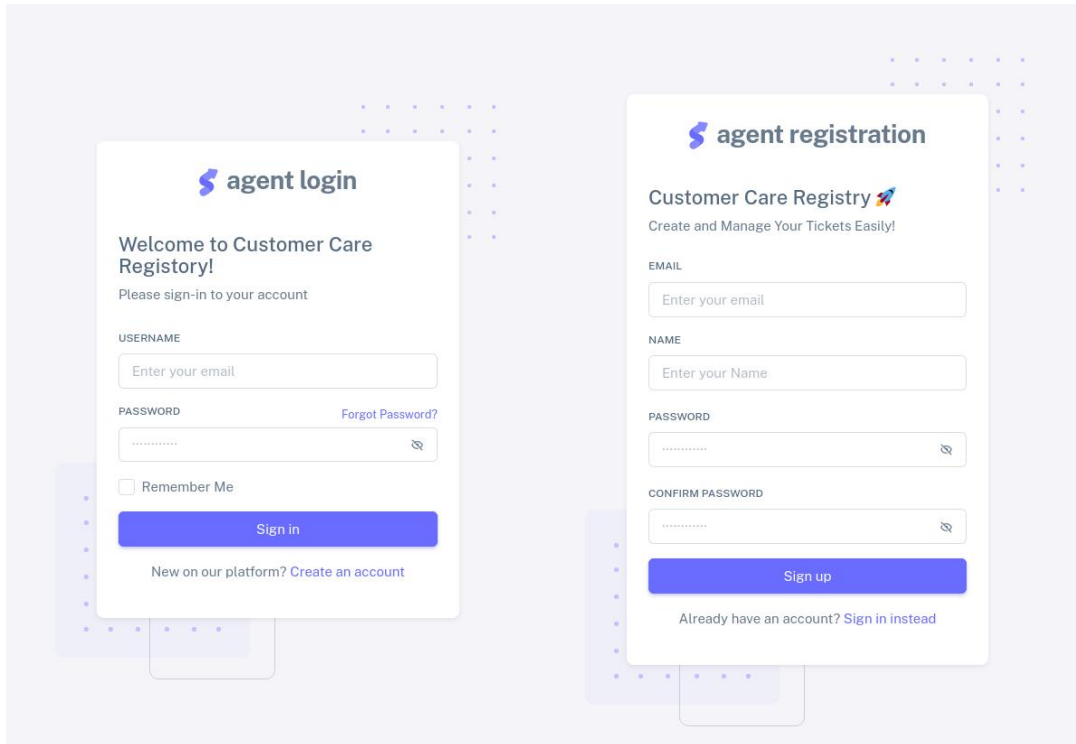


**Fig 6.19 Accepted New Admin Mail**

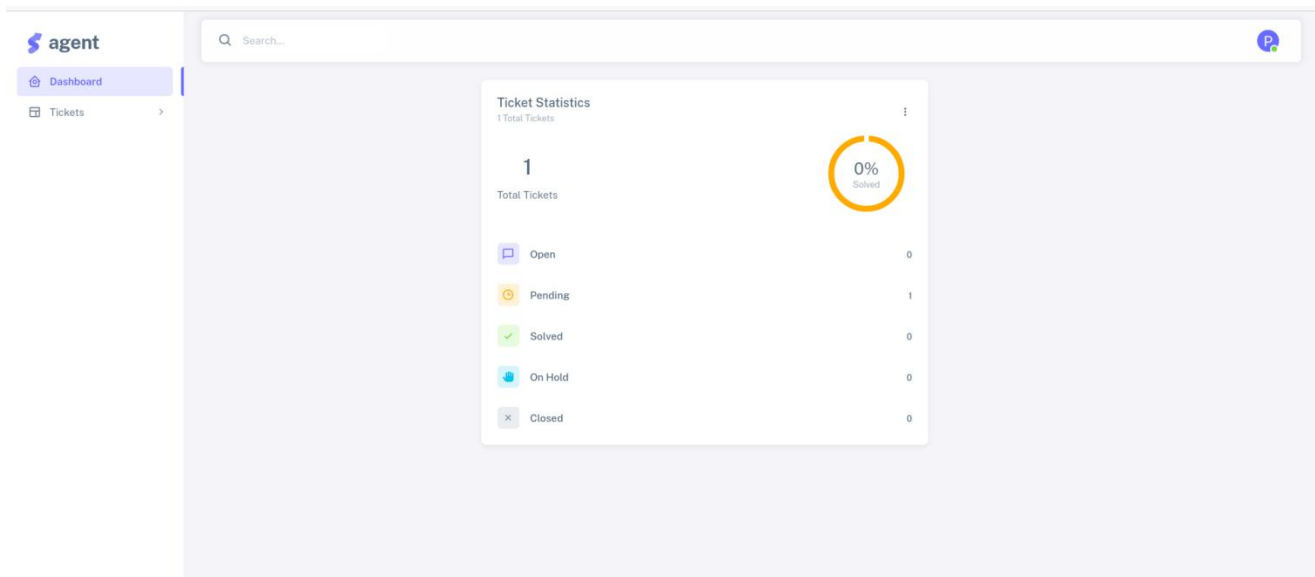


**Fig 6.20 All Agents**

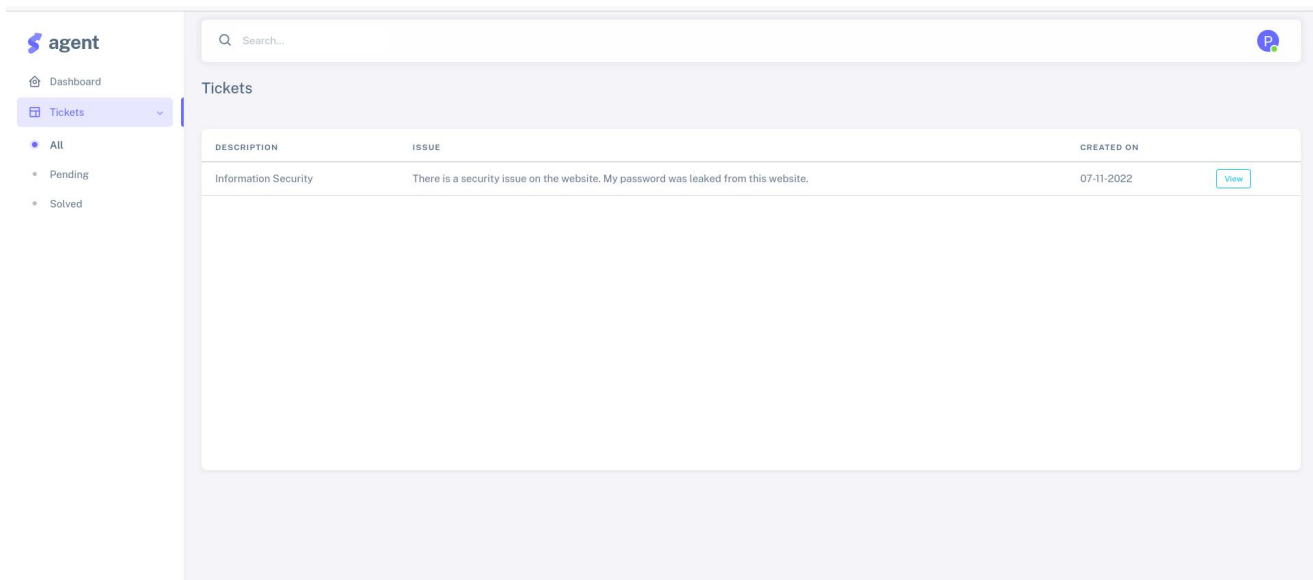




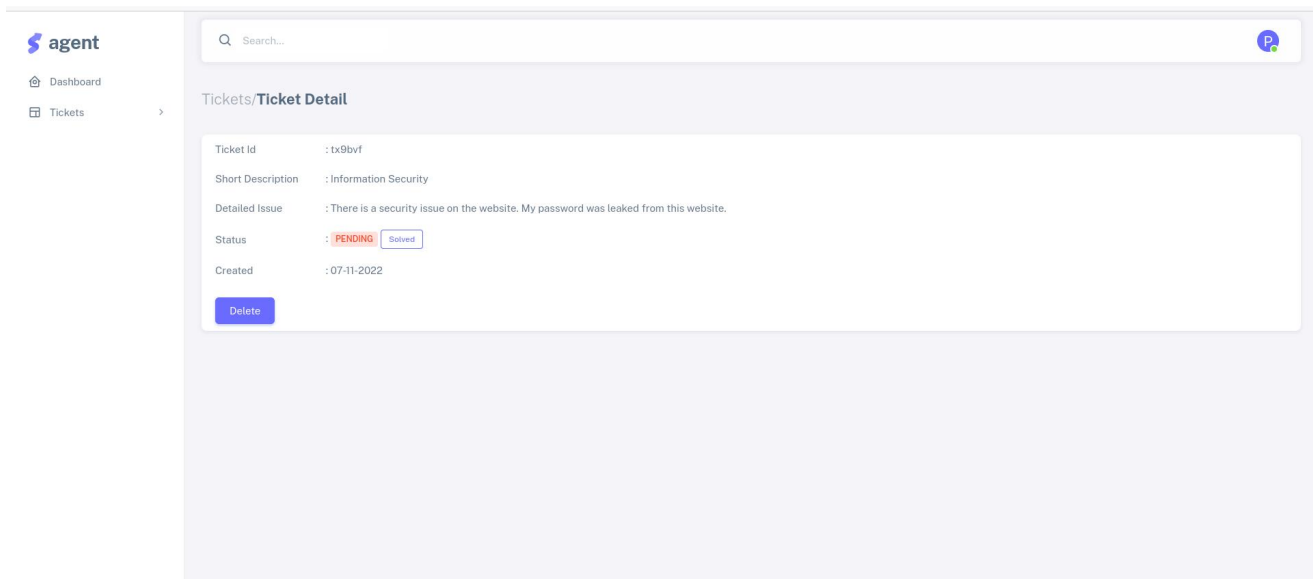
**Fig 6.21 Agent Login**



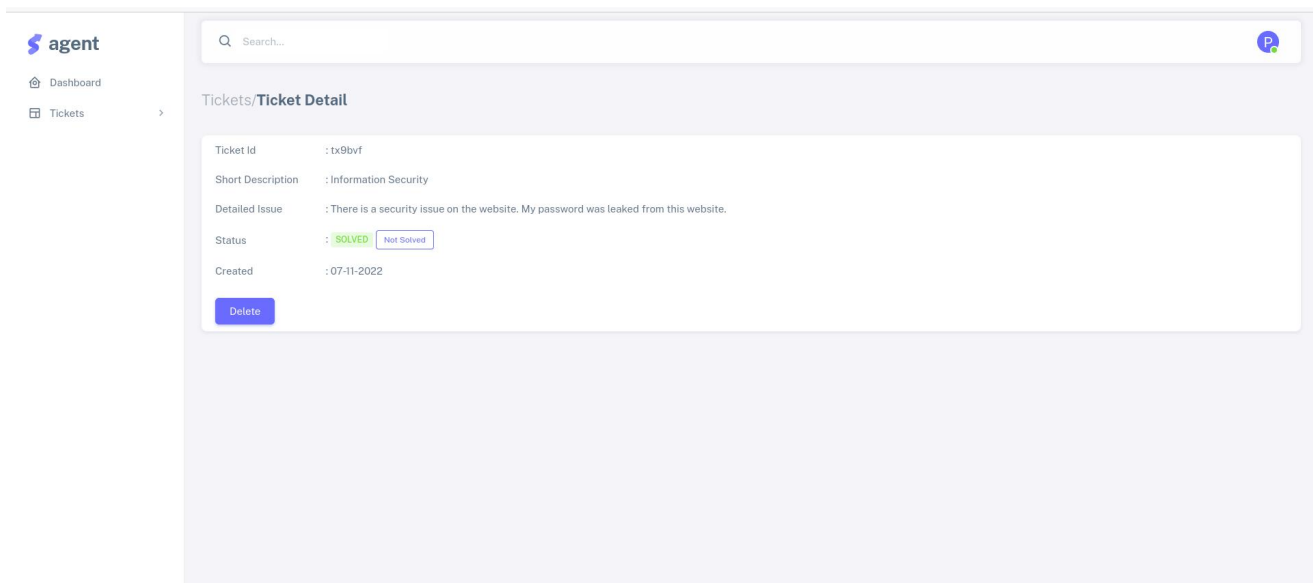
**Fig 6.22 Agent Dashboard**



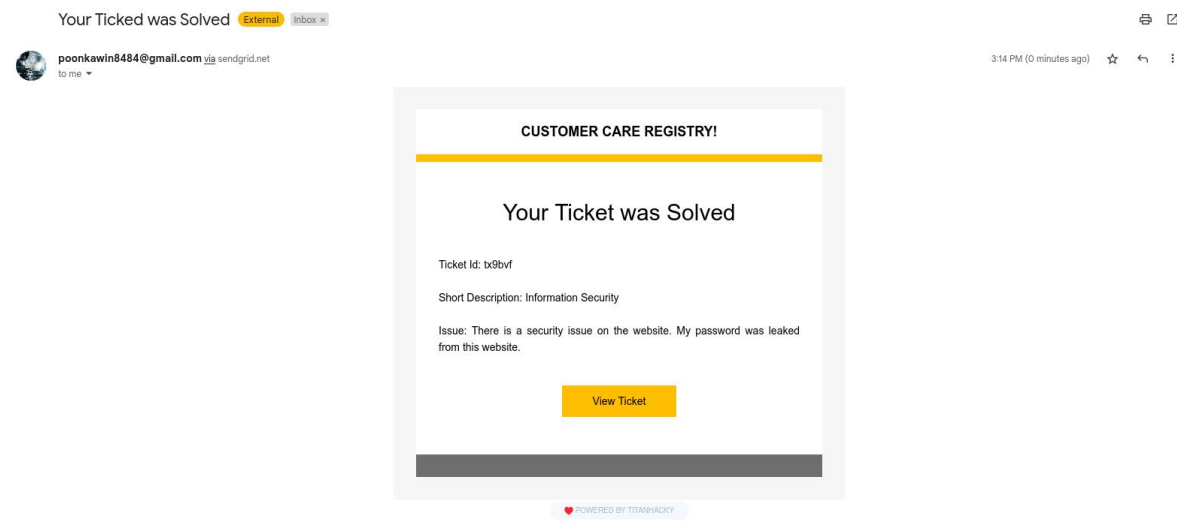
**Fig 6.23 Assigned Tickets**



**Fig 6.24 Ticket Detail**



**Fig 6.25 Solved Ticket**



**Fig 6.26 Solved Ticket Mail To User**

## **CHAPTER 7 - CONCLUSION**

In this project, we proposed Customer Care Registry to help the customer in processing their complaints and making the process in a transparent manner. The customer can register an account and start raising complaints. Following the customer's complaint, they will receive an email informing them that a ticket has been created. The admin has to choose an agent for the opened ticket. The customer will receive an email regarding the agent assignment after the admin has allocated one. Customer will be notified via email once the ticket has been resolved.

## REFERENCES

[1] Flask Tutorial

<https://flask.palletsprojects.com/en/2.2.x/tutorial/>

[2] W3schools “Introduction to CSS”

<https://www.w3schools.com/css/>

[3] Programiz “About python-programming”

<https://www.programiz.com/python-programming>

[4] Javapoint “mysql-create-user”

<https://www.javatpoint.com/mysql>