Service Provider Web Application

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Abstract :

Service Provider, a web application through which customers can request a service like electrical, plumbing, carpeting, painting, repairing & maintenance, cleaning, and many more. This project is primarily focused on providing service to customer's doorstep. This application is also provided with a feedback-based rating facility for the customer so that the quality of service can be improved. Customers are also able to complain to the shopkeeper about any service. The Admin has full control over the system and approves the registered shopkeeper. This web application is developed using some advanced technologies which are in great demand in the IT industry today.

I . INTRODUCTION :

In today's life, everyone is engaged with busy schedules and hectic tasks which make them deviate from family life. If any problem encounters unexpectedly, it distracts them and makes them choose over the work they have to accomplish primarily. It is significant to manage both professional and family life. In such circumstances, every one of us would have imagined a kind of house that doesn't have any fault in electrical devices, leaks in pipes, and a kind of house which never face any maintenance issues and every one of us has thought that life would be much better if no problem arises in getting service at your doorstep. In such a situation, online service providers play a vital role in today's life as it has so many advantages in our life because it makes our daily life easy. So, giving an idea to design and develop a system that provides many different services at your doorstep in just one click. A System that provides different categories of services like electrical, plumbing, carpeting, painting, repairing & maintenance, cleaning, and many more. To make it comfortable for all the users our system is user-friendly. The System is flexible as a service can be booked from anywhere you desire.

II . FUNCTIONALITIES

- Login and Sign Up system - Shopkeeper, Customer, Technician, Admin.
- Customers can request a service to hire a technician.
- The Customer will get OTP and the technician will have to enter that OTP to verify that he is doing his job
- Complaint from customers
- Feedback from customers
- The shopkeeper can view, update any service to process
- The shopkeeper can add, update and delete any technician details
- The shopkeeper can add, update customer details
- The shopkeeper can view the customer's request.
- The shopkeeper can view the feedback and complaints from customers.
- Send a notification/mail to the customer for service.
- The technician can check the service requested by the customer.

- The technician can comment about the service given to the customer and it will be notified to the customer and shopkeeper.

III . USER STORY

1 . As a customer I want to log in so that I can authenticate my profile**.**
2. As a customer I want to request service so that it will help to regulate my service.
3 . As a customer I want OTP so that I can give OTP to a technician and it will verify that he is doing his service.
4. As a customer I want a complaint box so that I can issue my complaint.
5. As a customer I want feedback so that I can increase the quality of service.
6 . As a Shopkeeper I want to log in so that I can authenticate my profile
7. As a shopkeeper I want to handle customer data so that I can add, view, update customer details anytime.
8. As a shopkeeper I want to handle technician data so that I can add, view, update, delete technician details anytime.
9. As a shopkeeper I want feedback from customers so that I can improve my service.
10. As a shopkeeper I want to see complaints so that I can resolve complaints ASAP.
11. As a shopkeeper I want to see customer pending requests so that I can solve customer requests ASAP.
12 . As a technician I want to log in so that I can authenticate my profile
13. As a technician I want to see customer requests so that I can know about customer's request details.
14. As an admin I want full access to the system so that I can manage and control applications.

IV . DESIGN

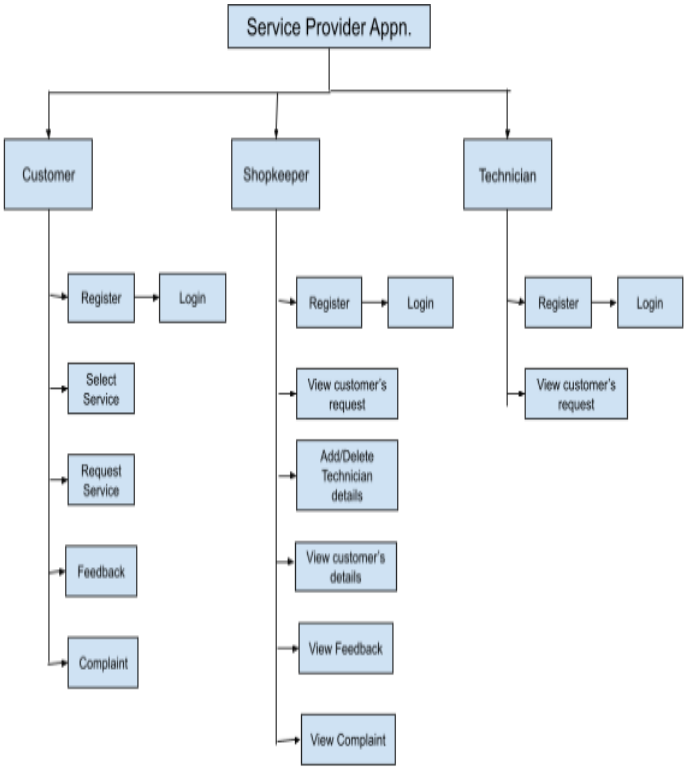
The project is developed using a specific software development lifecycle. I have created a modular design showing all the functionalities of all end users. Then I have created UML Models consisting of Use case diagram, Class diagram, Sequence diagram, and Activity diagram. After that, I designed the UI using Adobe XD.

Technologies -

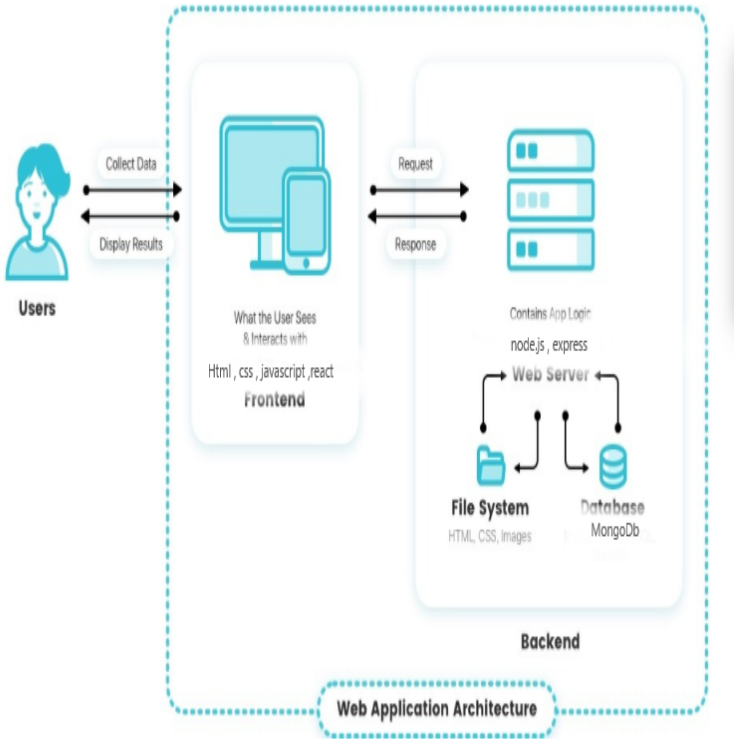
Multiple technologies are used in our system.HTML, CSS, JavaScript is used for front-end styling of applications. These languages are used to develop Front End UI. REACT.JS is used for the front-End UI interface / UI component and to fetch backend data through API in our application. We used NODE.JS as a backend runtime environment and Express.js is used as a backend web application framework for node.js. Database MongoDB is used to store all the data of our system.

Tools -

AdobeXD is used to create UI. VS code tool is used for backend and front end programming and to store data in MongoDB database MongoDB atlas tool is used.

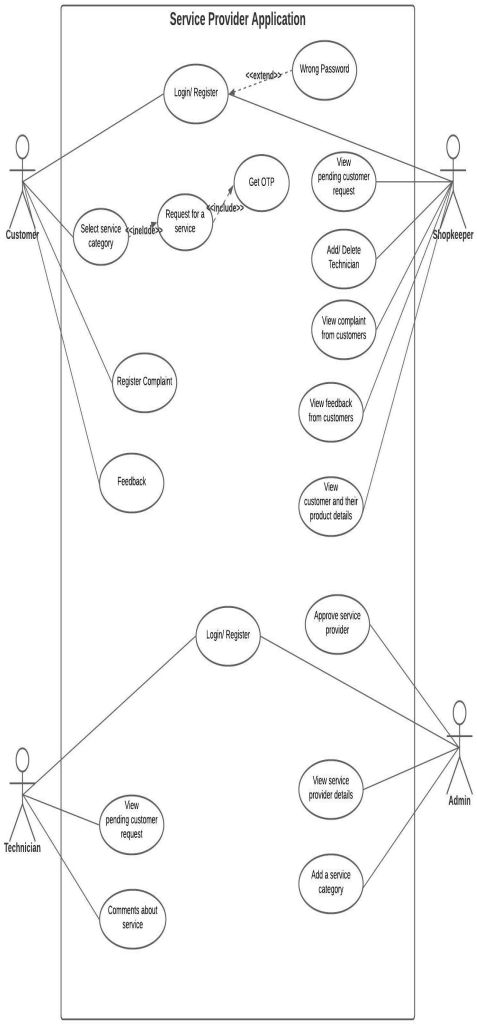


Web application Architecture :

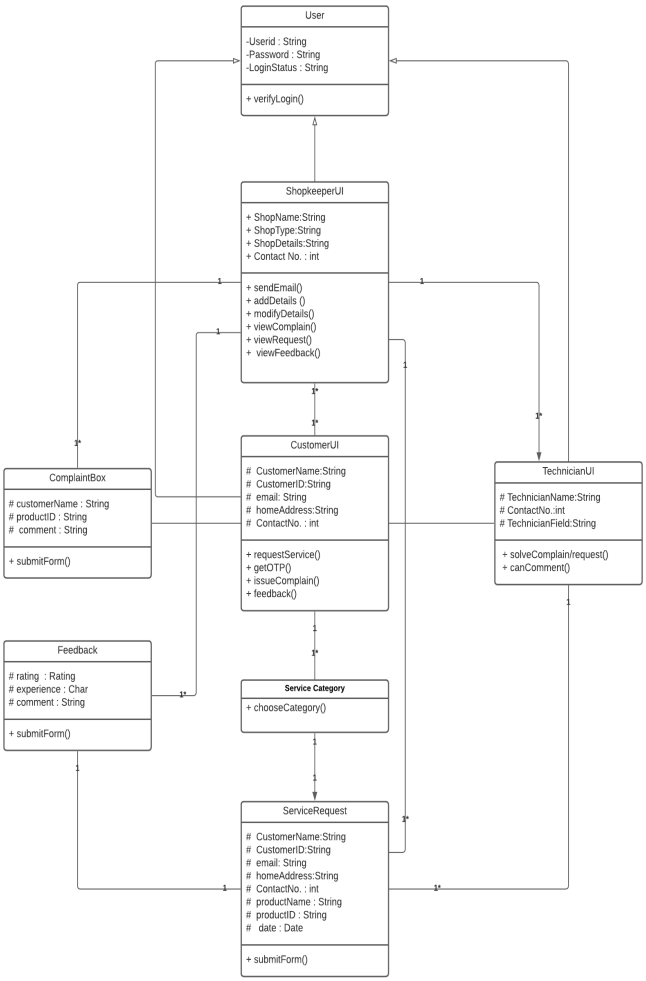


UML Model :

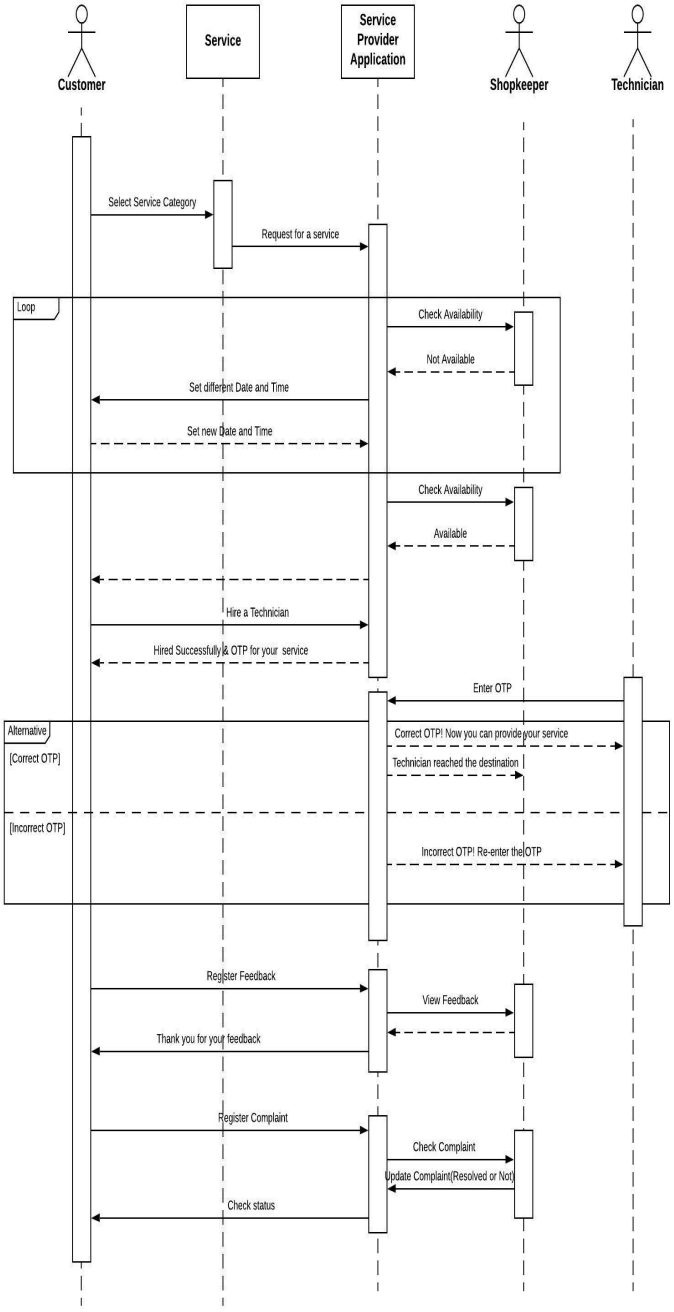
Use Case Diagram :



Class Diagram :

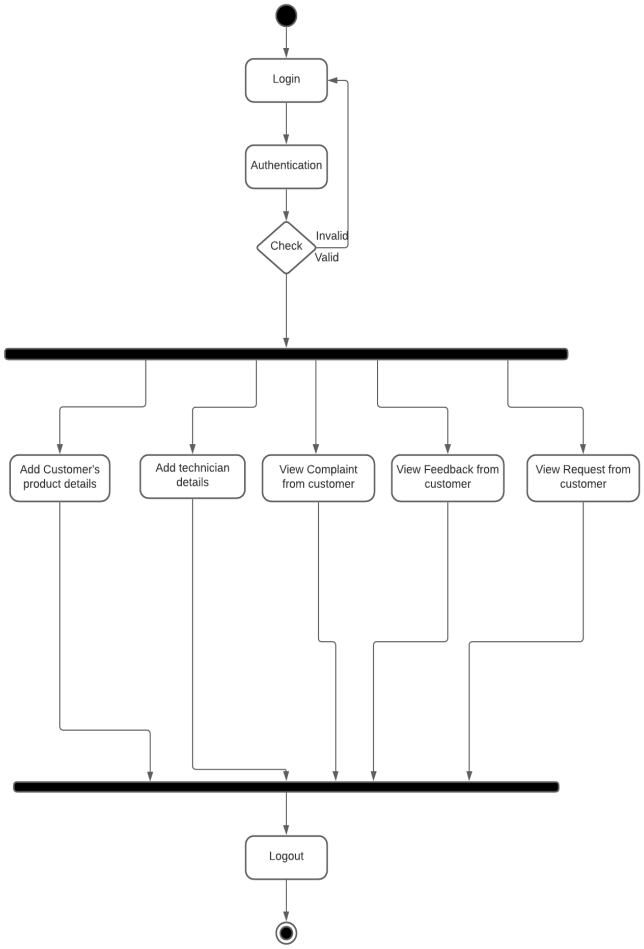


Sequence Diagram :

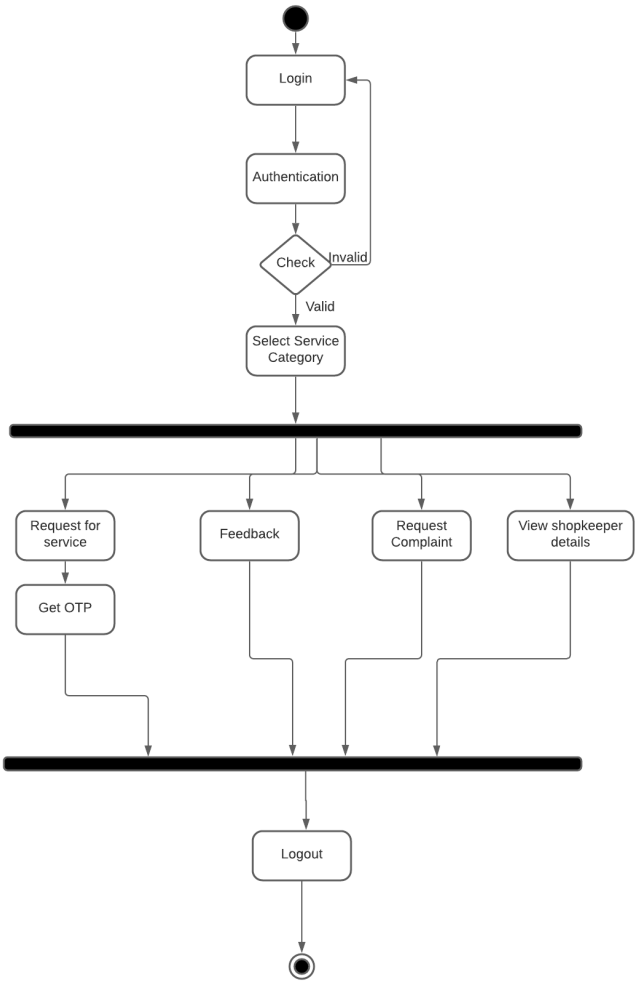


Activity Diagram

Shopkeeper :

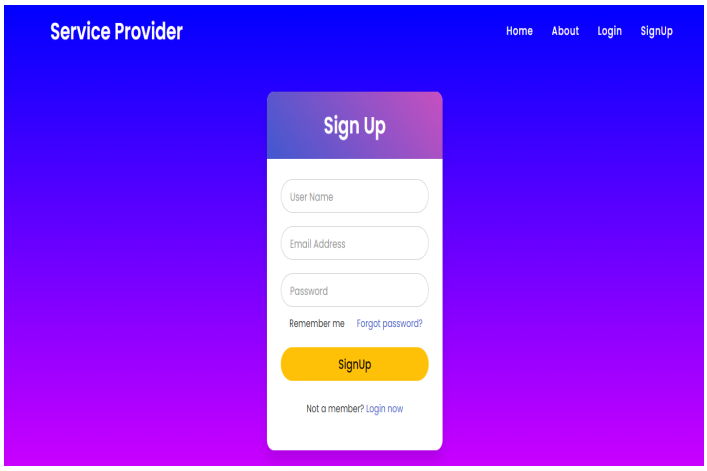


Customer :



V. IMPLEMENTATION

Sign Up / Log in: for new users signup page will be open and if a user is already registered in the application then log -in page will be opened.

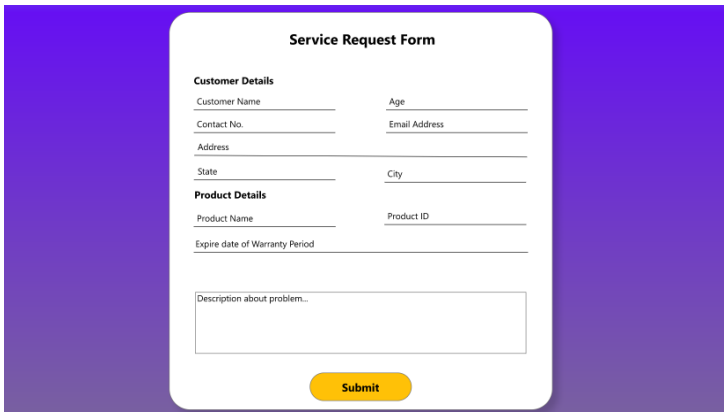


User details: when a new user is registered in the application a unique auto-generated user id will pop up.

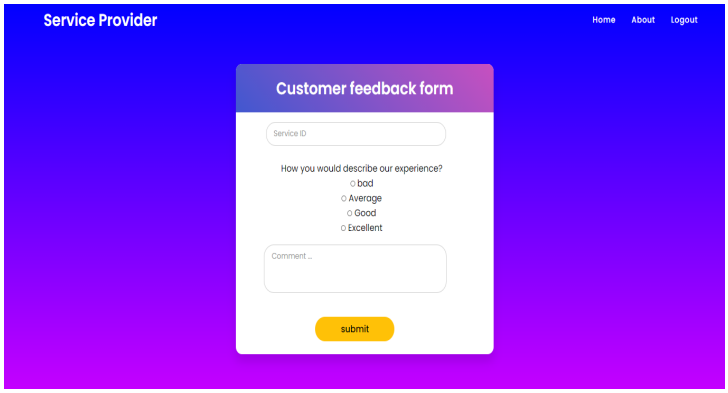
Select Service Category: The Customer can select the required service category.

View Shopkeeper details: Customer can view all registered shopkeeper details like shop name, shopkeeper name, and shopkeeper id.

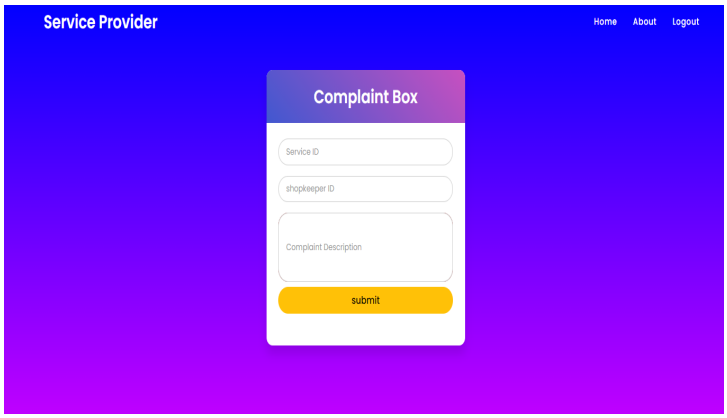
Customer Request Form: When customers select a category service request form will be opened. While submitting the form, a customer request will be sent to the appropriate shopkeeper.



Feedback Form: Customers can give feedback on the service provided by the shopkeeper.



Complaint Box: Customers can do complain if he/she is not satisfied with service.



Customer Details: Shopkeepers can see customer service requests, feedback, and complaint details.

Add and view Technician and customer Details: Shopkeepers can add and view technician and customer details.

VI . TESTING

1) Login / Signup :

Test Case ID : TU01
Test Scenario : Check Customer login with valid data
Test Steps : Go to localhost:3000/login
enter email and password
click submit
Test Data : email : guest1@gmail.com
Password : 1234
Expected Results: User should Login successfully
Actual Results : User Login Successfully
Pass/Fail : Pass

Test Case ID : TU02
Test Scenario : Check Customer login with invalid data
Test Steps : Go to localhost:3000/login
enter email and password
click submit
Test Data : email : guest1@gmail.com
Password : 1277
Expected Results : User should not Login successfully
Actual Results : Invalid Credentials
Pass/Fail : Pass

Test Case ID : TU03
Test Scenario : Check Customer login with invalid data
Test Steps : Go to localhost:3000/login
enter email and password
click submit
Test Data : email : guest177@gmail.com
Password : 1234
Expected Results : User should not Login successfully
Actual Results : Invalid Credentials
Pass/Fail : Pass

2) Service Request Form :

If registered shopkeeper id is : 65778

Test Case ID : TU04
Test Scenario : Check if Customer enter with valid data then respective shopkeeper can see his/her customer request
Test Steps : Go to localhost:3000/customerform
enter all details
click submit
Go to localhost:3000/request
Test Data : Customer ID : 16678
Customer Name : guest2
Product ID : 123M
Product Name : AC
Shopkeeper ID : 65778
Expected Results : User should submit successfully and shopkeeper can see his/her request details .
Actual Results : Form submitted Successfully
Pass/Fail : Pass

Test Case ID : TU05
Test Scenario : Check if Customer enter with Invalid data
Test Steps : Go to localhost:3000/customerform
enter all details
click submit
Go to localhost:3000/request
Test Data : Customer ID : 16678
Customer Name : guest2
Product ID : 123M
Product Name : AC
Shopkeeper ID : 65789
Expected Results : User should not submit successfully
Actual Results : enter valid details
Pass/Fail : Pass

3) Customer feedback form :

Test Case ID : TU06
Test Scenario : Check if Customer enter with valid data
Then the respective shopkeeper can see his/her feedback details.
Test Steps : Go to localhost:3000/feedbackform
enter all details
click submit
Go to localhost:3000/feedbacks
Test Data : Shopkeeper ID : 65778
Experience : Good
Comment : service was good
Expected Results : User should submit successfully and shopkeeper can see his/her feedback details
Actual Results : Form submitted Successfully
Pass/Fail : Pass

Test Case ID : TU07
Test Scenario : Check if Customer enter with invalid data
Test Steps : Go to localhost:3000/feedbackform
enter all details
click submit
Go to localhost:3000/feedbacks
Test Data : Shopkeeper ID : 65890
Experience : Good
Comment : service was good
Expected Results : User should not submit successfully
Actual Results : enter valid details
Pass/Fail : Pass

4) Customer Complaint box :

Test Case ID : TU08
Test Scenario : Check if Customer enter with valid data
Then the respective shopkeeper can see his/her complaint details
Test Steps : Go to localhost:3000/complaintform
enter all details
click submit
Go to localhost:3000/complaints
Test Data : Shopkeeper ID : 65778
Service ID : 78998
Comment : service was not good.
Expected Results : User should submit successfully and shopkeeper can see his/her complaint details
Pass/Fail : Pass

Test Case ID : TU09
Test Scenario : Check if Customer enter with invalid data
Test Steps : Go to localhost:3000/complaintform
enter all details
click submit
Go to localhost:3000/complaints
Test Data : Shopkeeper ID : 65999
Service ID : 78998

Comment : service was not good.
Expected Results : enter valid details
Pass/Fail : Pass

VII . Results and Discussions :

A functional web application in which customers have to log in first. Then they can request a particular service. This request goes to the shopkeeper and technician dashboard. Shopkeepers can manage the details of technicians. Customers can also give feedback and complaints about any service. Shopkeepers can view feedback and complaints from the customer so that they can improve their services. To verify, the technician is doing his job or not, there is an OTP system in which the customer will receive the OTP and it will be shared with the technician only when he goes to do his job

VIII . CONCLUSION

A service provider web application is developed which helps in online service booking. Service Provider application is the new trend in the market of on-demand applications. Although services like UrbanClap, Handyman, and Taskrabbit are already existing in the market; there are still many possibilities that we can explore and execute. With proper market research, the inclusion of vital features, user's needs, followed by appropriate marketing can make your app successful.

IX . FUTURE WORK

In the future, we can develop a web application in which we will put map navigation for the technician to find the location of the customer and also for the customer to track the technician using GPS. We can also add payment methods to our system so that the customers can pay online.

X. REFERENCES

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- https://ejs.co/
- https://nodejs.org/en/
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