Project Report

on

“On Demand Service”

“ODS”

SRI BALAJI UNIVERSITY

SCHOOL OF COMPUTER STUDIES

Program: Master of Computer Application

2023-25 Batch

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Project Guide:

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CERTIFICATE

Certified that the Project Report entitled **"On Demand Service"**, submitted by **LAKHAN BANSODE, ATHARVA SHELKE, AMOL CHIPTE** AND **VIVEK TETGURE** of MCA, is their own work and has been carried out under my supervision. It is recommended that the candidates may now be evaluated for their work by the University.

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ACKNOWLEDGEMENT

We feel immense pleasure to introduce “ON DEMAND SERVICE” as our major project.

I express my sincere thanks to our instructor Prof. Debidutta Sharma who guided us to the successful completion of this project report. We take this opportunity to express our deep sense of gratitude for their individual guidance, constant encouragement and immense motivation which have sustained our efforts at all stages of this project report. We grateful and appreciate all the staff members of the School of Computer Application for their cooperation and support.

I extend my sincere thanks to our principal Dr . G. Y. Shitole and vice Principal Dr. Richa Purohit for his support and for all the facilities provided for the preparation of this project report.

Also, we wish to thank our parents & friends who helped us a lot in collecting data, pictures and continuous help and support.

Finally, we would wish to thank everyone involved in this project time.

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ABSTRACT

The On-Demand Service is a innovative platform designed to meet the dynamic and immediate needs of users in various domains. Leveraging advanced technology, the service seamlessly connects users with a wide range of offerings, ensuring convenience and efficiency. Key features include real-time demand fulfilment, user-friendly interfaces on web and mobile, secure payment systems, and a robust feedback mechanism. From transportation and delivery services to skilled professionals and product rentals, the On-Demand Service optimizes resource allocation, enhances accessibility, and transforms traditional service models. This abstract encapsulates a scalable and adaptive solution catering to the evolving demands of modern consumers.

INTRODUCTION TO “ODS”

- We are Very Happy to Introduce our Project “ON-DEMAND SERVICE SYSTEM”, which is a very useful and preferred by Peoples. The Computerized Systems are more reliable than the Manual Works.

- An “ON-DEMAND SERVICE SYSTEM” is a computerized System that provides Quick Service and Response over a Internet.

- On-demand services represent a transformative shift in how we access and experience products and services. These innovative offerings harness the power of technology to provide immediate and tailored solutions to our everyday needs.

- It is Accessible through Web Browser, which enable users to request a wide array of services, from transportation and food delivery to home maintenance and healthcare, with unprecedented convenience.

2.1 MOTIVATION

Convenience for Customers:

Provides quick and easy access to home services, allowing customers to request help whenever they need it, even outside regular hours.

Increased Job Opportunities:

Enables service providers to connect with more clients, reducing downtime between jobs and boosting their income.

Quality Assurance:

Ensures that only verified professionals are listed, giving customers confidence in the quality of service they will receive.

Efficiency through Technology:

Automates scheduling, payments, and communication, making it easier for service providers to manage their work and focus on their services.

Competitive Advantage:

Helps providers stand out in the market, attracting more customers by offering modern, convenient solutions that others may not provide.

2.2 PROBLEM STATEMENT

Traditional clinic services often face limitations such as restricted operating hours, long wait times, and limited accessibility, leading to patient dissatisfaction and missed opportunities for timely care. In today's fast-paced environment, patients increasingly demand convenient, immediate access to healthcare. Without a flexible, on-demand service model, clinics may struggle to retain patients, remain competitive, and fully utilize their resources, ultimately limiting growth and patient outcomes.

Key Challenges:

- Limited availability during non-business hours.
- Long wait times for appointments.
- Inconvenience for patients needing urgent but non-emergency care.
- Missed revenue opportunities due to unserved patients.
- Inability to fully optimize clinic capacity and resources.

2.3 OBJECTIVES

The primary objective of on-demand services is to provide immediate and convenient solutions to consumer needs and preferences. These services are designed to:

Enhance Convenience:

On-demand services aim to make people's lives easier by allowing them to access goods and services quickly and efficiently, often with a few taps on a mobile app. This convenience is a central goal, especially in our fast-paced, modern lifestyles.

Transparency:

Rating and feedback systems, common in on-demand platforms, enhance transparency and trust. Users can make informed choices based on the experiences of others, and service providers are incentivized to maintain high standards.

Cost-Effectiveness:

On-demand services can reduce costs for both consumers and service providers. They often operate with lower overhead and can pass those savings on to customers.

Accessibility:

On-demand services are designed to be accessible 24/7, catering to the anytime, anywhere nature of modern life.

Scalability:

On-demand services often aim to scale quickly to meet growing demand and expand into new markets or offer additional services.

User Satisfaction:

Ultimately, the primary goal of on-demand services is to ensure high levels of user satisfaction by meeting their immediate needs and making their lives more convenient.

2.4 PURPOSE & GOALS

Purpose:

- ✓ **Enhance Accessibility:** Provide customers with easy access to home services, connecting them with professionals when they need help.
- ✓ **Streamline Operations:** Use technology to simplify the booking, scheduling, and payment processes for both customers and service providers.
- ✓ **Improve Service Quality:** Ensure that customers can choose from verified professionals, leading to better service outcomes and increased customer satisfaction.

Goals:

- ✓ **Increase Customer Satisfaction:** Deliver quick, reliable services that meet customer needs and expectations, fostering loyalty and repeat business.
- ✓ **Expand Market Reach:** Attract more service providers and customers by operating in multiple locations and offering a wide range of services.
- ✓ **Optimize Provider Efficiency:** Enable service providers to manage their workload effectively, reducing downtime and maximizing their income potential.
- ✓ **Build a Trusted Platform:** Create a reliable platform where customers feel safe to hire professionals based on reviews and ratings.
- ✓ **Gather Data for Improvement:** Collect insights on user behavior and service performance to continuously enhance the platform and services offered.

2.5 SCOPE & LIMITATIONS

The scope of on-demand services is extensive and continues to evolve as technology advances and consumer behaviors change. The concept of on-demand services has gained traction across various industries, creating new business opportunities and reshaping traditional service models.

Our system is developed for a particular city. So, we'll modify our web-app to avail for more cities in future. We'll add map navigation feature in the future. So that service provider can reach customer's home easily.

3.1 LIMITATIONS OF EXISTING SYSTEMS

We have observed following limitations in existing system:

- Existing system is offline.
- Difficult to manage records.
- No time limit for service to be provided.
- No guaranteed service.
- 24 hours service is not available.
- No security.
- Service record stored in register.
- After meeting with customer, service provider provides service & customer make payment.
- Difficult for customer to find any service in emergency at any time or place.

3.2 PROJECT PERSPECTIVE & FEATURES

- ✓ **Booking & cancellation:**

  Most of the time, a customer wants to cancel their booking for some reason. That's why on-demand mobile apps should possess this feature that allows customers to cancel the booking without trouble. Furthermore, it must also let customers reschedule the booking based on their comfort and time schedule.

- ✓ **Payment system:**

  These allowing users to make mobile payments for products and services directly to the team. Besides the basic credit cards, debit cards, and net banking, the addition of virtual wallets will prove to be highly beneficial to increase sales. Thus, this can be feature that should will be added to Site (Future Enhancement).

- ✓ **Rating & review options:**

  Incorporating the option for customers to deliver their feedback can produce a specific type of trust that other apps or websites normally lack. So, when customers can rate your products/services and review them, this will allow them to share their experience with other customers and help them to make an informed decision.

- ✓ **Easy & seamless interface:**

  An excellent website should be easy to use and informative too. It must have details and take no effort to book or cancel products or services as users wish. Moreover, the customers should be able to explore the options when searching for things, and there should be direct filtering and sorting options.

3.3 STAKEHOLDERS

1. ADMIN

- Admin deals with the system operation.
- Admin manage the functionalities of system like managing inquires, managing the service provider, managing charges, booking services, service category, customers.

2. SERVICE PROVIDER

- Service provider is the user of the system which offers there services to the customers.
- Service provider can manage their services in the system, view customer details and requests for home services, manage booking services and can view feedback of customers of their services and showcase their service category and experience to the customers.

3. CUSTOMER

- Customer is the user of the system which uses the functionalities and services provided by the system.
- A customer can view service category and service provider details.
- Customer can request for an appointment and can give there feedback on the Service provider services.

4. VISITOR

- Visitor is also the user of the system that visits the system without getting registered into the system.
- Visitor can view service category, service provider's details and feedback

3.4 SOFTWARE REQUIREMENT SPECIFICATION:

- **Functional Requirements**: -

The functional requirements of an On-Demand Service system typically encompass a variety of features and capabilities to ensure the platform's effectiveness and user satisfaction. Here are some common functional requirements for On-Demand Service systems:

- **User Registration and Authentication:**
  Users should be able to create accounts, log in securely, and manage their profiles.

- **Service Request and Booking:**
  Users should be able to request services, specify preferences, and book them in real-time.

- **Service Provider Matching:**
  The system should match service requests with available and qualified service providers based on location, availability, and skills.

- **Service History:**
  Users should have access to their service history, including past transactions and details.

- **Search and Filter:**
  Users should be able to search for specific services and service providers, applying filters as needed.

- **Cancellation:**
  Provide a mechanism for users to cancel service requests and specify rules for refunds or charges.

- **Admin Dashboard:**
  An administrative dashboard is needed to manage users, service providers, transactions, and resolve disputes.

- **Availability and Scheduling:**
  Enable service providers to set their availability schedules and manage their work hours.

- **Non- Functional Requirements:-**

Non-functional requirements for an On-Demand Service system focus on aspects beyond specific functionalities and address the overall performance, security, and user experience. Here are some key non-functional requirements:

- **Scalability:**
  Design the system to handle a growing number of users and service providers without a significant decrease in performance.

- **Reliability:**
  Maintain high system availability and reliability, minimizing downtime and service disruptions.

- **Security:**
  Implement robust security measures to protect user data, transactions, and sensitive information.

- **Usability:**
  Design an intuitive and user-friendly interface for both users and service providers, considering accessibility and ease of navigation.

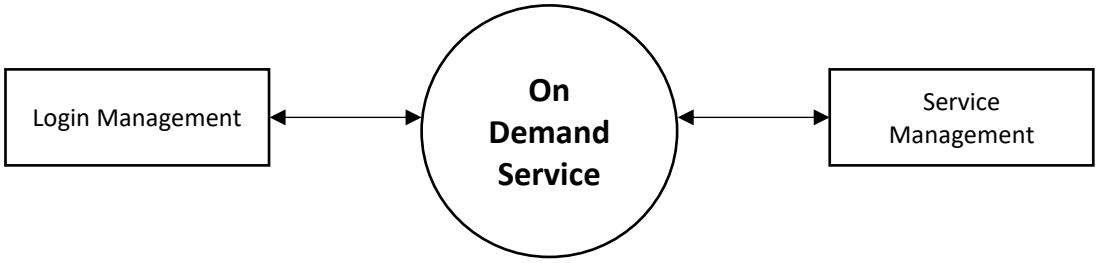
- **Compatibility:**
  Ensure compatibility with various devices, browsers, and operating systems to maximize accessibility.

- **Data Privacy:**
  Comply with data protection regulations and ensure the privacy and confidentiality of user and service provider information.

- **Maintainability:**
  Implement code and system architecture that is easily maintainable and allows for future updates or modifications.

4.1 DESIGN CONSTRAINTS

Zero Level DFD:



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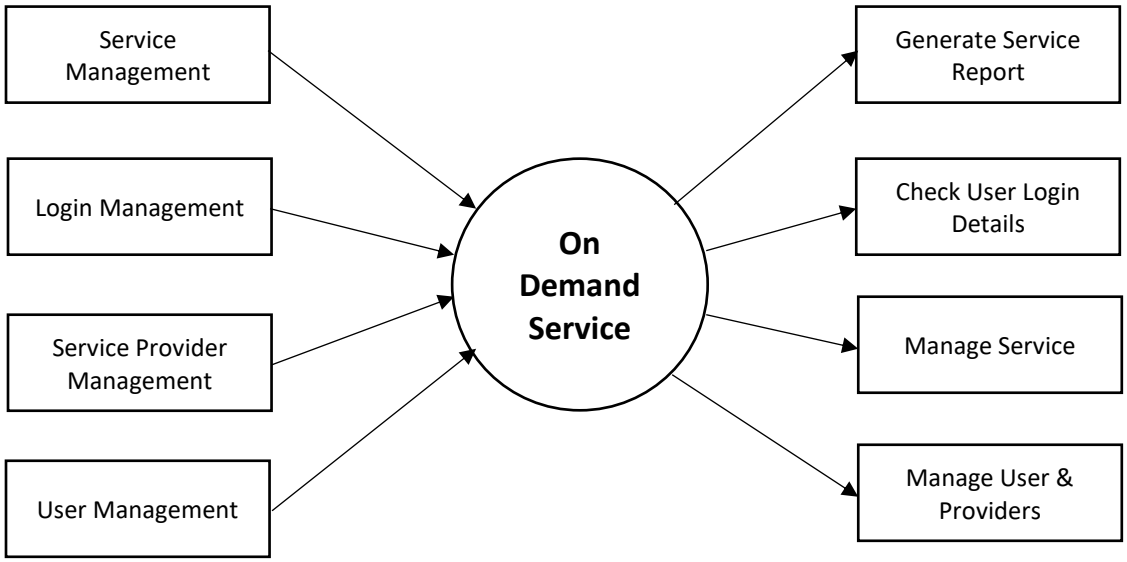

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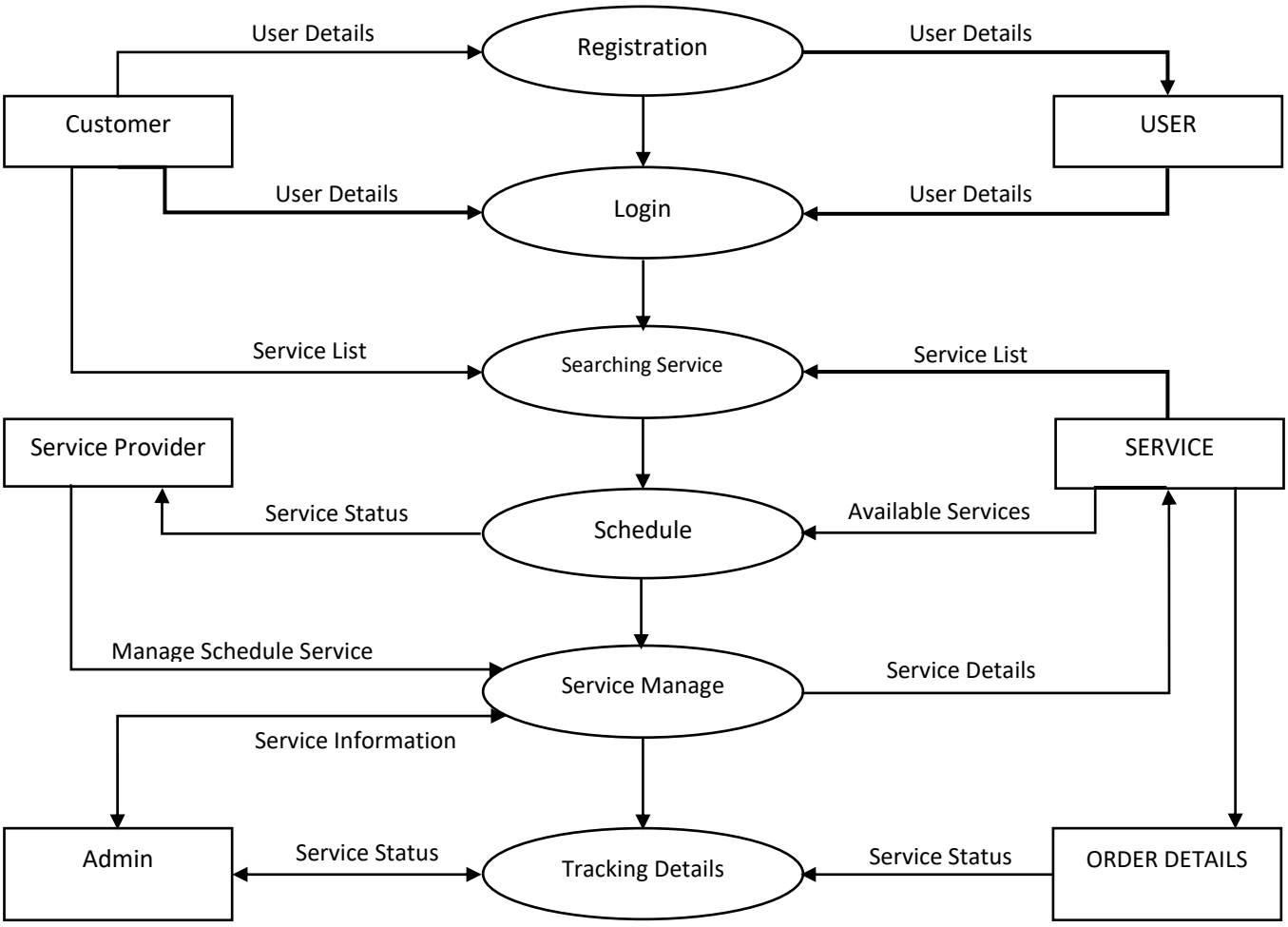

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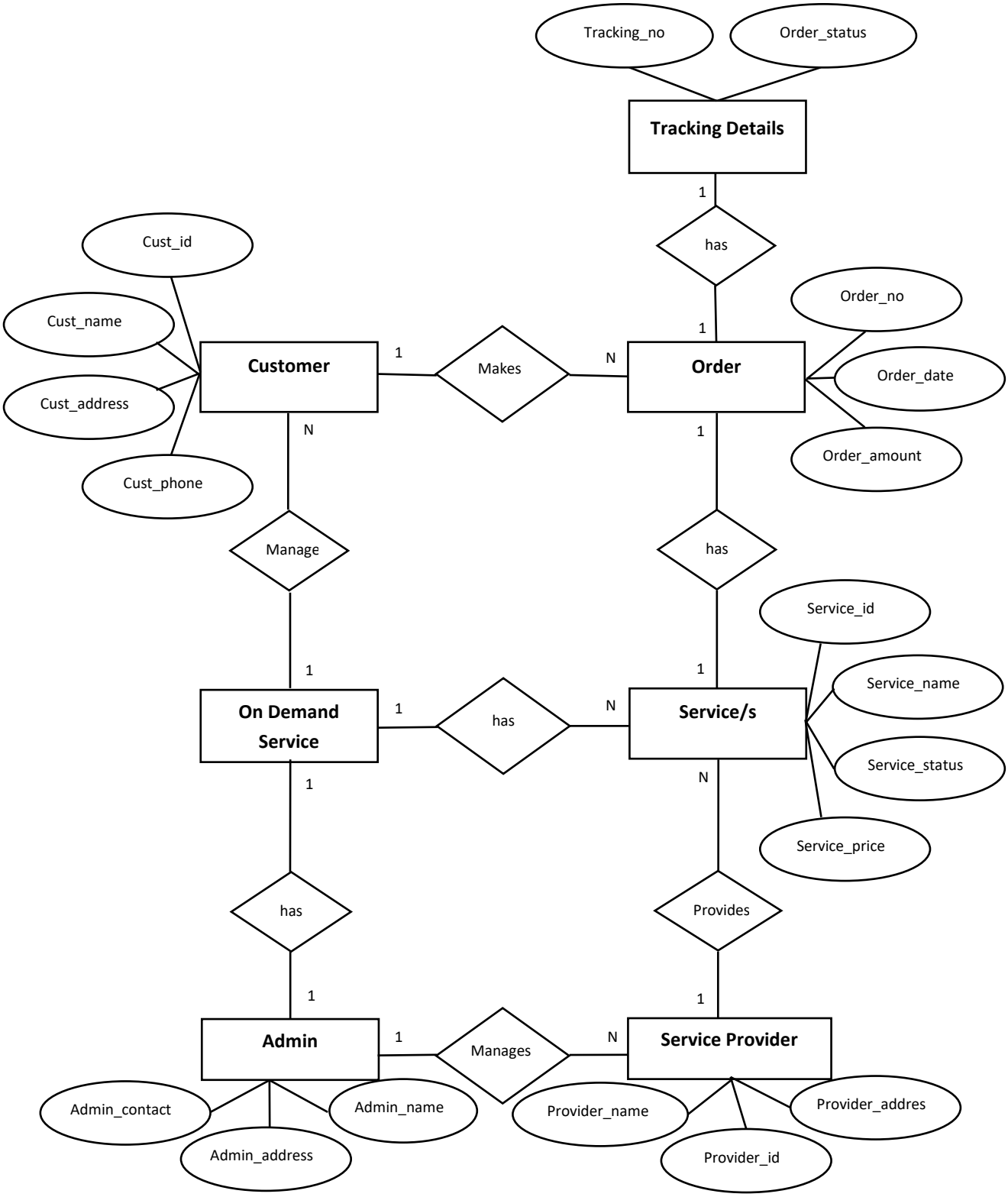
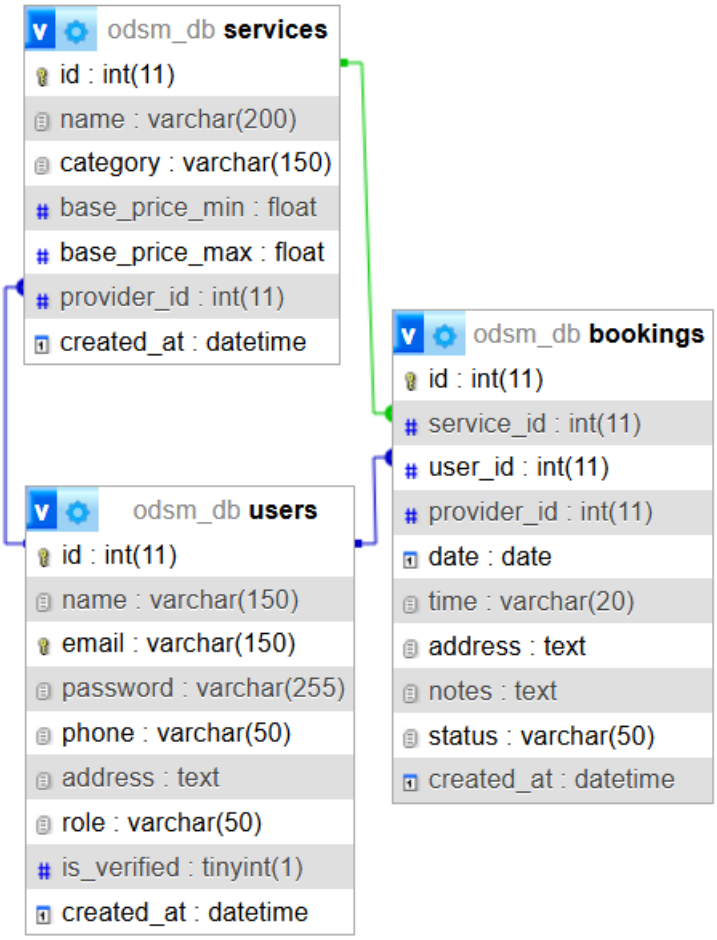

Tracking_no
Order_status
Tracking Details
1
has
1
Cust_id
Cust_name
Cust_address
Cust_phone
Customer
1
Makes
N
Order
Order_no
Order_date
Order_amount
N
1
Manage
has
1
1
Service_id
Service_name
Service_status
Service_price
On Demand Service
1
has
N
Service/s
1
N
has
Provides
1
1
Admin
1
Manages
N
Service Provider
Admin_contact
Admin_name
Admin_address
Provider_name
Provider_addres
Provider_id

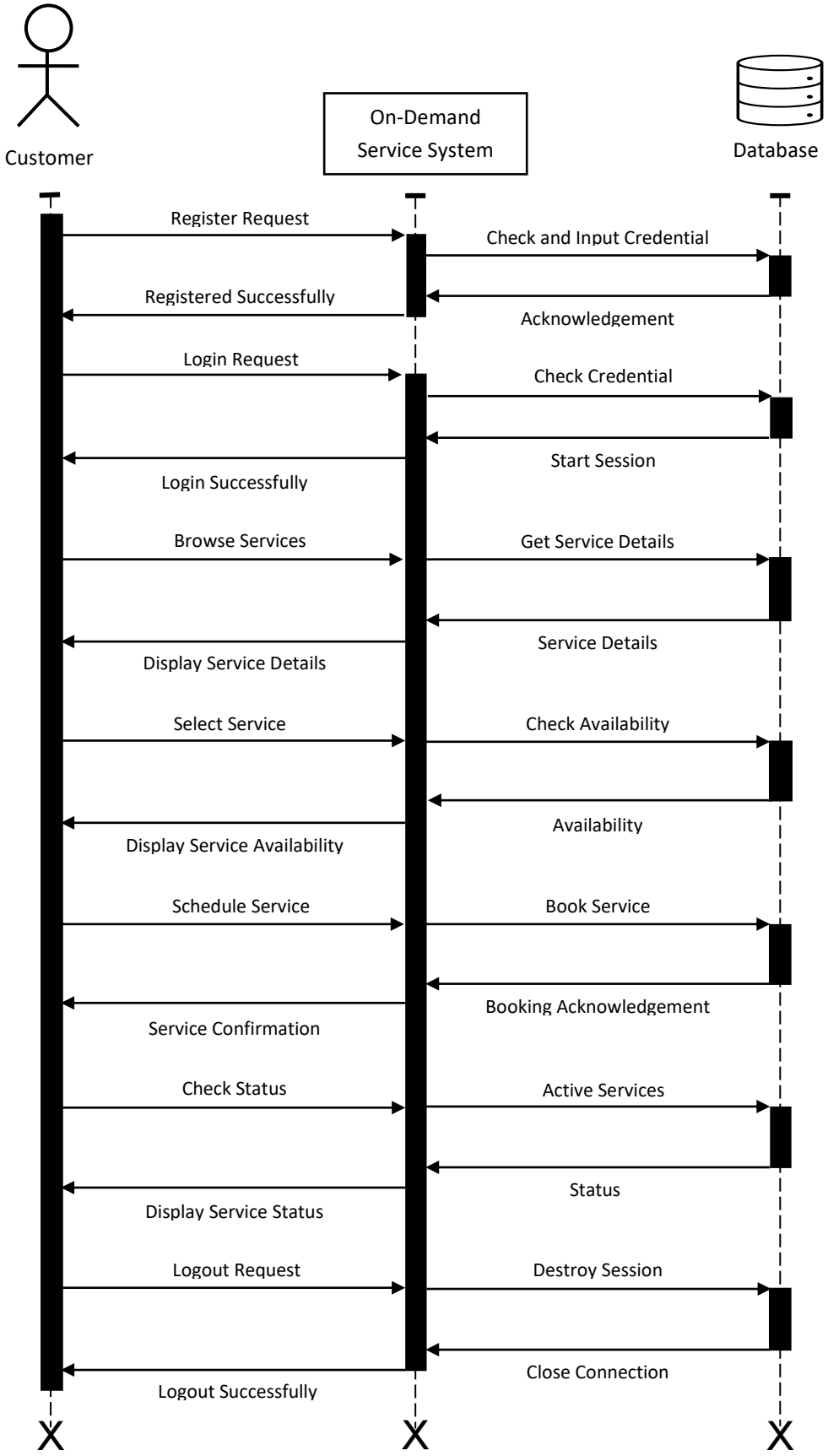
4.2 System Model: Using OOSE

Class Diagram:

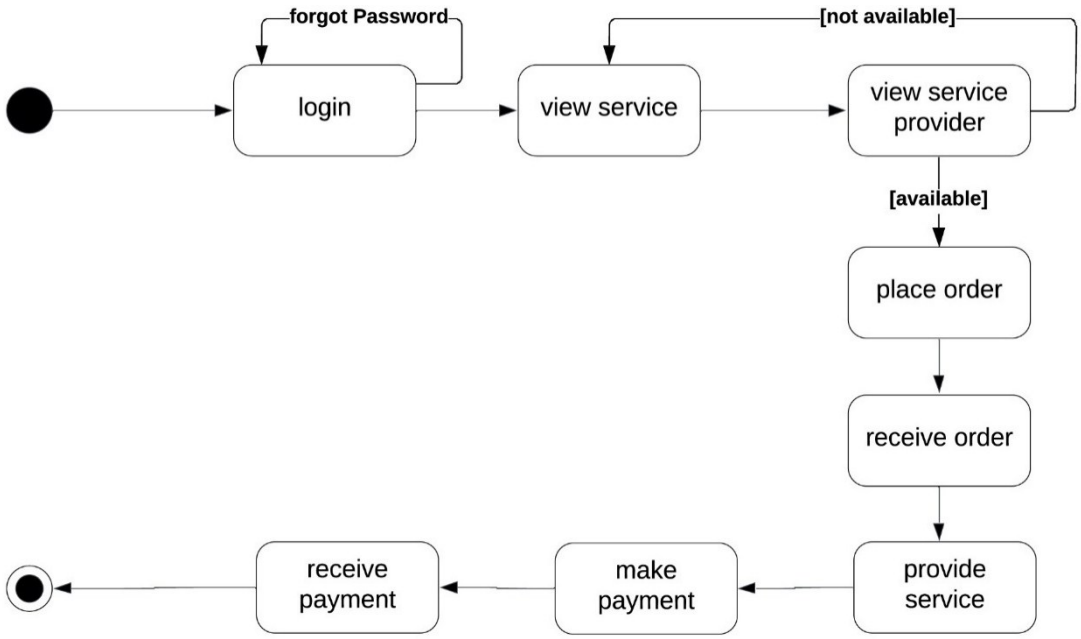


Use Case Diagram:

Sequence Diagram:



State Chart Diagram:



4.3 DATA MODEL

1.users

SR NO.	NAME	TYPE	CONSTRAINTS	DESCRIPTION
1	id	INT(11)	PRIMARY KEY	User ID
2	name	VARCHAR(150)	NOT NULL	User Name
3	email	VARCHAR(150)	NOT NULL	User Email
4	password	VARCHAR(255)	NOT NULL	User Password
5	phone	VARCHAR(50)		User Phone Number
6	address	TEXT		User Address
7	role	VARCHAR(50)		User Role
8	is_verified	TINYINT(1)		User is Verified or Not
9	created_at	DATETIME		When User is Created

2.services

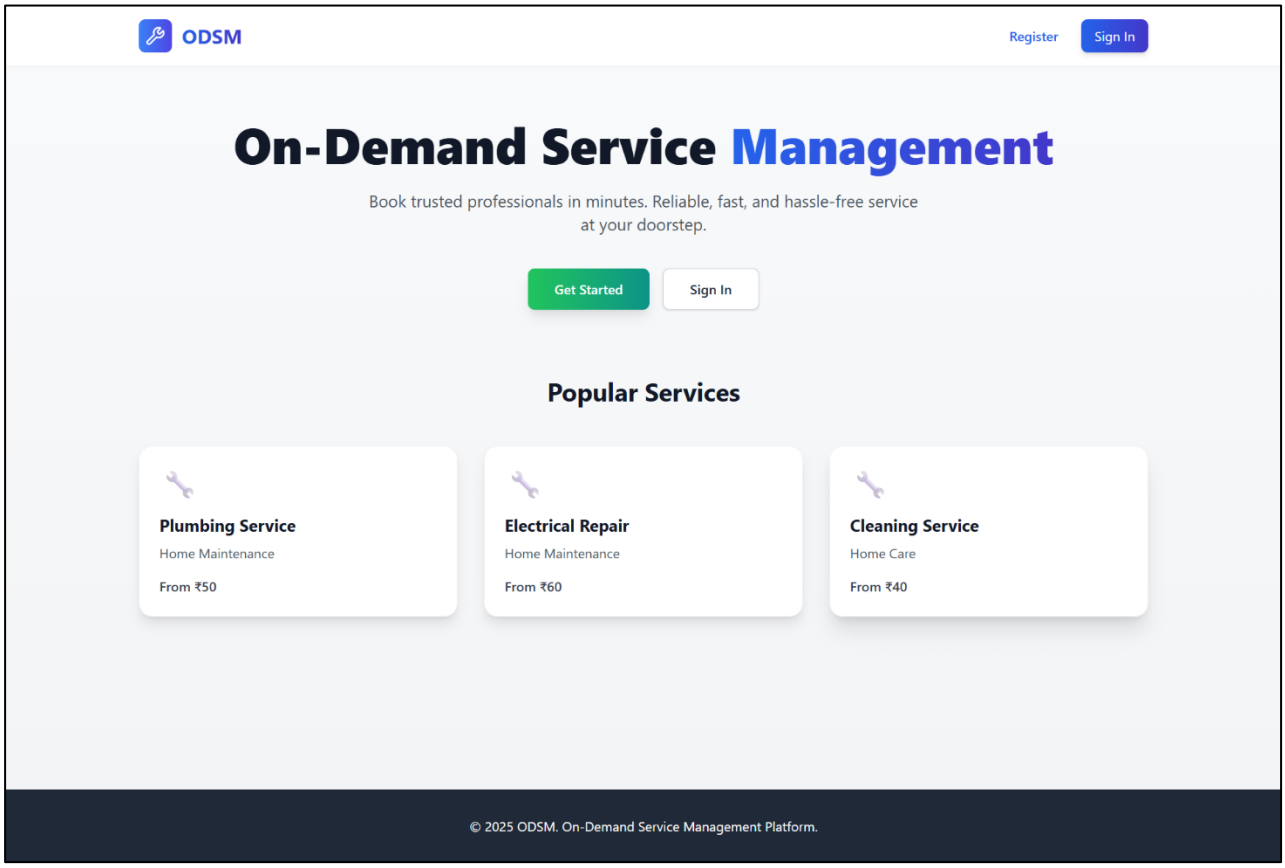
SR NO.	NAME	TYPE	CONSTRAINTS	DESCRIPTION
1	id	INT(11)	PRIMARY KEY	Service ID
2	name	VARCHAR(200)	NOT NULL	Service Name
3	category	VARCHAR(150)		Service Category
4	base_price_min	FLOAT		Service Base Price Minimum
5	base_price_max	FLOAT		Service Base Price Maximum
6	provider_id	INT(11)	FOREGIN KEY	Service Provider ID
7	created_at	DATETIME		When Service is Created

3.bookings

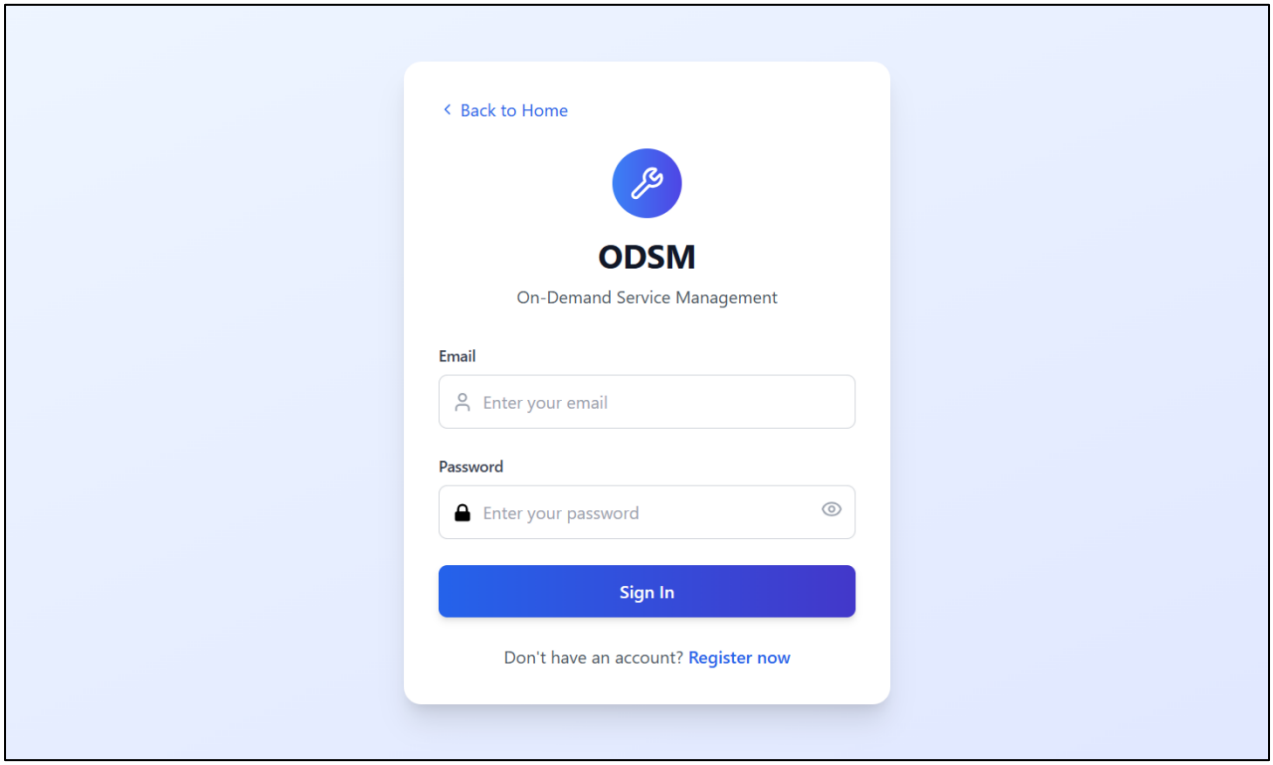
SR NO.	NAME	TYPE	CONSTRAINTS	DESCRIPTION
1	id	INT(11)	PRIMARY KEY	Booking ID
2	service_id	INT(11)	FOREGIN KEY	Service ID
3	user_id	INT(11)	FOREGIN KEY	User ID
4	provider_id	INT(11)		Provider ID
5	date	DATE		Booking Date
6	time	VARCHAR(20)		Booking Time
7	address	TEXT		Booking Address
8	notes	TEXT		Booking Notes
9	status	VARCHAR(50)		Booking Status
10	created_at	DATETIME		Booking Created Time

4.4 USER INTERFACES

Home Page:

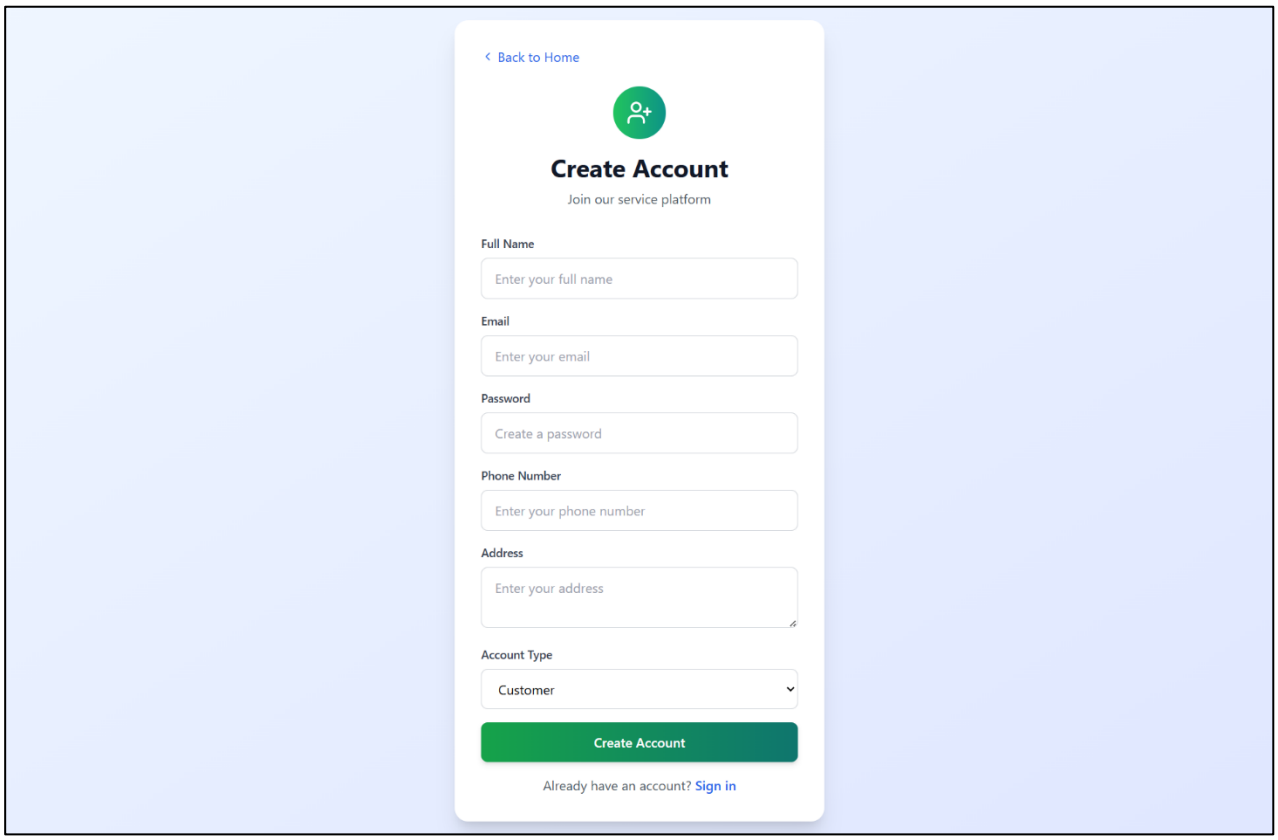


Login Page:

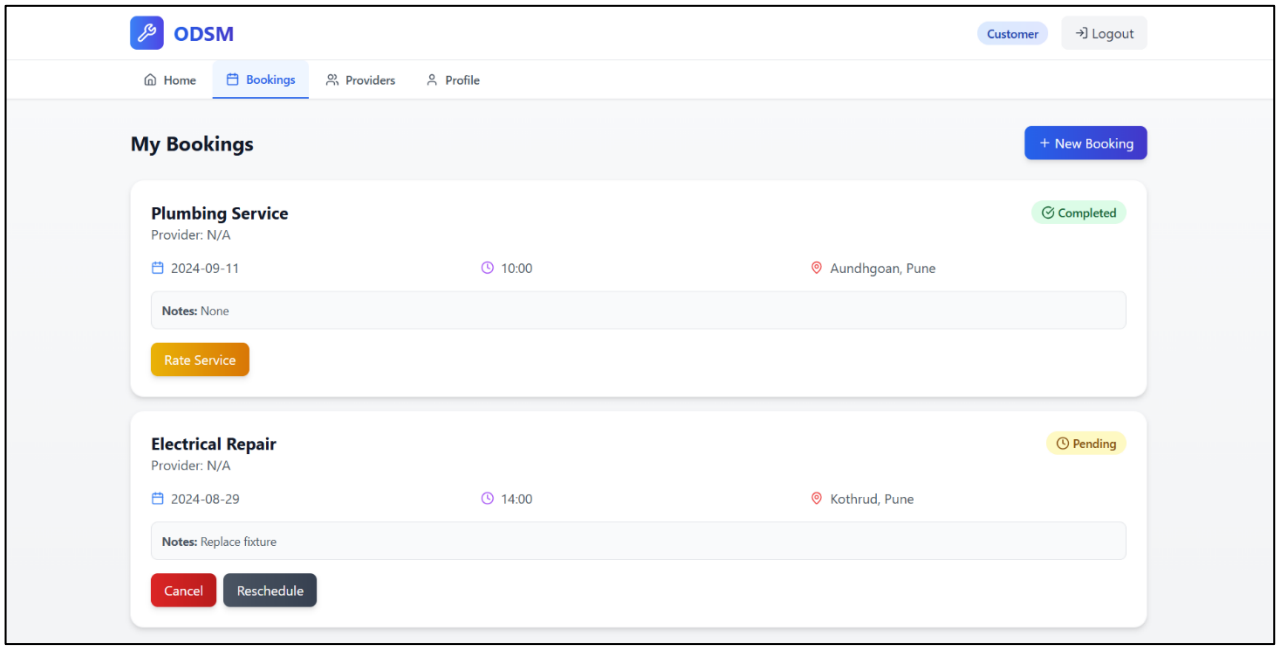


ON DEMAND SERVICE

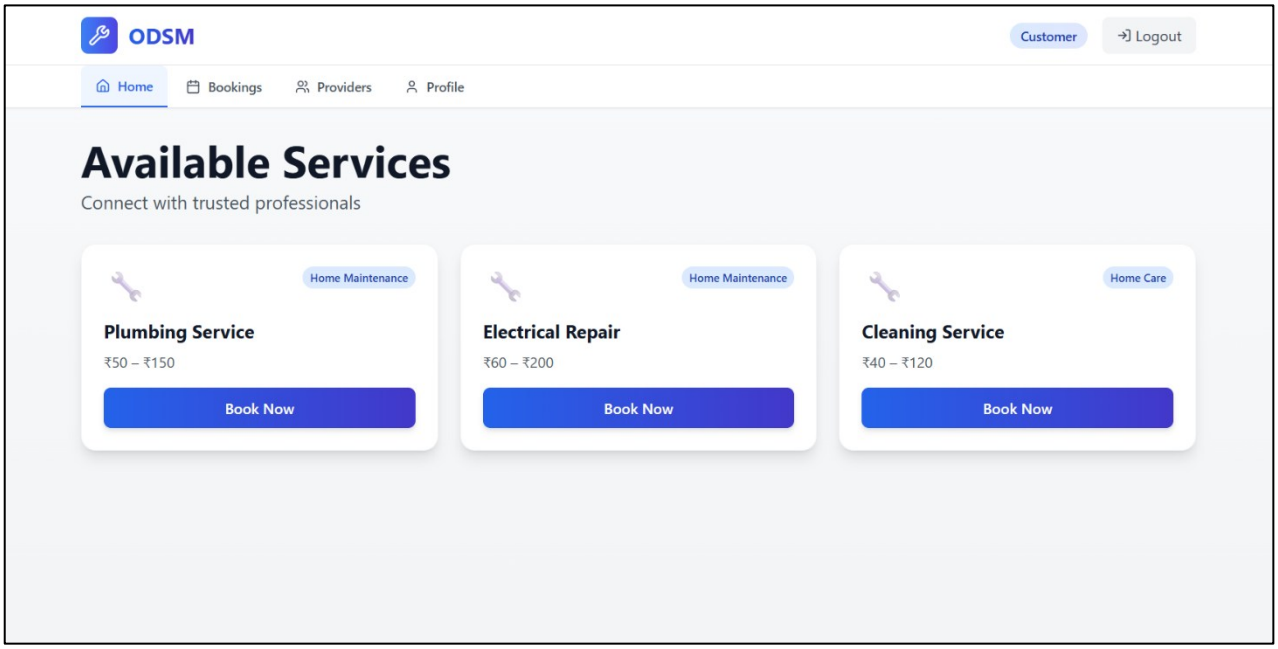
Customer and Provider Register Page:



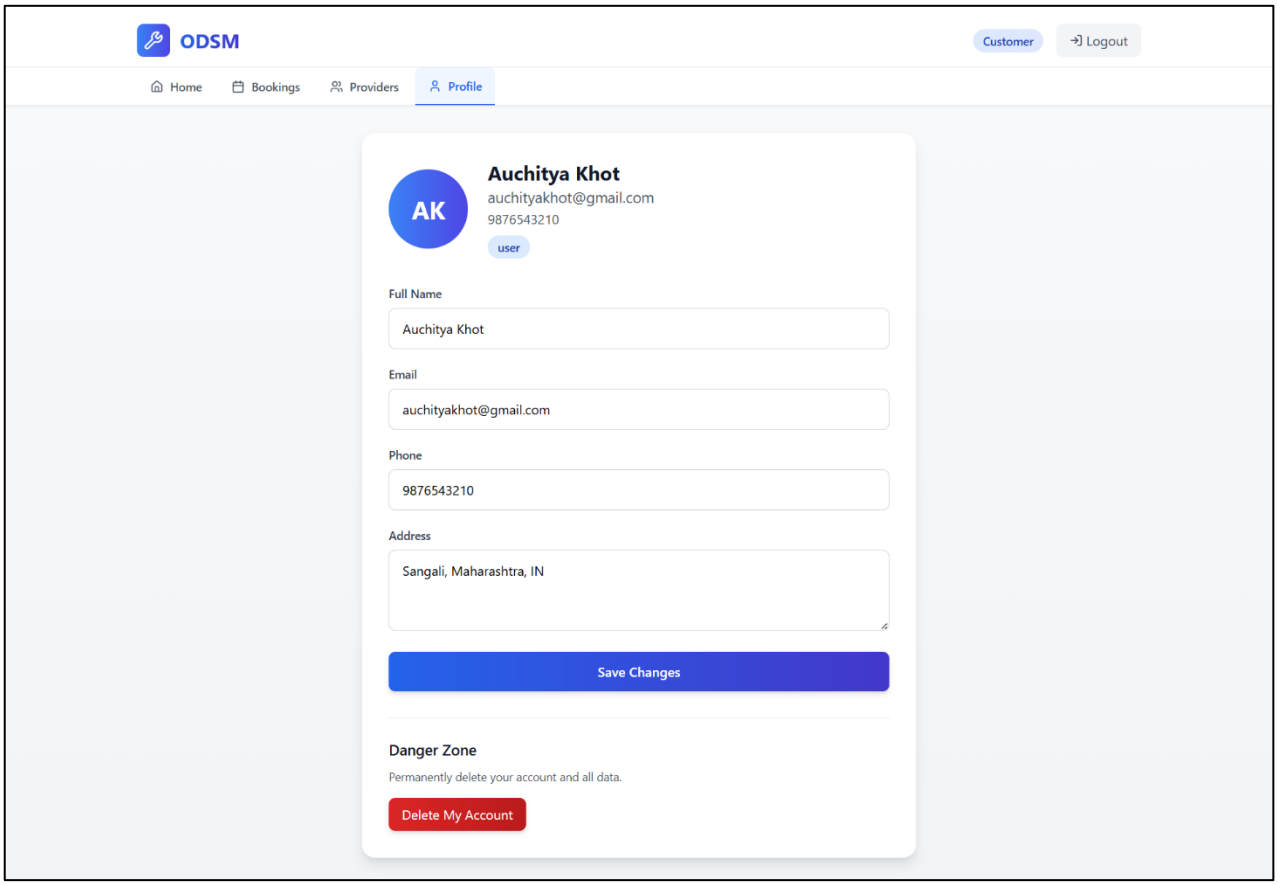
Customer History page:



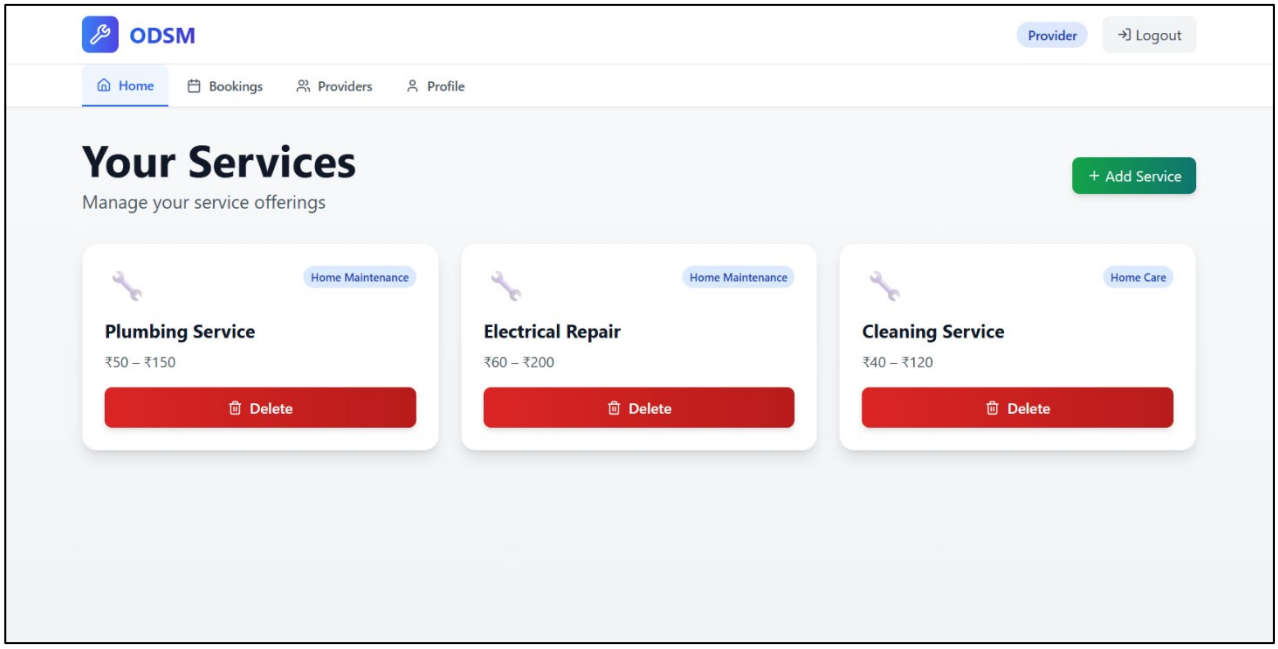
Customer Available Services page:



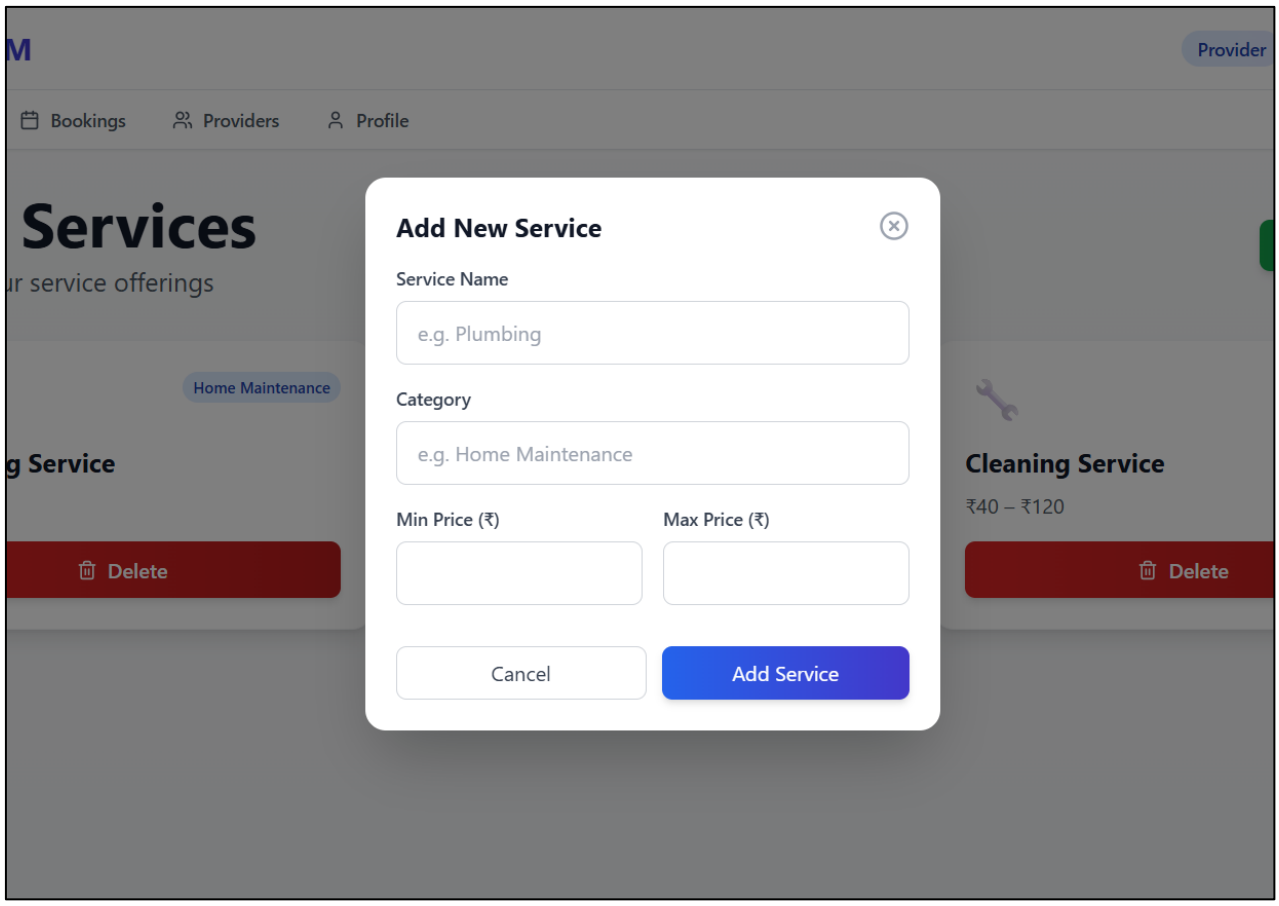
Customer / Admin / Service Provider Profile page:



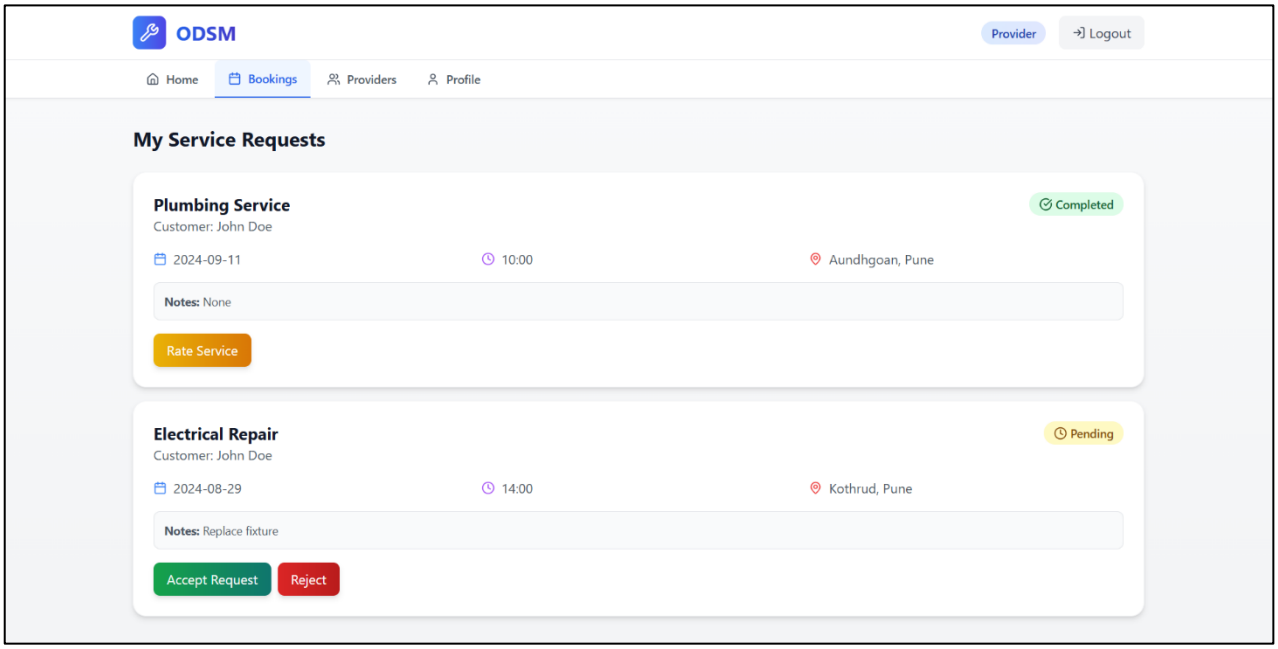
Service Provider Services page:



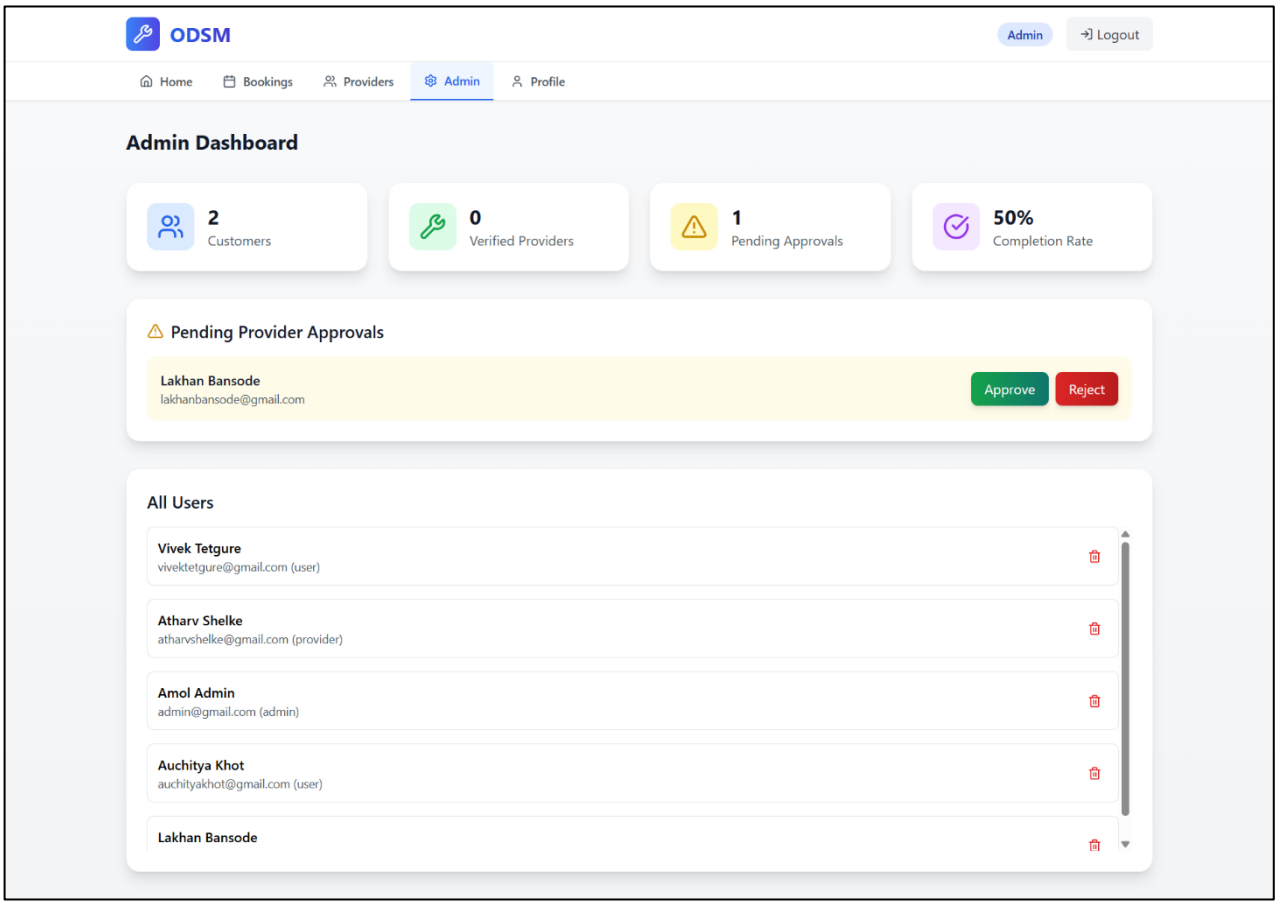
Service Provider Add Service Popup:



Service Provider My Service Request page:



Admin Manage User Page:



Implementation Details

Software Specification

Operating System: Windows 10 or onwards

IDE : Visual Studio Code – React.js

PyCharm – Python (Flask)

Extensions : HTML, CSS, JS

Database Connectivity : MYSQL server (Xampp)

Hardware Specification

RAM : 4 GB Ram

Storage : 10 GB Storage

Processor : Intel i3 and Above

6.1 Test Plan

The testing phase of the On Demand Service aims to ensure that the system meets its requirements and performs as expected. The test plan outlines the testing strategy, objectives, and scope.

- **Objectives**:
  - Verify that all functionalities work as intended.
  - Ensure data integrity and security.
  - Validate system performance under expected load conditions.

- **Testing Types**:
  - **Functional Testing**: To ensure each function of the software application operates in conformance with the requirement specification.
  - **Non-Functional Testing**: To evaluate the performance, usability, reliability, and security of the system.

6.2 Black Box Testing (Data Validation Test Cases)

USER REGISTRATION:

Test Case No	Feature	Description	Steps to Execute	Test Data Input	Expected Result	Status
BB-001	User Registration	Valid registration with all correct inputs	1. Open the registration page. 2. Fill in all fields. 3. Click on "Register".	Name: Mihir Konde, Email: mihir@gmail.com, Password: Pass@123	Registration successful message displayed	Passed
BB-002	User Registration	Registration with an invalid email format	1. Open the registration page. 2. Enter an invalid email. 3. Click on "Register".	Name: Jane Doe, Email: invalid-email, Password: Pass@123	Error message for invalid email format	Passed
BB-003	User Registration	Duplicate email registration	1. Open the registration page. 2. Enter a previously used email. 3. Click on "Register".	Name: Mihir Konde, Email: mihir@gmail.com, Password: Pass@123	Error message indicating email already exists	Passed
BB-004	User Registration	Registration with empty	1. Open the registration page.	Name: "", Email: "", Password: ""	Error message for	Passed

Test Case No	Feature	Description	Steps to Execute	Test Data Input	Expected Result	Status
		required fields	2. Leave required fields empty. 3. Click on "Register".		required fields	
BB-005	User Registration	Registration with password too short	1. Open the registration page. 2. Enter a short password. 3. Click on "Register".	Name: "Alex Brown", Email: "alex@example.com", Password: "123"	Error message for password length	Passed

USER LOGIN:

Test Case No	Feature	Description	Steps to Execute	Test Data Input	Expected Result	Status
BB-006	User Login	Valid login with correct credentials	1. Open the login page. 2. Enter valid credentials. 3. Click on "Login".	Email: mihir@gmail.com, Password: Pass@123	Redirect to user dashboard	Passed

Test Case No	Feature	Description	Steps to Execute	Test Data Input	Expected Result	Status
BB-007	User Login	Login with incorrect password	1. Open the login page. 2. Enter valid email, incorrect password. 3. Click on "Login".	Email: mihir@gmail.com Password: wrongpass	Error message for invalid credentials	Passed
BB-008	User Login	Login with unregistered email	1. Open the login page. 2. Enter an unregistered email. 3. Click on "Login".	Email: nonexistent@example.com, Password: Pass@123	Error message for email not found	Passed
BB-009	User Login	Login with empty fields	1. Open the login page. 2. Leave fields empty. 3. Click on "Login".	Email: "", Password: ""	Error message for required fields	Passed

6.3 White Box Testing (Functional Validation Test Cases)

USER REGISTRATION:

Test Case ID	Test Case Description	Code Path	Expected Result	Status
WB-001	Check User Registration Valid Input	signup.php	User created in the database	Passed
WB-002	Check User Registration Duplicate Email Logic	signup.php	Duplicate email error returned	Passed
WB-003	Validate Password Hashing Functionality	signup.php	Password hashed correctly	Passed
WB-005	Verify Error Logging for Registration Failures	signup.php	Error logged in the database if registration fails	Passed

USER LOGIN:

Test Case ID	Test Case Description	Code Path	Expected Result	Status
WB-006	Validate User Authentication Process	login.php	Session initiated upon valid login	Passed
WB-007	Check Error Handling for Invalid Login	login.php	Error logged for invalid attempts	Passed
WB-008	Validate Account Lockout Mechanism	login.php	Account locked after multiple failed attempts	Passed

ON DEMAND SERVICE

Test Case ID	Test Case Description	Code Path	Expected Result	Status
WB-009	Check Session Timeout Functionality	login.php	Redirect to login page after timeout	Passed
WB-010	Validate User Logout Functionality	login.php	User session terminated	Passed

Conclusion

The “ONLINE HOME SERVICES” web-based application will be developed by us through applying our knowledge gained in class room, referring to certain book, browsing some sites and through the help of internal faculties and using our knowledge related to the subject itself.

No project can be termed as ‘perfect’ in the real sense and there always remains scope for further improvement and so that helps to develop a new version. We are always eager to know some new points and it will help us to create new version.

We would like to thank the project guide and organization staffs that extend all their support and helped us to complete this work

Future Scope

Most of consumers want to feel satisfied with services almost instantly. We live in an internet-oriented world, where most business firms prefer to capture their audience everywhere. In fact, many people hire transportation services, beauty services, and other essential services from the comfort of their homes or offices. It means more and more people are embracing the benefits that the on-demand economy is introducing.

Hence, on-demand web development is certainly a lucrative market.

1. There will be a sudden uplift in the number of employees entering the on-demand website network.
2. The thorough background checks for personnel delivering services will flare-up.
3. The demand for well-experienced employees will boost because of the increased adoption of on-demand service website.
4. Mobile app can be developed for better and significantly more opportunities.
5. More firms and organizations will opt for on-demand web at a quick pace.

Bibliography and References

Books

Software Engineering – A Practitioner's Approach

- By Roger S. Pressman

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