



**Daffodil**  
*International*  
**University**

**Project Title:** ServiceAid – [Book trusted service providers for all your needs]

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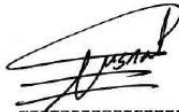
Daffodil International University

This project report has been submitted in fulfillment of the requirements for the degree of  
Bachelor of Science in Information Technology & Management

## Approval

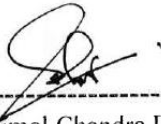
This project titled on "ServiceAid- [Book trusted service providers for all your need]", submitted by "A.S.M Tawfiqul Hasan, 211-51-047", to the Department of Information Technology & Management, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Information Technology & Management, and approval as to its style and contents.

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### **Declaration**

I hereby declare that I have done this project under the supervision of Ms. Nusrat Jahan, Head, Department of Information Technology & Management (ITM), Daffodil International University. I also declare that neither this project nor any part of this has been submitted elsewhere for award of any degree.

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## Chapter 1: Introduction

### 1.1 Background

ServiceAid service-providing website addresses several key issues in the service industry, including the lack of standardized pricing, inconsistent service quality, and limited availability of reliable service providers. Customers often struggle to find trustworthy service providers due to the absence of a centralized platform, leading to inefficiencies and security concerns. Scheduling services is another challenge, as coordinating availability with service providers can be difficult and time-consuming.

I took reference from Sheba.xyz platform that is also a service provider platform. But this platform has one way service booking system like Customer can only booked on the platform and the admin panel assign service provider to the related customer.

### 1.2 Motivation

As the service platform Sheba.xyz was one way service provider user can not choose any other options related to the service they need. To prevent this problem I developed this platform where many service provider can register and user can get many options related to their services.

### 1.3 Objectives

- **Transparent Pricing:** Provide a clear and standardized pricing structure, allowing clients to compare costs upfront and avoid hidden charges.
- **Verified Service Providers:** Ensure all service providers undergo a rigorous vetting process, including background checks and skill assessments, to guarantee quality and safety.
- **User-Friendly Scheduling:** Implement an intuitive scheduling system that allows clients to book services at their convenience, with options for real-time availability.

- **Comprehensive Service Listings:** Offer a wide range of services in one platform, reducing the need for clients to search multiple sources for different types of services.
- **Secure Payment Gateway:** Provide a secure and reliable payment system that ensures clients can safely pay for services online, with options for various payment methods.
- **Regular Updates and Improvements:** Continuously update the platform with new features and improvements based on client feedback, ensuring it remains responsive to their evolving needs.
- **Streamlined Booking and Scheduling:** The intuitive booking system with real-time availability will simplify the process of scheduling services, saving time and reducing coordination hassles for customers.

## 1.4 Challenges

During the development and implementation of the ServiceAid platform, several challenges and obstacles were encountered. The key challenges include:

### 1.4.1 Technical Challenges

#### 1. Platform Integration:

- Ensuring seamless integration of frontend (React, Tailwind CSS, DaisyUI) with backend services and the database.

#### 2. Real-Time Availability Updates:

- Implementing a real-time booking system that accurately reflects service provider availability.

#### 3. Security Implementation:

- Ensuring secure user data storage, safe payment processing, and protection against unauthorized access or breaches.

### 1.4.2 User Experience Challenges

#### 1. Simplified UI/UX Design:

- Balancing functionality and ease of use to create a user-friendly interface for diverse user groups.

### 1.4.3 Data and Content Management Challenges

#### 1. Provider Verification:

- Developing a rigorous but efficient process for verifying service providers' credentials.
- Ensuring compliance with local regulations and standards.

**2. Content Updates:**

- Regularly updating service listings, provider profiles, and promotional content without disrupting the user experience.

**1.4.4 Project Management Challenges**

**1. Time Constraints:**

- Completing the project within a tight timeline, particularly given the deadline for the final defense.
- Prioritizing tasks and meeting milestones in the face of unexpected delays.

**2. Resource Allocation:**

- Efficiently managing resources like time, technical tools, and personal skills to meet project goals.

**1.4.5 Testing Challenges**

**1. Bug Fixing:**

- Identifying and resolving issues during testing to ensure a flawless user experience.

## Chapter 2: Requirement Specification

### 2.1 Business Process Modeling

Business Process Modeling (BPM) helps visually represent the processes involved in the ServiceAid project, ensuring clarity and understanding of how activities flow between the primary participants: Customers, Service Providers and Admin. Below I have provided diagram and description to illustrate these processes.

#### 2.1.1 Main Processes Overview

1. **Customer journey:** From registration to service completion, the customer's journey involves searching, booking, receiving services and view service status.
2. **Service provider workflow:** Registration, verification, and fulfilling service requests are the main components of the provider's process.
3. **Admin activities:** Platform management, control users, user support, and dispute resolution.

#### 2.1.2 Diagram Representation

The following diagram illustrates the flow of activities:

[Customer] --> [Register/Login] --> [Search Services] --> [View Provider Profile]  
--> [Book Service] --> [View Status] --> [Receive Service] --> [Feedback]

[Service Provider] --> [Register] --> [Verify Profile] --> [List Services] -->  
[Manage Availability] --> [Fulfill Service Request]

[Admin] --> [Verify Providers] --> [Monitor Activities] --> [Handle Disputes] -->  
[Update Content]

### 2.2 Requirement Collection

Requirement collection is a critical phase in the project development lifecycle as it involves identifying and documenting the functional, non-functional and business requirements necessary for the platform's success.

### 2.2.1 Stakeholders

- **Customers:** Individuals looking to book various services through the platform.
- **Service Providers:** Individuals who enroll to offer services such as plumbing, repairing, cleaning, etc.
- **Admin:** The system administrator who oversees the platform, manages users and services.

### 2.2.2 Functional Requirements

- **User Authentication & Authorization**
  - ◆ **Login/Signup:** Implement secure login and signup functionalities for both service providers and customers.
  - ◆ **Role-Based Access:** Define different roles with specific permissions: Service Provider, Customer, and Admin.
- **Service Provider Management**
  - ◆ **Profile Creation:** Allow service providers to create and manage their profiles, including details about the services they offer.
  - ◆ **Service Enrollment:** Enable service providers to enroll in specific service categories.
  - ◆ **Availability Management:** Allow service providers to set and update their availability status (e.g., available/unavailable, time slots).
  - ◆ **Booking Management:** Service providers can view and manage their bookings, including confirming or canceling them.
- **Service Listing & Search**
  - ◆ **Service Category Filtering:** Implement filtering options by service categories
  - ◆ **Service Provider Listing:** Display a list of service providers based on the customer's search criteria and selected category.

- ◆ **Service Provider Details:** Allow customers to view detailed profiles of service providers, including ratings, reviews, and availability.
- **Customer Booking Process**
  - ◆ **Search for Services:** Enable customers to search for available services and view a list of service providers.
  - ◆ **Booking Service Providers:** Allow customers to select a service provider and book them based on their available time slots.
  - ◆ **Booking Confirmation:** Provide booking confirmation and notifications to both the customer and the service provider.
- **Availability & Scheduling**
  - ◆ **Preferred Time Slot Booking:** Allow customers to book services for specific time slots based on the service provider's availability.
- **Review and Rating System**
  - ◆ **Report & Review Service Providers:** Allow customers to report and review service providers after the service is completed.
  - ◆ **Review Management:** Service providers can respond to customer reviews.
- **Admin Functions**
  - ◆ **User Management:** Admin can manage all user accounts, including service providers and customers.
  - ◆ **Service Management:** Admin can manage and categorize services offered on the platform.
  - ◆ **Monitoring & Reporting:** Admin can monitor platform activity, generate reports, and oversee the booking process.

### 2.2.3 Non-Functional Requirements

- **Usability**
  - ◆ **User-Friendly Interface:** Ensure that the platform is easy to navigate for all users, with clear instructions and intuitive design.
  - ◆ **Accessibility:** Make the platform accessible to users with disabilities, following best practices in web accessibility.
- **Performance**
  - ◆ **Load Time:** Optimize the platform to ensure quick load times, even during peak usage.
  - ◆ **Scalability:** Design the system to handle increasing numbers of users and bookings without performance degradation.
- **Security**
  - ◆ **Data Encryption:** Implement encryption for sensitive data, such as user information.
  - ◆ **Authentication:** Use secure authentication methods to protect user accounts.
- **Reliability**
  - ◆ **Uptime:** Aim for high availability of the platform, with minimal downtime.
  - ◆ **Backup and Recovery:** Implement regular data backups and a recovery plan to ensure data integrity in case of failures.
- **Scalability**
  - ◆ **Future Expansion:** Design the platform to accommodate additional services or features as the business grows.
  - ◆ **Load Handling:** Ensure the system can handle a large number of concurrent users without performance issues.

## 2.3 Diagrams

### 2.3.1 Use Case Diagram

**Actors:**

1. **Customer:** The individual who searches for and books services.
2. **Admin:** The system administrator who manages users, services, and monitors.
3. **Service Provider:** The individual who enrolls to provide services and manages their tasks.

## Customer Use Case

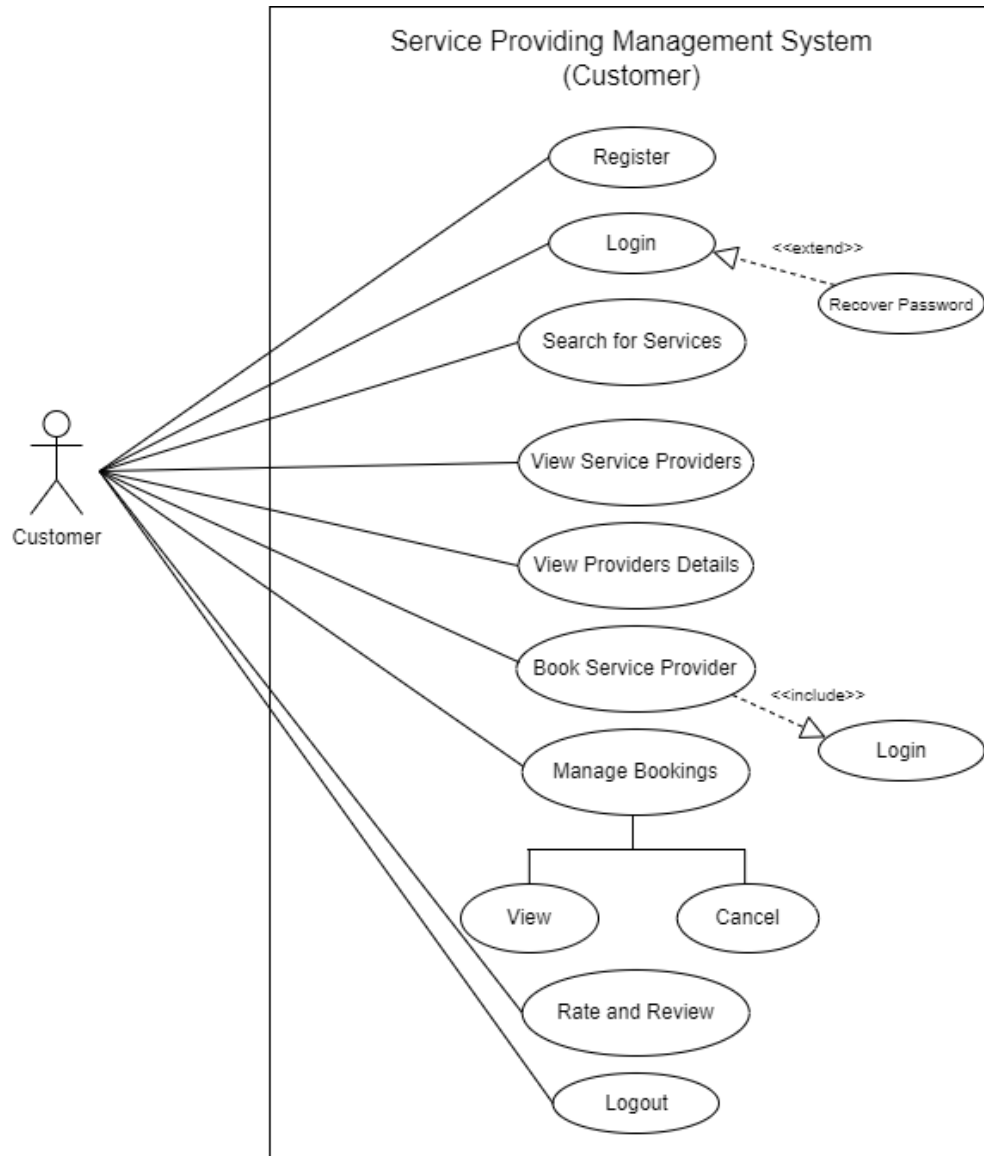


Fig 2.3.1.1: Customer Use Case Diagram

## Service Provider Use Case

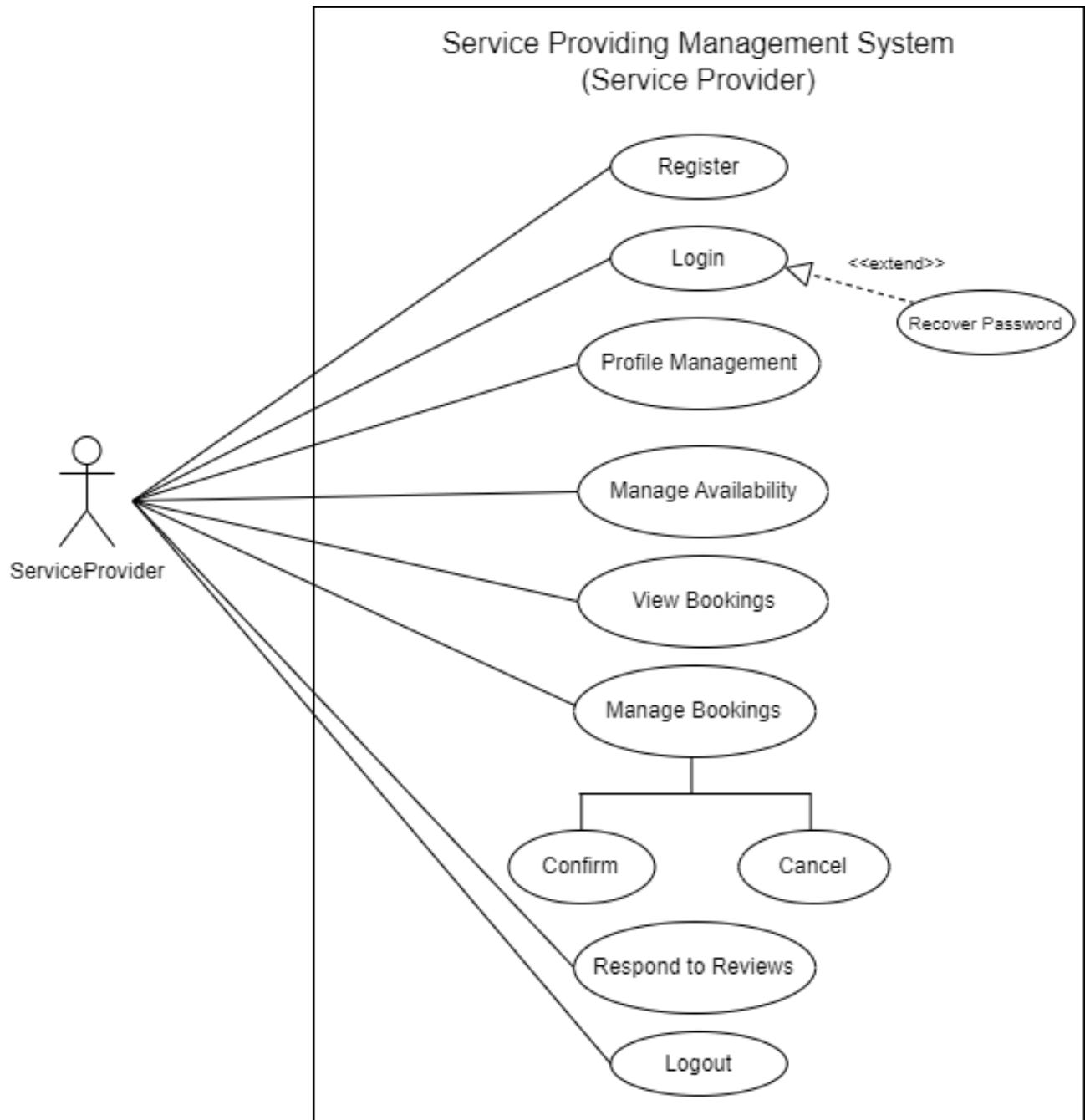


Fig 2.3.1.2: Service Provider Use Case Diagram

## Admin Use Case

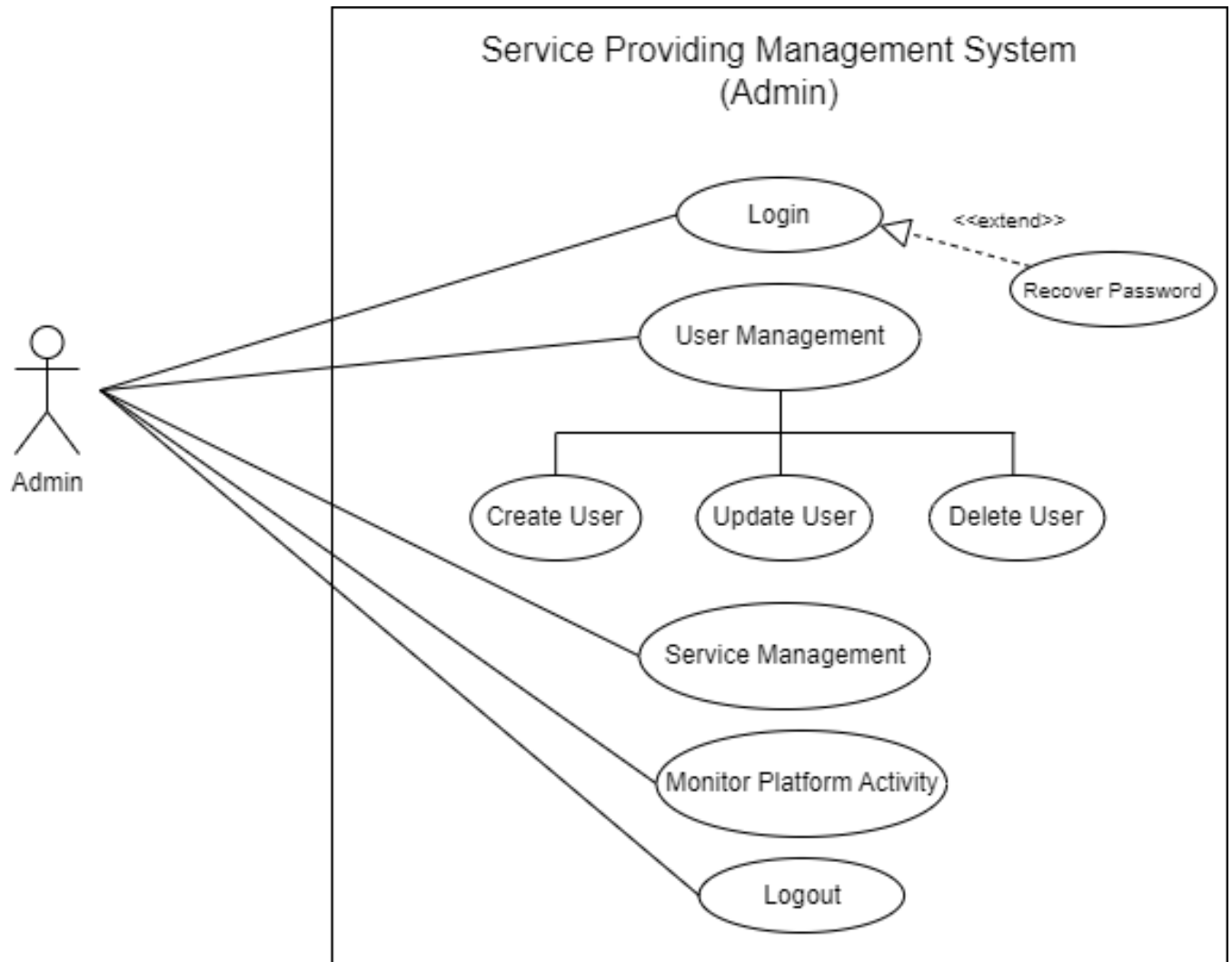


Fig 2.3.1.3: Admin Use Case Diagram

### 2.3.2 Activity Diagram

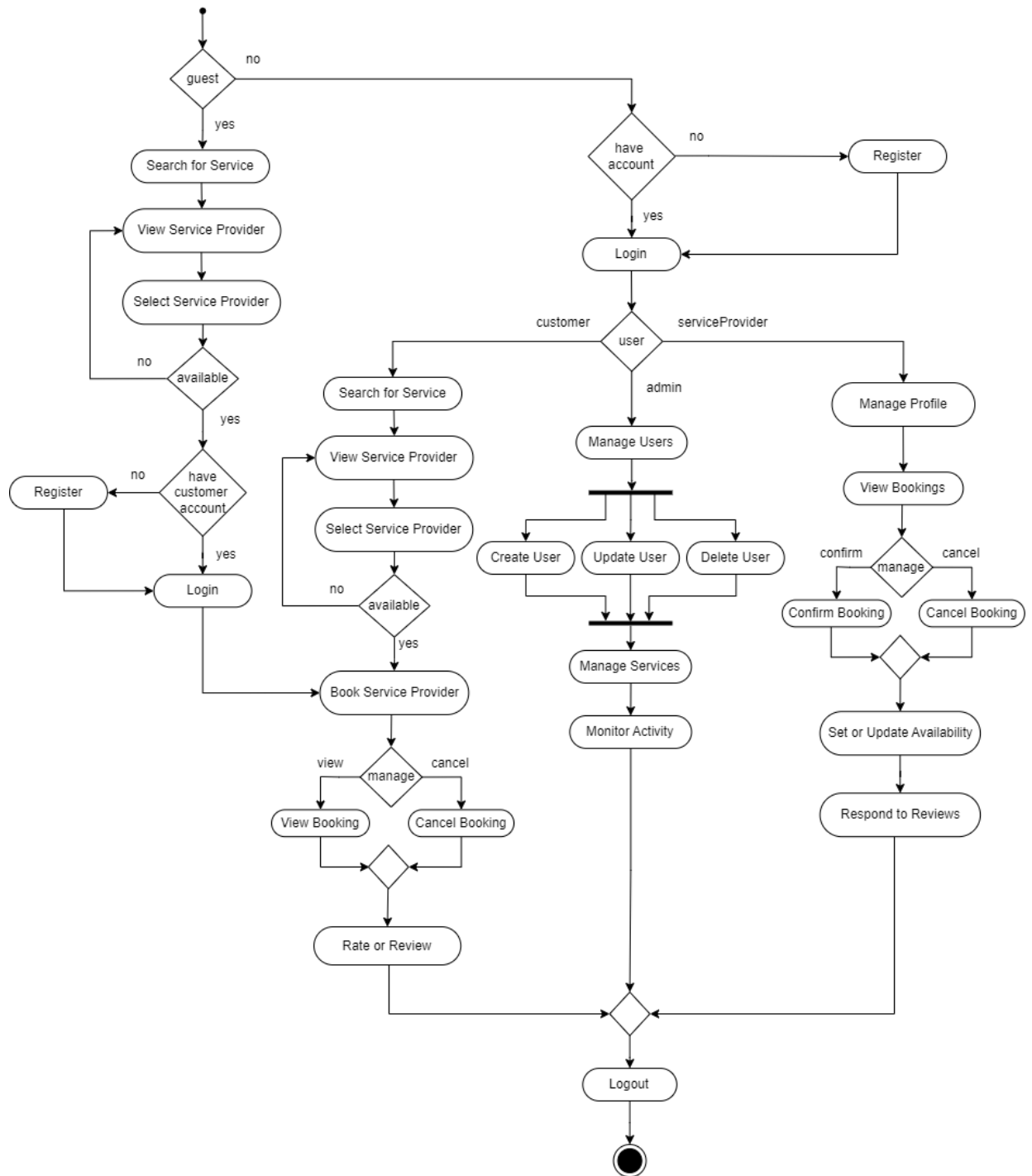


Fig 2.3.2.1: Activity Diagram

### 2.3.3 Sequence Diagram

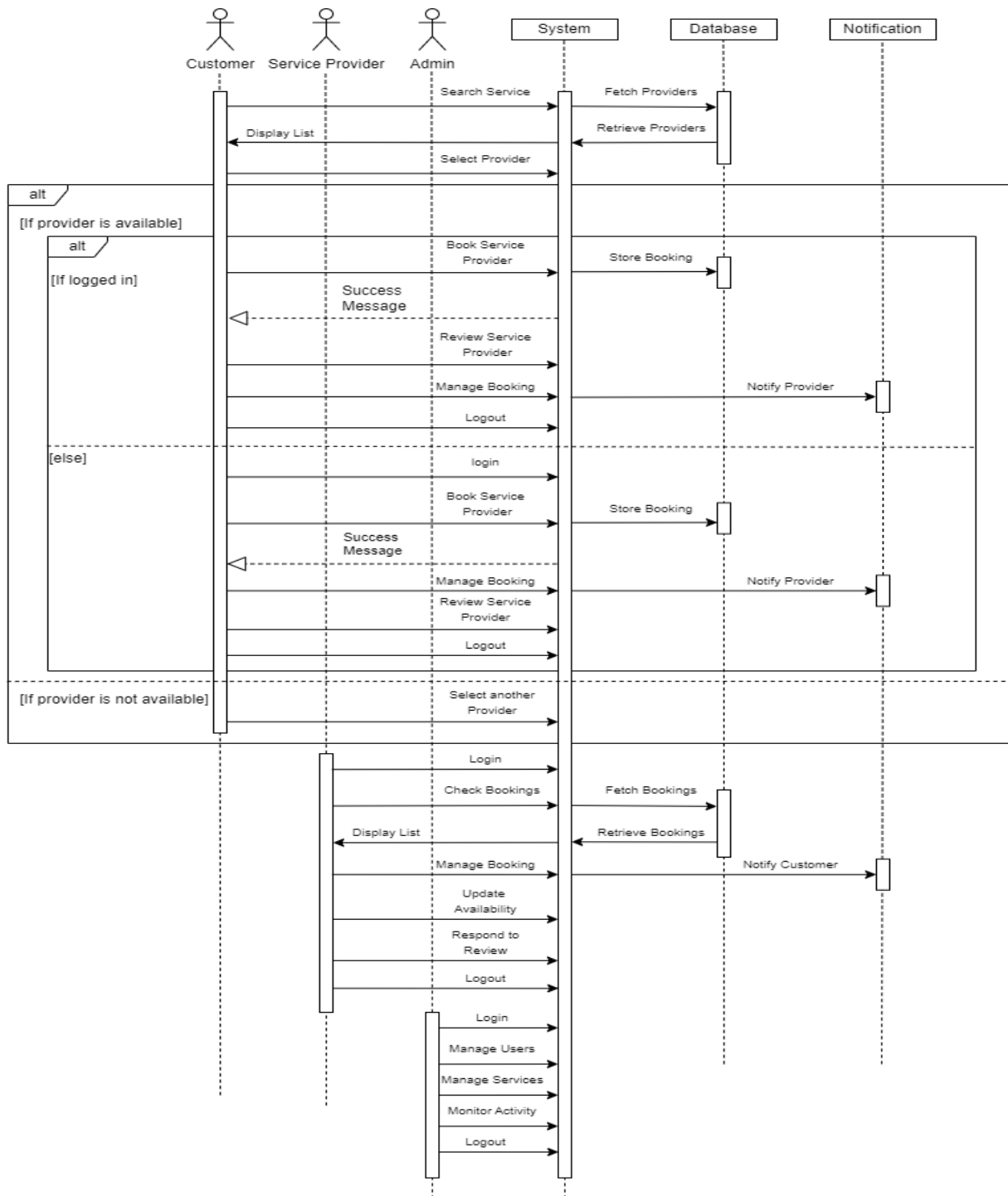


Fig 2.3.3.1: Sequence Diagram

## 2.3.4 Gantt Chart

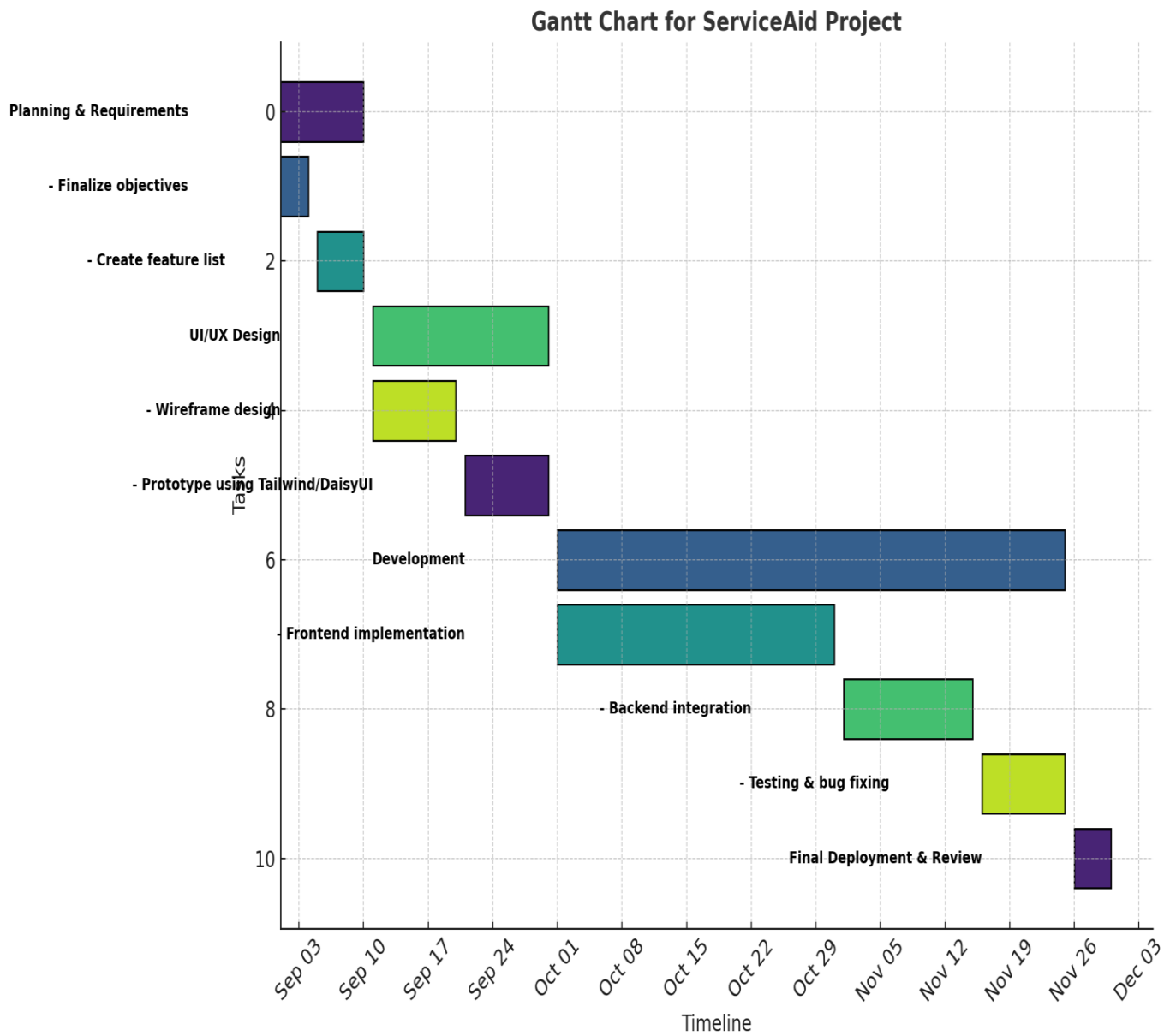


Fig 2.3.4.1: Gantt Chart

## 2.4 SWOT Analysis

### 2.4.1 Strengths

- **Centralized Service Platform:** Offers a one-stop solution for various services, enhancing customer convenience.
- **Verified Providers:** Ensures quality and safety through rigorous vetting of service providers.
- **Transparent Pricing:** Clear, upfront pricing builds trust and prevents hidden fees.
- **User-Friendly Interface:** Easy navigation and booking process improve user experience.

### 2.4.2 Weaknesses

- **Trust Building Required:** Initial efforts needed to gain customer trust in a new platform.
- **Initial Cash-Only Payments:** Lack of digital payment options may limit customer flexibility.

### 2.4.3 Opportunities

- **Market Expansion:** Potential to grow by adding more services and reaching new regions.
- **Local Partnerships:** Collaborations with local businesses can enhance service offerings.
- **Tech Integration:** Incorporating advanced technology (like AI) can improve service efficiency.

### 2.4.4 Threats

- **Competitive Market:** Competition from existing platforms may impact market share.
- **Security Concerns:** Ensuring data security and privacy is crucial to maintain trust.
- **Regulatory Risks:** Compliance with local laws and regulations could pose challenges.

## Chapter 3: Design Specification

This section outlines the design and structure of the ServiceAid project, detailing how various components come together to create an effective, user-friendly and robust system. It includes an in depth exploration of the frontend design, backend architecture, user interaction design, and implementation requirements.

### 3.1 Front-End Design

The frontend of the ServiceAid platform focuses on creating an intuitive, visually appealing, and accessible interface. The design prioritizes simplicity and efficiency, ensuring that users of all technical abilities can navigate the system with ease.

#### 3.1.1 Framework

The frontend is built using React.js. It is a powerful JavaScript library for building interactive user interfaces. This enables:

- Component-based architecture for modular design.
- Efficient rendering of dynamic content.
- Improved performance through virtual DOM.

#### 3.1.2 Styling

The platform employs Tailwind CSS. It is a utility-first CSS framework that allows for rapid prototyping and consistent styling across the application. Key features include:

- **Responsive Design:** Ensures the platform is accessible on devices of all screen sizes, including desktops, tablets, and mobile phones.
- **Custom Themes:** Tailored themes provide a clean, professional look while aligning with accessibility guidelines.

#### 3.1.3 Key Pages

- **Home Page:** Welcomes users with an overview of the platform, highlighting its purpose and key features.
- **Registration/Login:** Facilitates secure user authentication and profile creation.

- **Dashboard:** Displays personalized information, including Customer, Service Provider and Admin that matches with the profiles, customizations, and service status.
- **Search and Match Page:** Enables recipients to search for available resources and services to update their availability.

#### 3.1.4 User Interactions

- **Real-Time Feedback:** Loading indicators, confirmation services, and error alerts keep users informed.
- **Interactive Forms:** Validation checks ensure users provide accurate and complete information.

#### 3.1.5 Frontend Accessibility

- Designed to meet international standards for accessibility.
- Keyboard navigability and screen-reader compatibility ensure inclusivity for users with disabilities.

### 3.2 Back-End Design

The backend of ServiceAid handles the core logic, data storage, and processing. It is built using Node.js with Express.js framework. This was chosen for its performance and scalability.

#### 3.2.1 Architecture

- **Server-Side Framework:** Express.js provides a robust structure for API creation, routing, updating and getting data from database.
- **Database:** MongoDB is used for data storage, offering flexibility in handling unstructured data, which is ideal for diverse user profiles and resource types.

#### 3.2.2 Core Functionalities

- **User Management:** Secure registration, login, and profile updates are supported by encrypted data transfers.
- **Matching Algorithm:** A custom-built algorithm efficiently matches service providers and customer based on location, resource type, and time.

### 3.2.3 Security Measures

- **Encryption:** Data is secured using HTTPS and data encryption protocols
- **Role-Based Access Control:** Limits administrative privileges to authorized users only.
- **Data Validation:** Ensures that inputs from users conform to expected formats and parameters.

## 3.3 Interaction Design and UX

The interaction design and user experience (UX) strategies of ServiceAid focus on enhancing usability and user satisfaction through well-thought-out navigation and intuitive design.

### 3.3.1 User Journey Mapping

- From landing on the homepage to booking a service or getting a resource, every step of the user journey is optimized for minimal friction.

### 3.3.2 Navigation Design

- **Top Navigation Bar:** Contains key links to the home, services, contact and dashboard.
- **Breadcrumb Trails:** Help users retrace their steps and maintain context.

### 3.3.3 Feedback Mechanisms

- Success messages (e.g. “Profile updated successfully”, “Message sent successfully”, “User Deleted”).
- Error prompts (e.g. “Invalid user and password”, “Password must be 6-character long”).

### 3.3.4 Mobile-First Approach

- The platform is designed with a mobile-first philosophy, ensuring seamless usability on smartphones while maintaining full functionality on larger screens.

### 3.3.5 Testing for Usability

- Conducted user testing with diverse demographics to ensure the design accommodates various user preferences and skill levels.

### 3.4 Implementation Requirements

The implementation of ServiceAid necessitates a carefully chosen set of tools and technologies to ensure reliability, scalability, and efficiency.

#### 3.4.1 Frontend Tools

- **React.js:** For building dynamic and interactive interfaces of ServiceAid platform.
- **Tailwind CSS:** For rapid styling and dynamic design for Pc, Tablet or Mobile view.

#### 3.4.2 Backend Tools

- **Node.js and Express.js:** To handle server-side logic and API creation and also update, delete data from the database.
- **MongoDB:** It is the main server of the platform. It is used for managing data like services list, bookings information, user information, etc.

#### 3.4.3 Development Environment

- **Version Control:** Git and GitHub for collaborative development and tracking changes and it also used as a drive to store the code data.
- **Code Editor:** Visual Studio Code, with extensions of JavaScript (ES6), npm IntelliSense, react extension pack, Auto import, React JS code snippets, Tailwind CSS IntelliSense.

## Chapter 4: Implementation and Testing

### 4.1 Testing Strategy

The testing strategy for the ServiceAid project focuses on ensuring all functionalities work as intended, delivering a seamless experience for customers, service providers, and administrators. The approach includes functional, integration, system, and user acceptance testing to validate the project's features and this testing will be manually step by step.

#### Pass/Fail Criteria

##### 1. Component Pass/Fail Criteria

- The test will pass if the feature works as per the design requirements.
- The test will fail if it does not meet the specified objectives.

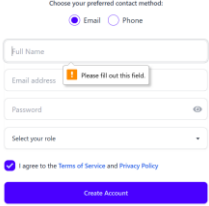
### 4.2 Test Cases

Test Case 01	Test Case Name	System	Subsystem
01	Customer Registration	User Management	Registration
02	Service Provider Registration	User Management	Registration

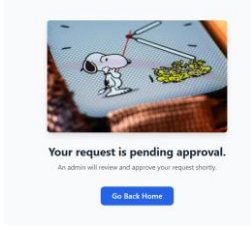
Designed By	Executed By	Execution Date
A.S.M Tawfiqul Hasan	A.S.M Tawfiqul Hasan	02-12-2024

#### Customer Registration:

Step	Action	Pass/Fail	Comment
1	User fills in only the name field and clicks "Register".	Fail	Prompts user to complete other fields.

2	User clicks "Register" without filling in any fields.	Fail	
3	User enters an invalid email format (e.g., abc.com).	Fail	Prompts user to provide a valid email.
4	User enters valid data and clicks "Register".	Pass	Registration succeeds.

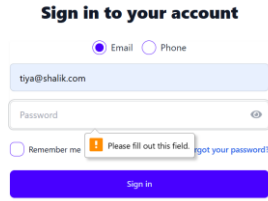
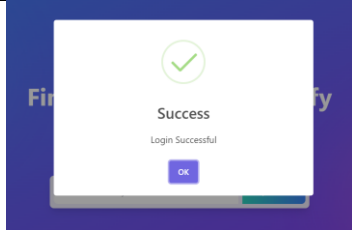
### Service Provider Registration:

Step	Action	Pass/Fail	Comment
1	Service provider fills in business name but skips contact details.	Fail	Prompts to complete contact details.
2	Service provider submits registration without uploading required documents.	Fail	Displays error for missing documents.
3	Service provider completes registration and submits.	Pass	

Test Case 02	Test Case Name	System	Subsystem
01	User Login	User Management	Login

Designed By	Executed By	Execution Date
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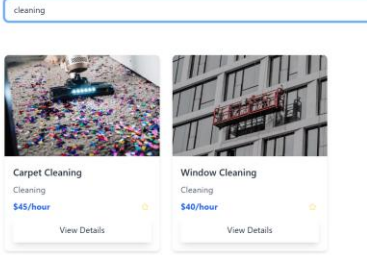
A.S.M Tawfiqul Hasan	A.S.M Tawfiqul Hasan	02-12-2024
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Step	Action	Pass/Fail	Comment
1	User fills in only the email field and clicks "Login".	Fail	
2	User clicks "Login" without filling in any fields.	Fail	Displays error for missing required fields.
3	User enters an invalid email format (e.g., abc.com).	Fail	Prompts user to provide a valid email.
4	User enters correct credentials and clicks "Login".	Pass	

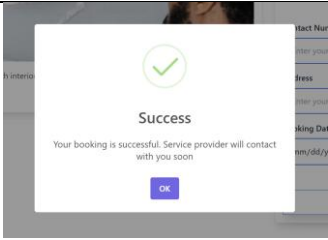
Test Case 03	Test Case Name	System	Subsystem
01	List of Available Services	Service	Services
02	Book a Service	Service	Booking

Designed By	Executed By	Execution Date
A.S.M Tawfiqul Hasan	A.S.M Tawfiqul Hasan	02-12-2024

**Services:**

Step	Action	Pass/Fail	Comment
1	User navigates to the services page.	Pass	All available services are displayed.
2	User searches for a service using keywords.	Pass	

### Book a Service Steps:

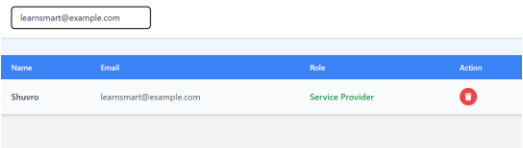
Step	Action	Pass/Fail	Comment
1	User tries to book a service without logging in.	Fail	Prompts user to log in first.
2	User books a service with valid details (date, time, payment).	Pass	
3	User books a service for an unavailable slot.	Fail	Displays error for unavailable slot.

Test Case 04	Test Case Name	System	Subsystem
01	Manage Users	Admin Dashboard	User Management
02	Approve/Reject Service Provider	Admin Dashboard	Provider Access

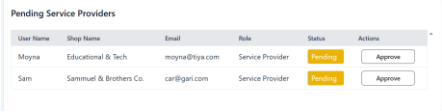
03	Manage Services	Admin Dashboard	Service Management
04	View User Messages	Admin Dashboard	Messaging
05	Send Emails	Admin Dashboard	Communication

Designed By	Executed By	Execution Date
A.S.M Tawfiqul Hasan	A.S.M Tawfiqul Hasan	02-12-2024

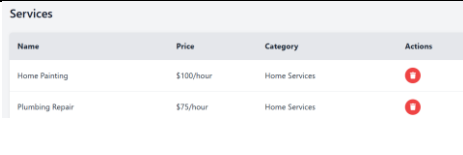
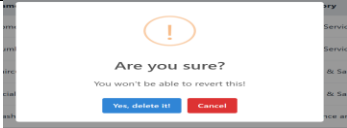
### Manage Users

Step	Action	Pass/Fail	Comment
1	Admin views a list of registered users.	Pass	Displays all users.
2	Admin searches for a specific user by name or email.	Pass	
3	Admin deletes a user from the system.	Pass	User is successfully removed.

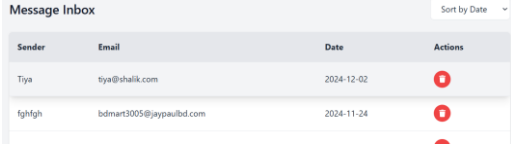
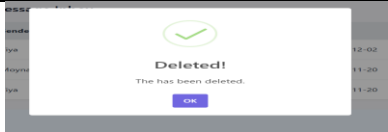
### Approve/Reject Service Provider

Step	Action	Pass/Fail	Comment
1	Admin views a list of pending service provider requests.	Pass	
2	Admin approves a provider request.	Pass	Provider is activated.
3	Admin rejects a provider request with a reason.	Pass	Provider receives rejection notification.

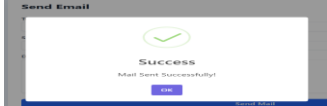
## Manage Services

Step	Action	Pass/Fail	Comment
1	Admin views a list of all services.	Pass	
2	Admin removes a service from the system.	Pass	

## View User Messages

Step	Action	Pass/Fail	Comment
1	Admin views messages sent by users.	Pass	
2	Admin filters messages by user or date.	Pass	Relevant messages are displayed.
3	Admin can delete irrelevant messages	Pass	

## Send Email

Step	Action	Pass/Fail	Comment
1	Admin sends the email.	Pass	

## Chapter 5: Conclusion

### 5.1 Conclusion

The ServiceAid project has been an enriching endeavor, achieving its primary objectives of creating a reliable and efficient platform for service delivery. The platform addresses key industry challenges by offering verified providers, transparent pricing, and seamless booking systems, thereby improving customer satisfaction and trust.

Despite its success, the project also highlighted areas for future development, such as enhancing automation, integrating advanced features like live chat and notifications, and implementing a subscription model for service providers. These insights will guide the next phases of the project to achieve even greater impact.

In summary, ServiceAid stands as a testament to the power of technology in solving real-world problems, providing a robust foundation for further innovation in the service industry.

### 5.2 Future Scope

The ServiceAid platform has significant potential for expansion and improvement. The following points outline future enhancements and features that could be implemented to make the platform more robust, user-friendly, and efficient:

#### 5.2.1 Service Provider Subscription Management

- **Automated subscription fee deduction:** Implement a system to automatically deduct subscription fees from service providers on a monthly or yearly basis, ensuring seamless payment processing.
- **Commission-Based revenue model:** Introduce a feature to deduct a percentage of the payment from each service completed on the platform as commission.

#### 5.2.2 Advanced Communication Features

- **Live chat system:** Enable real-time communication between customers and service providers for quick clarification of queries or negotiation of service details.

- **Push Notifications:** Notify users about booking confirmations, payment status, upcoming appointments, and special offers.

### 5.2.3 Enhanced User Experience

- **Service Tracking:** Allow customers to track the location or progress of their booked service provider in real-time.
- **Rating and Feedback Analytics:** Provide advanced analytics to service providers, summarizing their performance based on customer feedback and ratings.

### 5.2.4 Advanced Security Measures

- **Two-Factor Authentication:** Strengthen account security by adding 2FA during login and critical actions like payments or profile updates.
- **Data Encryption:** Encrypt all user and provider data to protect sensitive information and maintain user trust.
- **Fraud Detection System:** Develop a fraud detection mechanism to identify suspicious activities or fraudulent transactions on the platform.

### 5.2.5 Scalability and Market Expansion

- **Multi-Language Support:** Expand the platform to cater to diverse regions by adding support for multiple languages.
- **Regional Expansion:** Extend services to more cities and regions, adapting to the unique requirements of each area.
- **Business Partnerships:** Collaborate with local businesses to offer bundled services, discounts, or promotional packages.

### 5.2.6 AI-Powered Features

- **Smart Matching System:** Use AI algorithms to match customers with the most suitable service providers based on their preferences, location, and service history.

- **Predictive Maintenance:** For services requiring tools or machines, provide reminders and scheduling for regular maintenance based on usage patterns.

### 5.2.7 Payment and Financial Features

- **Installment Payments:** Offer customers the option to pay for high-cost services in installments.
- **In-App Wallet:** Introduce a digital wallet for seamless transactions within the platform, allowing users to load funds and pay directly.

### 5.2.8 Continuous Updates and Feedback Integration

- **Regular Feature Updates:** Continuously improve the platform based on user feedback and emerging trends in the service industry.
- **Customer and Provider Training:** Develop a knowledge base or training program to help users and service providers utilize the platform effectively.

## 5.3 Cost Management Report

Category	Cost Item	Estimated Monthly Cost (BDT)	Description
Development Phase	Developer Salary	50,000 – 85,000	For developers who created the platform during the development phase (one-time expense).
	Design and UI Tools	5,500 - 11,000	Tools like Figma, Adobe XD, or Canva for creating the design.
	Testing Tools	2,200 - 5,500	For tools like Postman, BrowserStack, or any paid testing tools.

<b>Domain &amp; Hosting</b>	Domain Name Registration	2000 - 3000	Annual domain cost, spread over months (e.g. serviceaid.com).
	Web Hosting	5,500 - 22,000	Hosting on providers like AWS, DigitalOcean, or Vercel for backend and frontend hosting.
	CDN (Content Delivery Network)	1,100 - 2,200	To speed up loading times (e.g. Cloudflare).
<b>Database</b>	Database Service	2,200 - 11,000	Managed database services like MongoDB Atlas.
<b>Website Maintenance</b>	Administrative Costs	5,500 - 16,500	Managing user queries, resolving bugs, and updating content.
	Website Monitoring	1,100 - 3,300	Tools like Pingdom or UptimeRobot to ensure uptime.
	SSL Certificate	550 - 1,100	SSL encryption for website security.
<b>Third-Party Services</b>	Email Services	1,100 - 5,500	Services like SendGrid or Mailgun for transactional emails. (Using Nodemailer for free)
	Marketing/SEO Tools	5,500 - 16,500	Tools like Google Ads, Facebook Ads, or SEMrush for marketing campaigns and website promotion.
<b>Maintenance Team</b>	Developer/Technical Support	22,000 - 55,000	For bug fixes, updates, and maintaining the site.

	Content Manager/Copywriter	11,000 - 33,000	To manage blog content, service descriptions, and customer support articles.
	Customer Support	11,000 - 44,000	Dedicated customer support personnel to address user queries.
<b>Miscellaneous Costs</b>	Backup Services	1,100 - 3,300	Automated backup solutions like AWS S3 or Backblaze.
	Updates and Feature Enhancements	11,000 - 33,000	Continuous improvement of the platform.

**Approximate Monthly Costs (Published Website)**

<b>Category</b>	<b>Low Range (BDT)</b>	<b>High Range (BDT)</b>
Hosting, Domain, CDN	7,700	25,850
Database	2,200	11,000
Maintenance (Admin, Monitoring)	6,600	19,800
Third-Party Services	7,700	22,000
Team (Support, Content, Tech)	44,000	132,000
<b>Total Estimated Costs</b>	<b>68,200</b>	<b>210,650</b>

## Chapter 6: Appendix

### Appendix A: Git Hub Links

1. **ServiceAid Client:** <https://github.com/the-user01/serviceAid-client>
2. **ServiceAid Server:** <https://github.com/the-user01/serviceAid-server>

### Appendix B: System Design

#### Front-End Registration/Login Part

1. **Registration:** Customer / Admin, Service Provider (for service provider it will redirect to another page)

The screenshot displays the ServiceAid website's registration interface for a Service Provider. At the top left is the ServiceAid logo, and at the top right are navigation links: Home, Services, About, Contact, and Login. The main heading is "Create your account" with the subtext "Join ServiceAid and start booking services". Below this, users are prompted to "Choose your preferred contact method:" with radio buttons for "Email" (selected) and "Phone". The registration form includes fields for "Service Provider" (name), "service@provider.com" (email), a password field with a toggle for visibility, and a dropdown menu for "Service Provider". A checkbox for "I agree to the Terms of Service and Privacy Policy" is checked. A prominent blue "Next" button is at the bottom of the form. Below the form, a link says "Already have an account? Log in here". The footer features the ServiceAid logo, the tagline "Connecting you with trusted experts, whenever you need a helping hand.", a "Contact Us" button, and social media icons for Facebook, Twitter, Instagram, and LinkedIn. The bottom left corner contains the copyright notice "© 2024 All Rights Reserved".

### Create your account

Join ServiceAid and start booking services

Already have an account? [Log in here](#)



Connecting you with trusted experts, whenever you need a helping hand.



## 2. Login: Phone + Email

### Sign in to your account

Email  Phone

Remember me [Forgot your password?](#)

Or continue with

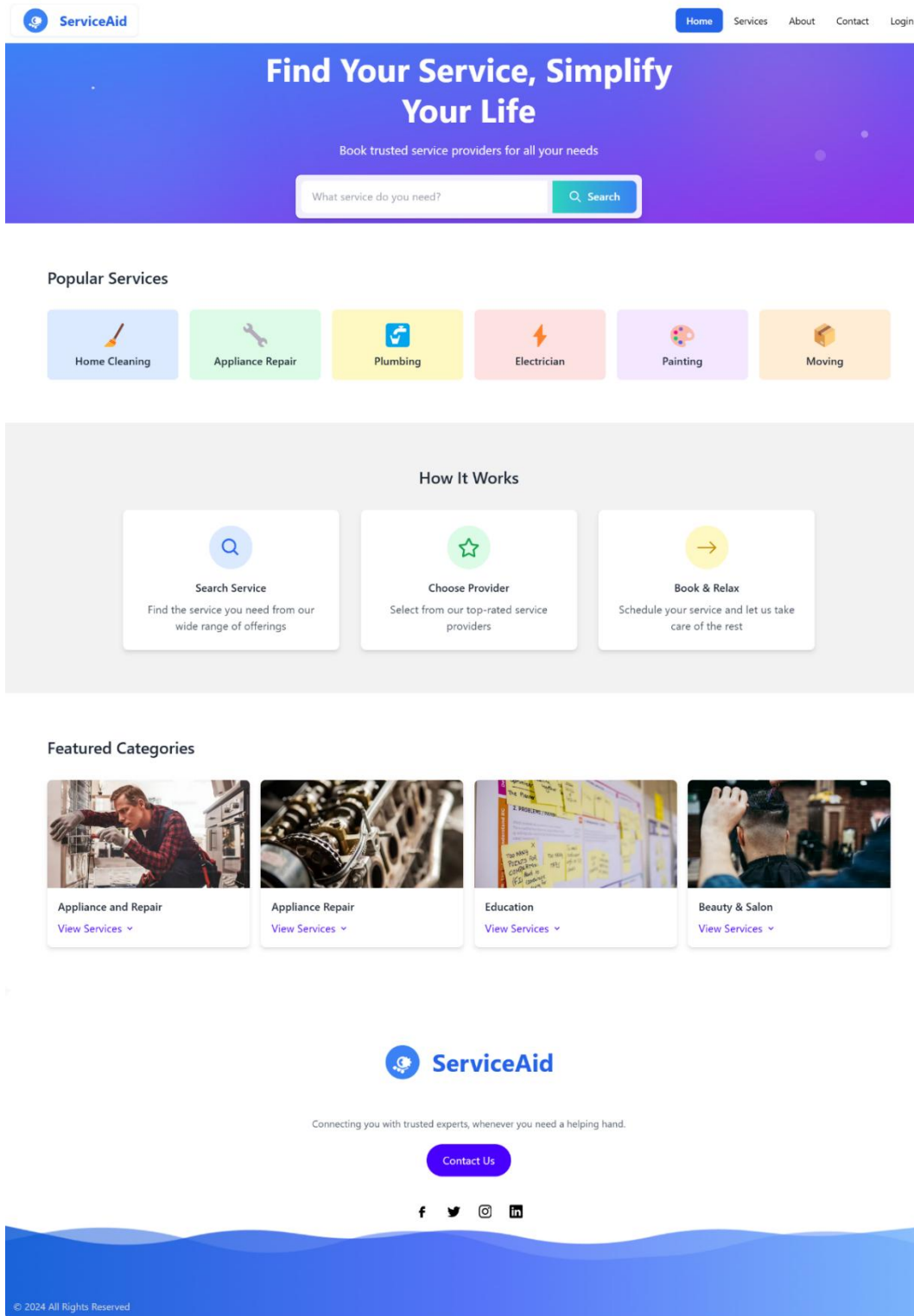
Don't have an account? [Register here](#)



Connecting you with trusted experts, whenever you need a helping hand.



# Front-End Customer Part



After clicking to the Service in Navbar website will redirect user to Service Page

**ServiceAid** Home **Services** About Contact

## Discover Our Services

Find the perfect service for your needs

What service do you need?

**Service Categories**

- All
- Home Services
- Beauty & Salon
- Appliance Repair
- Cleaning
- Education
- Health & Wellness
- Events

<p><b>Haircut &amp; Styling</b> Beauty &amp; Salon \$30/session</p> <p><a href="#">View Details</a></p>	<p><b>Plumbing Repair</b> Home Services \$75/hour</p> <p><a href="#">View Details</a></p>	<p><b>Carpet Cleaning</b> Cleaning \$45/hour</p> <p><a href="#">View Details</a></p>	<p><b>Tutoring Services</b> Education \$30/hour</p> <p><a href="#">View Details</a></p>
<p><b>Facial Treatment</b> Beauty &amp; Salon \$50/session</p> <p><a href="#">View Details</a></p>	<p><b>Yoga Classes</b> Health &amp; Wellness \$25/session</p> <p><a href="#">View Details</a></p>	<p><b>Washing Machine Repair</b> Appliance and Repair \$45/hour</p> <p><a href="#">View Details</a></p>	<p><b>Online Course Creation</b> Education \$40/hour</p> <p><a href="#">View Details</a></p>
<p><b>Massage Therapy</b> Health &amp; Wellness \$50/session</p> <p><a href="#">View Details</a></p>	<p><b>Window Cleaning</b> Cleaning \$40/hour</p> <p><a href="#">View Details</a></p>	<p><b>Home Painting</b> Home Services \$100/hour</p> <p><a href="#">View Details</a></p>	<p><b>Refrigerator Repair</b> Appliance and Repair \$50/hour</p> <p><a href="#">View Details</a></p>

**Are you a service provider?**  
Join our platform and grow your business

[Become a Provider](#)

**ServiceAid**

Connecting you with trusted experts, whenever you need a helping hand.

[Contact Us](#)

f t i ln

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After clicking to a service website will redirect user to service details page from where user can order services.

The screenshot displays a ServiceAid website interface. At the top left is the ServiceAid logo. The top right navigation menu includes links for Home, Services, About, and Contact, along with a user profile icon. A purple button labeled 'Back to Services' is positioned above the main content area. The main content is divided into two columns. The left column features a 'Carpet Cleaning' service listing provided by CleanRite. It includes a photograph of a carpet cleaning machine on a carpet covered in colorful confetti. Below the image, the text reads 'Specialized carpet cleaning services with deep stain removal.' and the price is listed as '\$45/hour'. The right column contains a 'Book This Service' form. This form includes a 'Select a Day' section with buttons for Monday, Wednesday, and Friday. Below that is an 'Available Hours' section with a blue button indicating '9:00 AM - 5:00 PM'. The form also has input fields for 'Contact Number' and 'Address', and a 'Book Now' button at the bottom. At the bottom of the page, the ServiceAid logo is centered, followed by the tagline 'Connecting you with trusted experts, whenever you need a helping hand.' and a purple 'Contact Us' button. Below the button are social media icons for Facebook, Twitter, Instagram, and LinkedIn. The footer of the page features a blue wavy graphic and the text '© 2024 All Rights Reserved'.

# About ServiceAid

Connecting people with trusted service providers since 2024

## Our Mission

To simplify the process of finding and booking reliable services, empowering both customers and service providers to create better communities.

- Trust**  
We build trust through transparency and our commitment to quality service.
- Innovation**  
We continuously innovate to improve the service experience for all our users.
- Community**  
We foster a sense of community among our users and service providers.

## Our Journey

- 2020: ServiceAid is Born**  
Founded with the vision to revolutionize the service industry.
- 2021: Rapid Growth**  
Expanded to 10 major cities and onboarded 1000+ service providers.
- 2022: Mobile App Launch**  
Introduced our mobile app for iOS and Android platforms.
- 2023: Going National**  
Expanded our services nationwide, serving millions of customers.

## Meet Our Team

 <p>John Doe CEO &amp; Founder</p>	 <p>Jane Smith COO</p>	 <p>Mike Johnson CTO</p>	 <p>Sarah Brown Head of Customer Service</p>
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## What Our Users Say

<p>ServiceAid has been a lifesaver! I found reliable plumbers and electricians quickly and easily.</p> <p><b>Alex Thompson</b> Homeowner <span>★★★★★</span></p>	<p>As a busy entrepreneur, ServiceAid helps me manage all my business maintenance needs efficiently.</p> <p><b>Emily Chen</b> Small Business Owner <span>★★★★★</span></p>	<p>Joining ServiceAid has helped me grow my business and connect with new clients. Highly recommended!</p> <p><b>Michael Rodriguez</b> Service Provider <span>★★★★★</span></p>
---	---	--

## Frequently Asked Questions

- What types of services can I find on your platform? +
- How do I book a service? +
- Are the service providers vetted? +
- Can I cancel or reschedule my booking? +
- What payment methods are accepted on your platform? +
- How can I contact customer support if I have issues? +

### Ready to experience the ServiceAid difference?

Join thousands of satisfied customers and service providers today.

[Get Started Now](#)



Connecting you with trusted experts, whenever you need a helping hand.

[Contact Us](#)



User can send messages from Contact page to Admin.

**ServiceAid** Home Services About **Contact** Login

## Contact Us

We're here to help. Reach out to us for any questions or concerns.

### Send Us a Message

Name  
Your Name

Email  
your@email.com

Message  
How can we help you?

[Send Message](#)

### Contact Information

**Phone**  
01245745545  
Mon-Fri, 9am-6pm EST

**Email**  
support@serviceaid.com  
We aim to respond within 24 hours

**Office**  
Jatrabari  
Dhaka-1236

**Business Hours**  
Monday - Friday: 9am - 6pm  
Saturday: 10am - 4pm  
Sunday: Closed

### Our Location

Jatrabari Ideal school and coll...  
Dhaka - Sylhet Hwy, Dhaka 1204, Bangladesh  
4.0 ★★★★★ 628 reviews  
[View larger map](#)

Jatrabari Teletalk Customer Care - Dhaka  
Fresh Ceramics Dealer's Exclusive Showroom  
MODS Zone 1 & 7 Dhaka WASA  
Al-Sazeda Filling Station  
Chai Pai Chinese  
Jannatul Ferdous Ferdous

**ServiceAid**

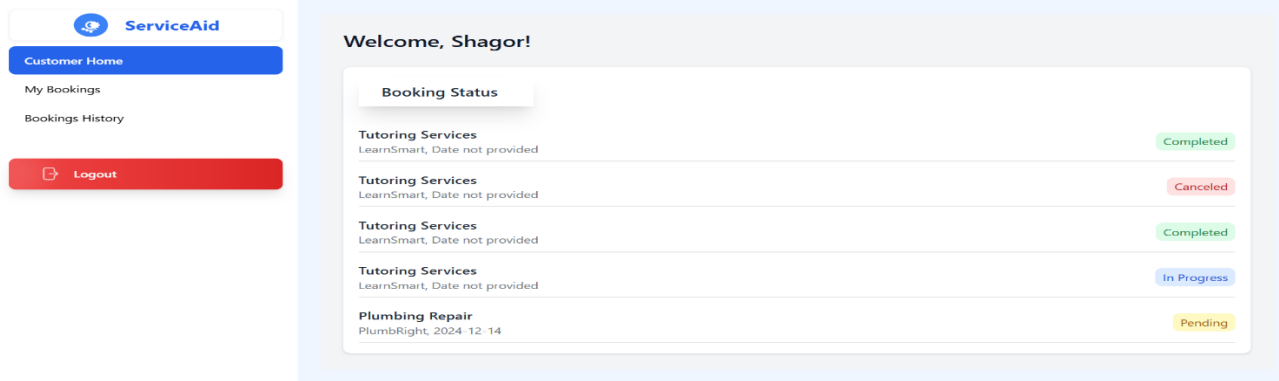
Connecting you with trusted experts, whenever you need a helping hand.

[Contact Us](#)

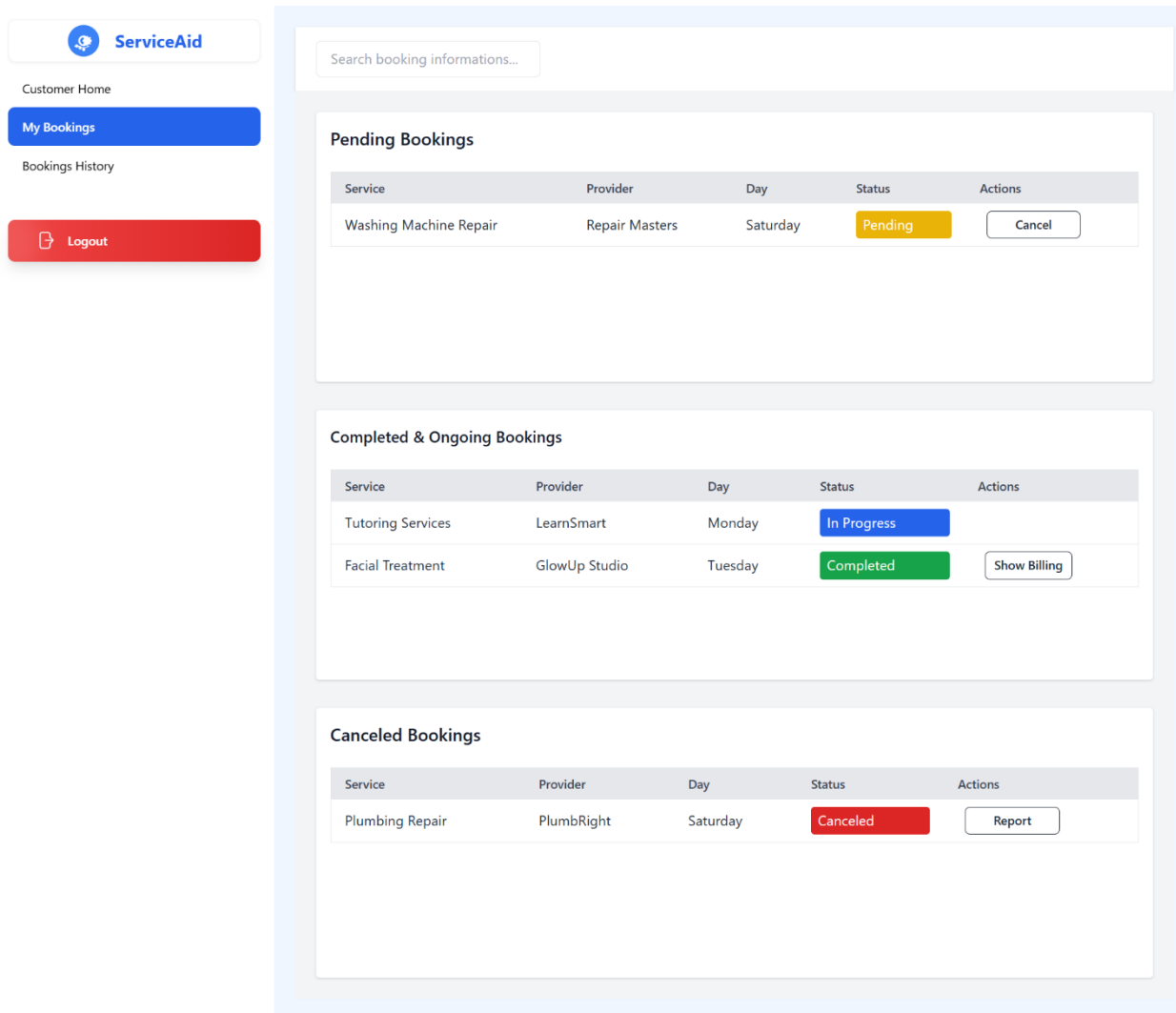
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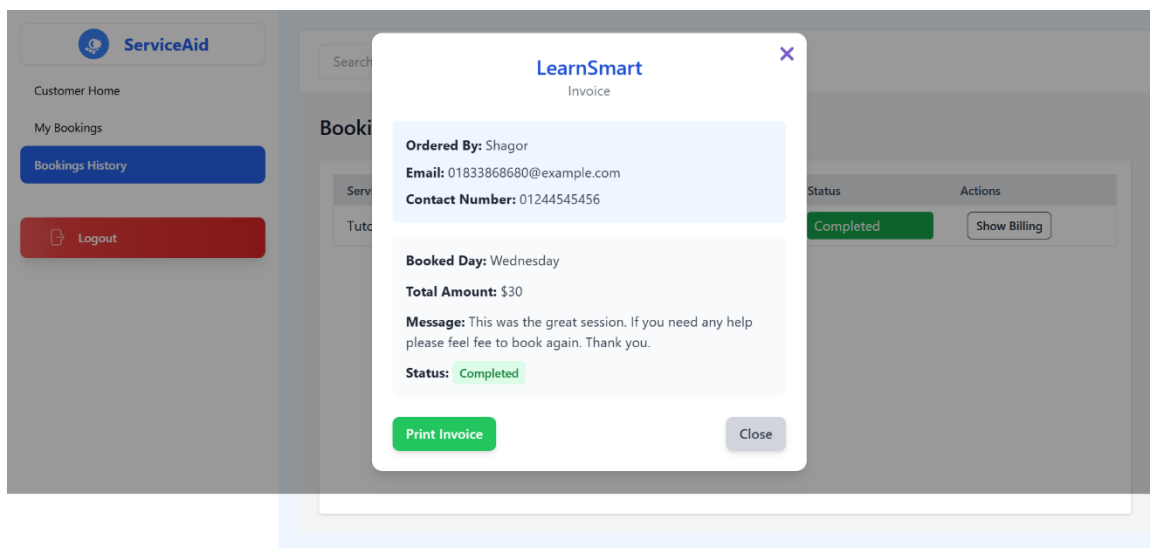
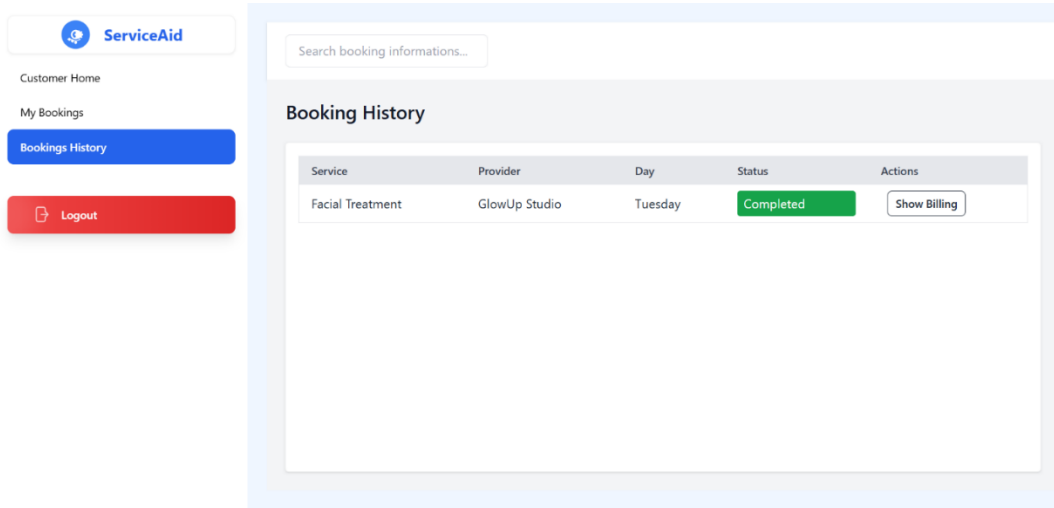
User can view their dashboard. It contains service order history

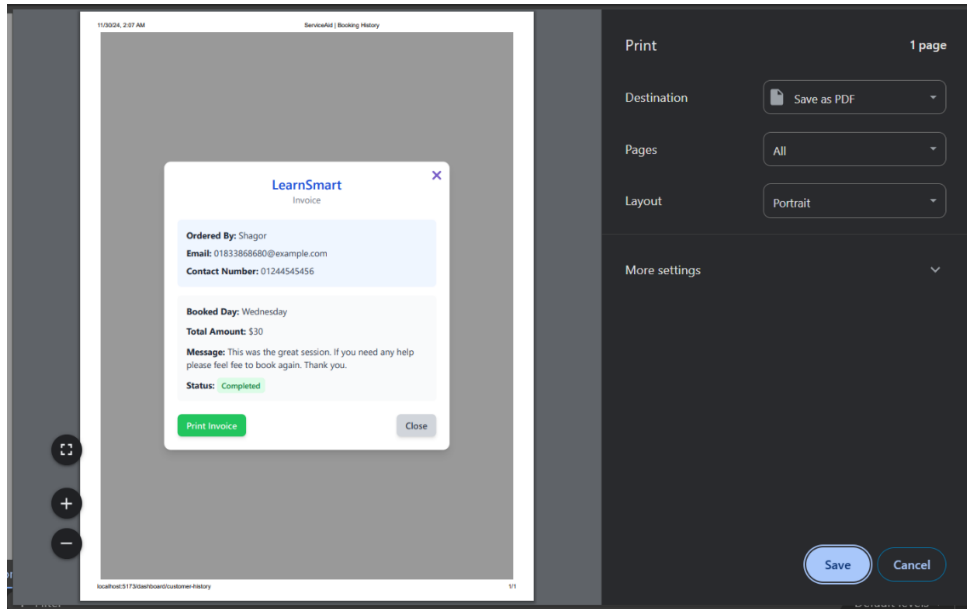


In My Booking page user can see their booking details

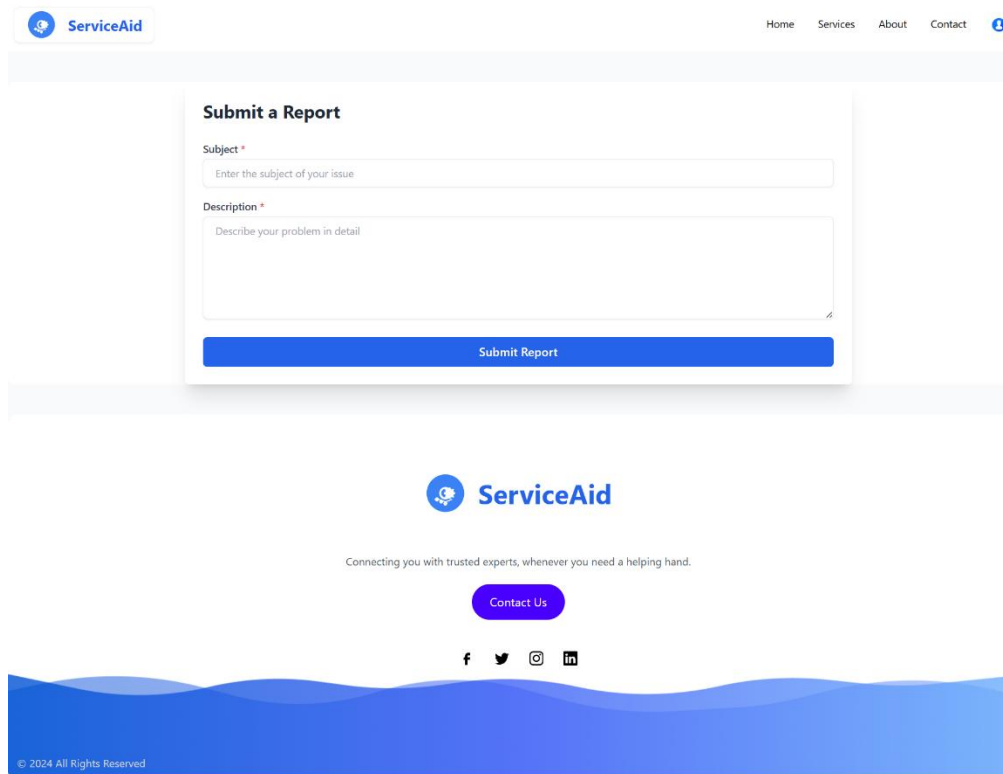


In Booking history page user can view completed bookings and also can print/download their payment receipt.



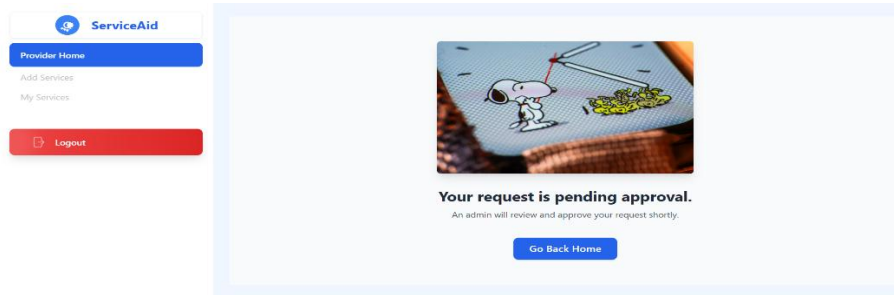


If User cancel a service he/she can submit a report. This report will be shown to Admin.

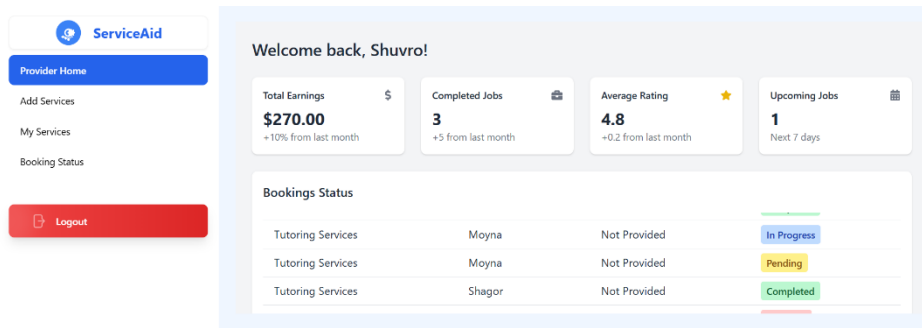


## Front-End Service Provider Part

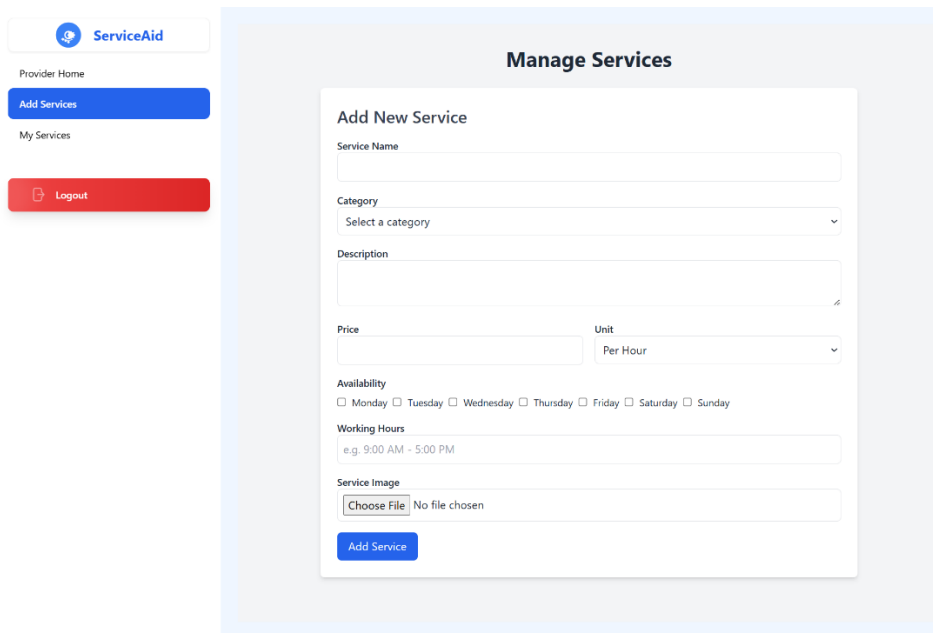
After opening a shop service provider will be redirect to waiting page for Admin approval.



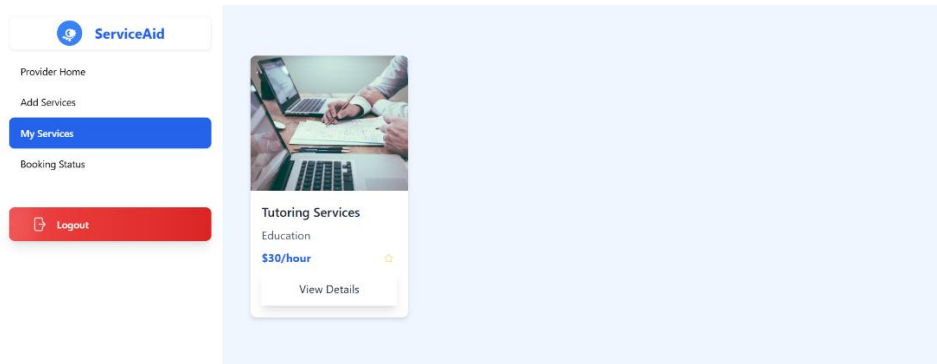
Service Provider can see their dashboard with summary of service history



In Add services page service provider can add their services



In My Services page Service Provider can see their services.



After completing a service, Service Provider can create a billing summary. It will appear to clients Bookings History page.

### Tutoring Services

Provider Name: LearnSmart

---

**Order Summary:**

Ordered By: Moyna  
Email: moyna@tiya.com  
Contact Number: 01255486532

---

**Billing Form:**

Total hour  
4

Total Amount: **\$120**

Additional Notes (Optional)

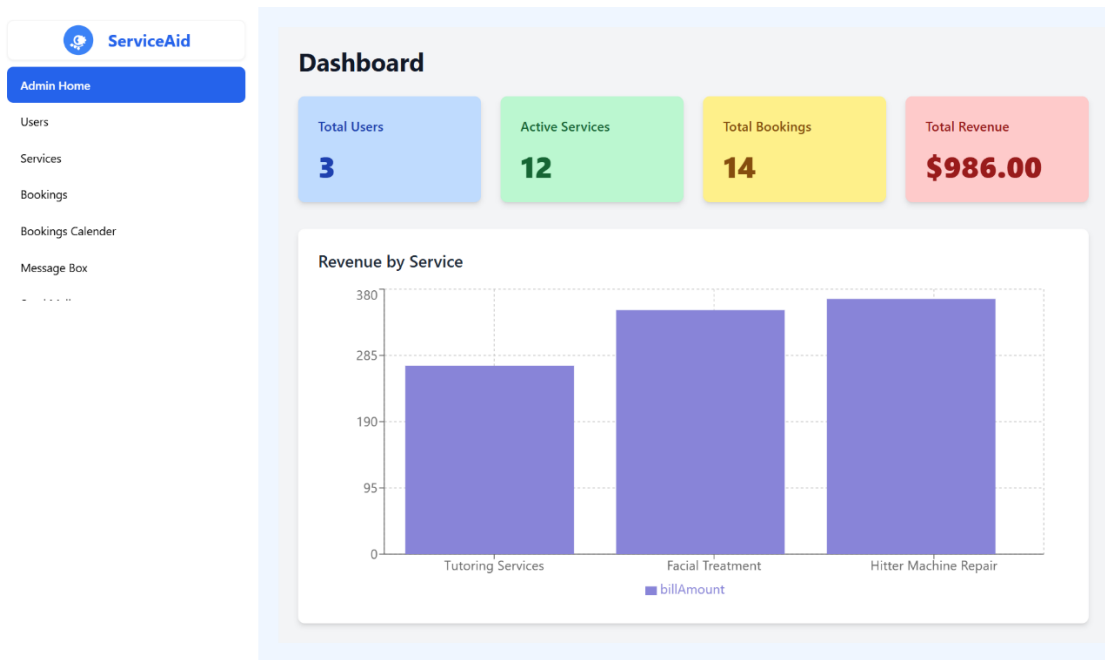
If you liked the session please feel free to book the session again. Thank you :)

**Submit Billing**

Close

## Front-End Admin Part

Admin can view their dashboard with a statistical report of earning statement.



In Users Page Admin can view total Users Including Admin, Customer, Service Provider. Admin have the authority to delete a user. Also Admin can Approve service provider from here.

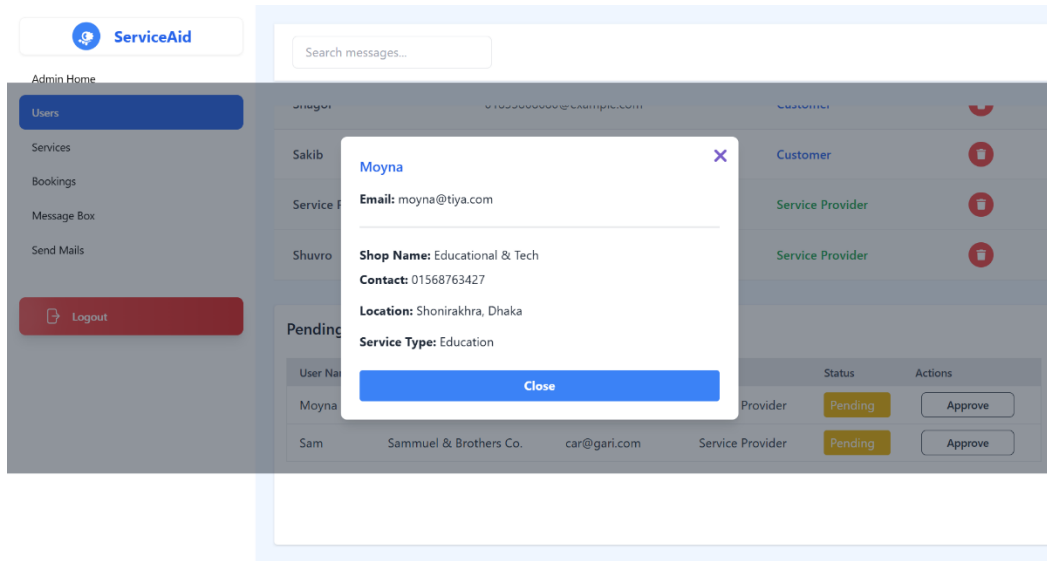
The Users Management page includes a search bar and a table of users. Below the table is a section for 'Pending Service Providers' with a table of users awaiting approval.

Name	Email	Role	Action
Tiya	tiya@shalik.com	Admin	
Shagor	01833868680@example.com	Customer	
Sakib	01568763427@example.com	Customer	

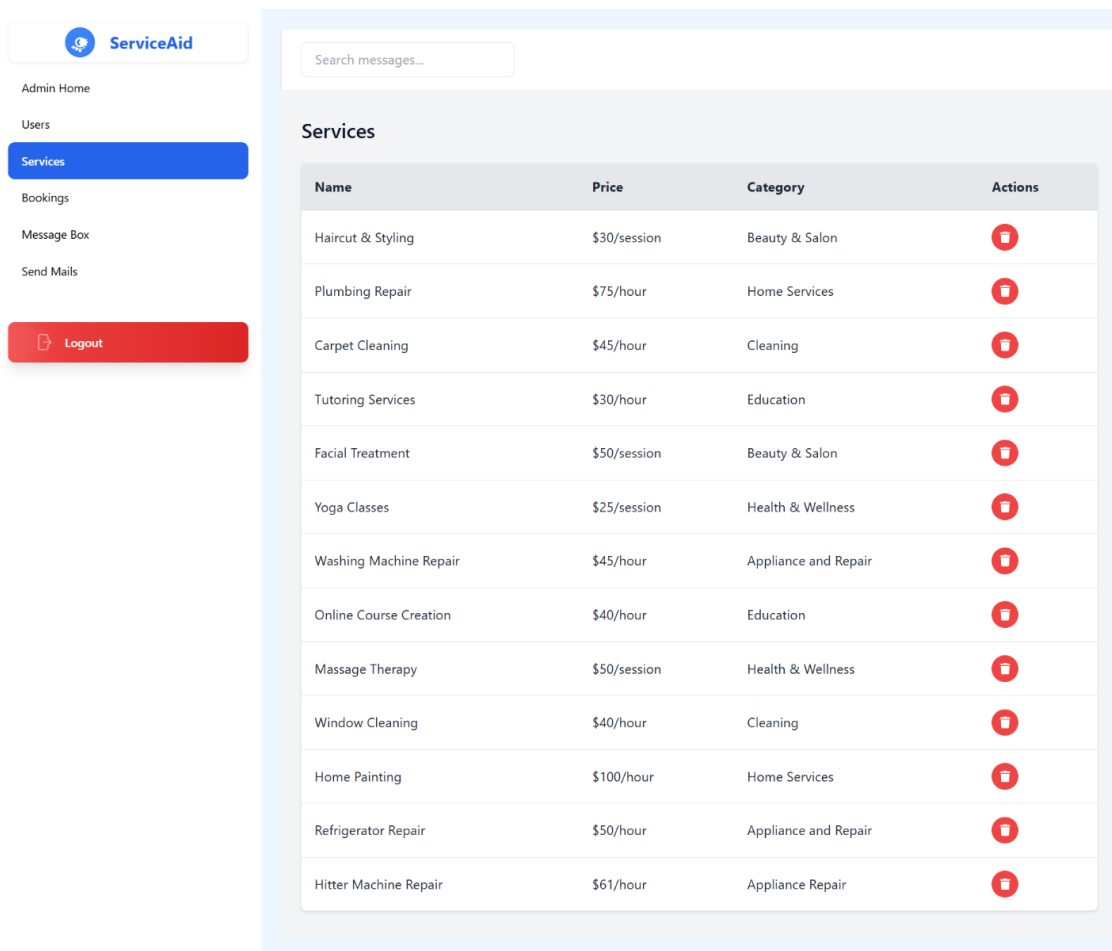
  

User Name	Shop Name	Email	Role	Status	Actions
Moyna	Educational & Tech	moyna@tiya.com	Service Provider	Pending	<input type="button" value="Approve"/>
Sam	Sammuel & Brothers Co.	car@gari.com	Service Provider	Pending	<input type="button" value="Approve"/>

Admin can view details of Service Provider before approving them.



Admin can view the all services



Admin can view Bookings status in Bookings page. If the service booking is canceled Admin can see the reason/complaints.

**Bookings**

Service Name	Customer	Booking Day	Status
Tutoring Services	Tiya	Monday	Completed
Facial Treatment	Tiya	Tuesday	Completed
Tutoring Services	Moyna	Monday	In Progress
Tutoring Services	Moyna	Friday	Pending
Tutoring Services	Shagor	Wednesday	Completed
Hitter Machine Repair	Moyna	Thursday	In Progress
Hitter Machine Repair	Moyna	Sunday	Completed

**Canceled Bookings**

Service Name	Customer	Booking Day	Status
Plumbing Repair	Tiya	Saturday	Canceled
Washing Machine Repair	Tiya	Saturday	Canceled
Tutoring Services	Shagor	Friday	Canceled
Hitter Machine Repair	Moyna	Tuesday	Canceled

**Service Cancellation Info**

Service Name: Plumbing Repair  
 Provider Name: Plumbright  
 Customer: Tiya  
 Contact: 01532654789  
 Booking Day: Saturday  
 Status: Canceled

**Report**

Subject: More Charge Asked  
 Description: They asked me to give more charge for their service.

Close

Admin can see the services date wise in a calendar view

ServiceAid

2024

Admin Home

Users

Services

Bookings

Bookings Calendar

Message Box

### Admin Calendar

January							February							March									
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat			
		1	2	3	4	5	6						1	2	3							1	2
7	8	9	10	11	12	13	4	5	6	7	8	9	10	3	4	5	6	7	8	9			
14	15	16	17	18	19	20	11	12	13	14	15	16	17	10	11	12	13	14	15	16			
21	22	23	24	25	26	27	18	19	20	21	22	23	24	17	18	19	20	21	22	23			
28	29	30	31	25	26	27	28	29	24	25	26	27	28	29	30								
									31														

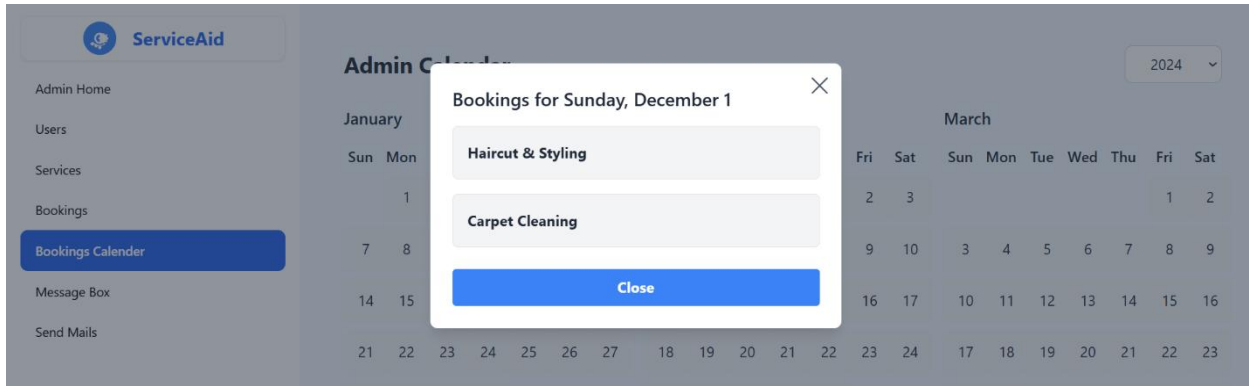
April							May							June							
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	
		1	2	3	4	5	6				1	2	3	4							1
7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8	
14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15	
21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22	
28	29	30	26	27	28	29	30	31	23	24	25	26	27	28	29						
									30												

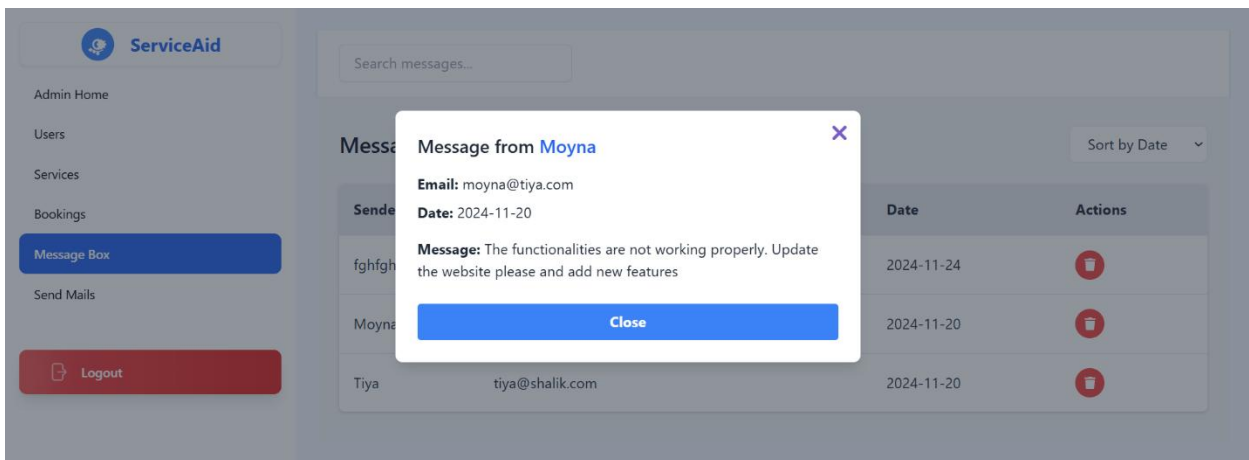
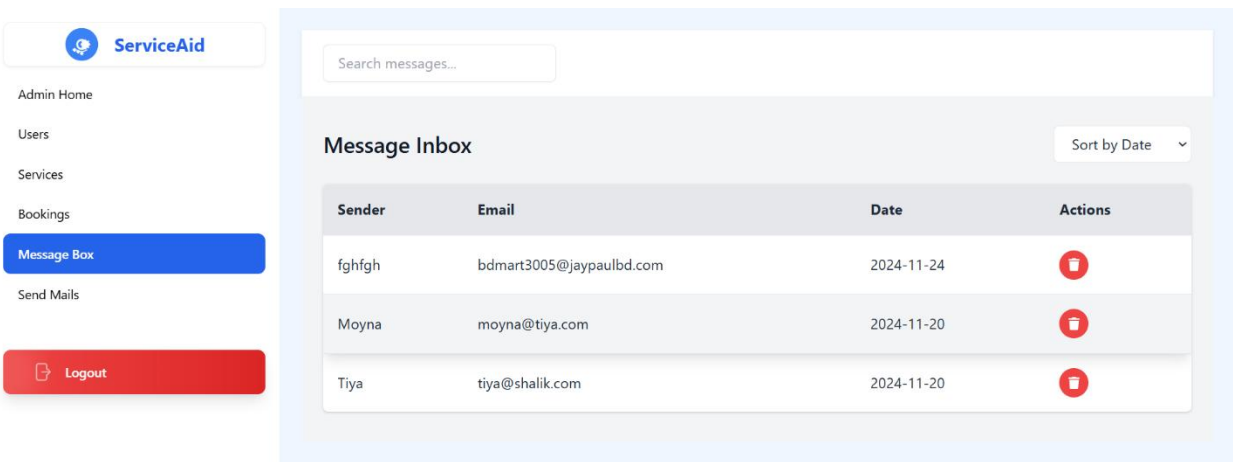
July							August							September							
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	
		1	2	3	4	5	6					1	2	3	1	2	3	4	5	6	7
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14	
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21	
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28	
28	29	30	31	25	26	27	28	29	30	31	29	30									

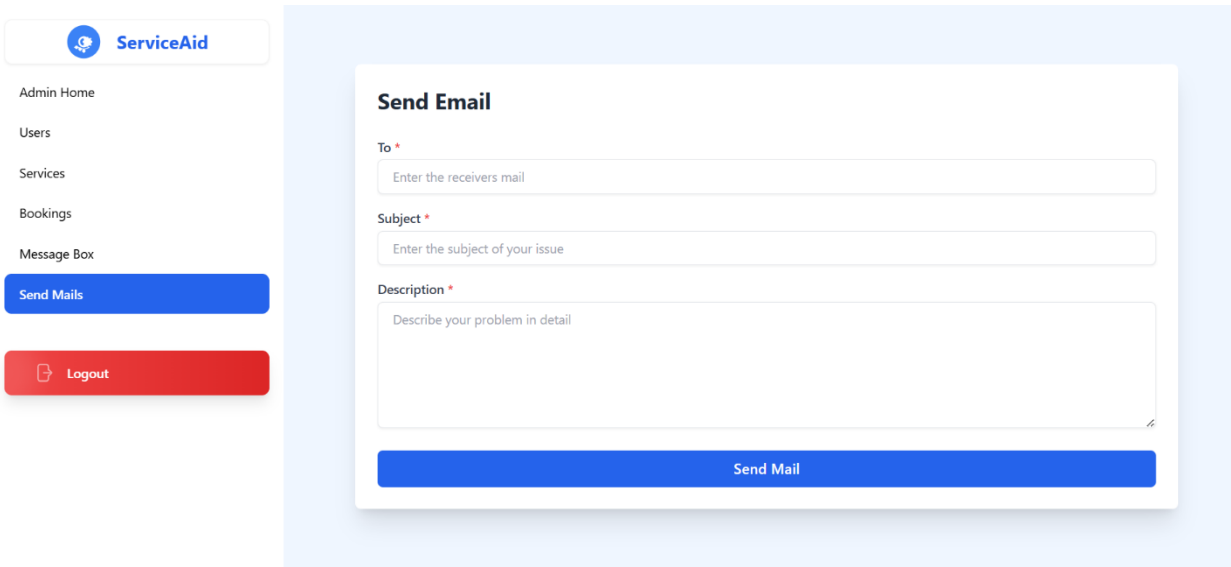
October							November							December							
Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	
			1	2	3	4	5						1	2	1	2	3	4	5	6	7
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14	
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21	
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28	
27	28	29	30	31	24	25	26	27	28	29	30	29	30	31							



Admin can see the messages that are sent from users from the contact page



## Admin can send E-mails to users

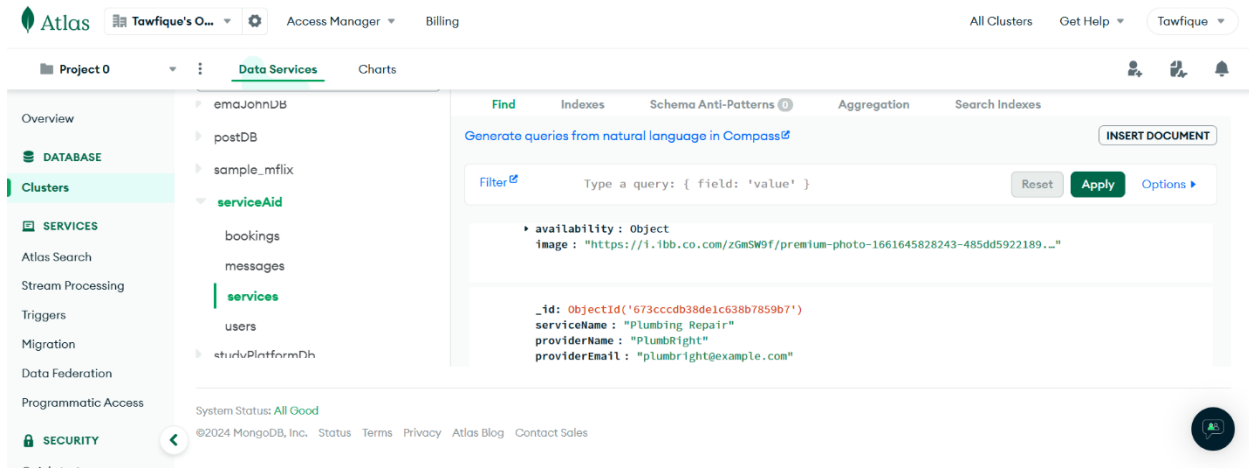


The screenshot shows the ServiceAid Admin interface. On the left is a sidebar with navigation links: Admin Home, Users, Services, Bookings, Message Box, Send Mails (highlighted in blue), and Logout (highlighted in red). The main content area displays a 'Send Email' form with the following fields:

- To \***: Enter the receivers mail
- Subject \***: Enter the subject of your issue
- Description \***: Describe your problem in detail

A blue 'Send Mail' button is located at the bottom of the form.

## Appendix C: System Database



The screenshot shows the MongoDB Atlas interface. The top navigation bar includes the Atlas logo, the user 'Tawfique's O...', and links for Access Manager and Billing. The main interface is divided into a left sidebar, a central navigation area, and a main content area.

The left sidebar shows the following sections:

- Overview
- DATABASE
- Clusters
- SERVICES
- Atlas Search
- Stream Processing
- Triggers
- Migration
- Data Federation
- Programmatic Access
- SECURITY

The central navigation area shows the following structure:

- Project 0
- Data Services
- Charts
- emaJohnDB
- postDB
- sample\_mflix
- serviceAid
  - bookings
  - messages
  - services
  - users
- etrvPlatformDb

The main content area shows the 'Find' tab for the 'users' collection. It includes a search bar with the text 'Type a query: { field: 'value' }' and buttons for 'Filter', 'Reset', 'Apply', and 'Options'. Below the search bar, a document is displayed with the following JSON structure:

```
{
  "availability": "Object",
  "image": "https://i.tbb.co.com/zGmSW9f/premium-photo-1661645828243-485dd5922189...",
  "_id": ObjectId('673ccdb38de1c638b7859b7'),
  "serviceName": "Plumbing Repair",
  "providerName": "PlumbRight",
  "providerEmail": "plumbright@example.com"
}
```

At the bottom of the interface, there is a footer with the text 'System Status: All Good' and '©2024 MongoDB, Inc. Status Terms Privacy Atlas Blog Contact Sales'.

## References

1. The concept of this project was inspired by Sheba.xyz, a leading service marketplace in Bangladesh. <https://sheba.xyz>
2. Stack Overflow community was utilized to resolve various coding challenges and gain insights into best practices for problem-solving. <https://stackoverflow.com>
3. React Router was used for implementing dynamic routing in the project to enable seamless navigation between different pages. <https://reactrouter.com>
4. Firebase was used for authentication and secure data management. Its real-time database and hosting services also supported efficient project development. <https://firebase.google.com>
5. Axios was used for making API requests, handling asynchronous data fetching, and managing responses effectively in the application. <https://axios-http.com>
6. TanStack Query was employed to manage server state and caching, ensuring optimized data fetching and improved application performance. <https://tanstack.com/query>
7. Express.js was used as the backend framework for building RESTful APIs and managing server-side logic. <https://expressjs.com>
8. MongoDB was chosen as the database solution for its flexibility and scalability, enabling efficient data storage and retrieval. <https://www.mongodb.com>
9. Nodemailer was implemented for email notifications, ensuring smooth communication between the platform and its users. <https://nodemailer.com>

## ServiceAid

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