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Chapter 1. INTRODUCTION

The advent of digital platforms has profoundly transformed service industries across the globe, offering unprecedented convenience and efficiency for both providers and consumers. Platforms such as Uber, Airbnb, and TaskRabbit have revolutionized the way people book services, facilitating instant access to a diverse range of offerings. This digital transformation has enabled users to find and hire services with unprecedented ease, altering traditional business models and setting new standards for service delivery. However, this rapid technological advancement has also exposed significant disparities, particularly for skilled workers who are not well-versed in navigating these digital tools.

While many workers with specialized skills stand ready to contribute valuable services, their limited technological proficiency often hampers their ability to fully engage with and benefit from these platforms. Consequently, these workers are frequently marginalized in the digital economy, unable to leverage the opportunities that digital platforms provide. This issue is compounded by the fact that mainstream platforms tend to favor providers who are already digitally literate and well-established, thereby perpetuating a cycle of exclusion for those who lack technological skills.

The Wage Web project is a platform designed to connect skilled workers with customers seeking various services. It focuses on empowering lesser-known professionals by providing them with a user-friendly interface to showcase their talents, while also offering support for those who may struggle with technology. The platform aims to bridge the gap between service providers and consumers, making it easier for workers to gain visibility and for customers to find reliable, skilled help. Wage Web enhances accessibility and creates a more inclusive environment, ensuring that all workers, regardless of their digital proficiency, can succeed in the marketplace.

1.1 Problem Statement

The Wage Web project is developed to address the challenges faced by skilled but lesser-known workers in gaining visibility and connecting with customers, especially those who are not tech-savvy. These challenges include difficulties in accessing digital platforms and a lack of support in navigating online service marketplaces.

Chapter 2. LITERATURE SURVEY

The intersection of technology and service delivery has been extensively studied, particularly in the context of digital platforms that facilitate connections between service providers and consumers. Notable examples include Urban Company and TaskRabbit, which have demonstrated how digital tools can streamline service booking and improve efficiency for users who are comfortable with technology. These platforms leverage sophisticated algorithms and user-friendly interfaces to connect clients with service providers quickly and effectively, enhancing convenience and accessibility.

However, the success of such platforms often does not extend to all skilled workers. A significant portion of this workforce struggles with technological tools, leading to their exclusion from these opportunities. Research has highlighted that while digital platforms can offer substantial advantages, they frequently overlook individuals with limited digital literacy. For instance, studies by the Pew Research Center and other institutions have documented the ongoing digital divide, revealing that technological proficiency remains unevenly distributed across different demographic and socio-economic groups. This divide is particularly pronounced in sectors like home services, where many workers possess valuable skills but lack the digital expertise needed to leverage online platforms effectively.

2.1 Existing System

1. Urban Company (formerly UrbanClap)

Merits:

- **Wide Range of Services:** Urban Company offers a broad array of services, including home cleaning, beauty, maintenance, and wellness, making it a one-stop solution for customers.
- **Professional Vetting:** Service providers are thoroughly vetted, ensuring customers receive quality services from qualified professionals.
- **User-Friendly Interface:** The platform has an intuitive interface for both customers and service providers, making it easy to navigate and book services.
- **Training and Support:** Urban Company provides training and tools to help service providers improve their skills and deliver top-tier services.
- **Secure Payments:** Integrated payment gateways ensure that transactions are safe and seamless for both parties.

Demerits:

- **High Commissions:** Service providers are required to pay significant commissions, which can reduce their earnings.
- **Favors Established Providers:** Newer or lesser-known providers may struggle to compete against those with a strong existing reputation and customer reviews.
- **Strict Guidelines:** Providers have to adhere to strict operational guidelines, limiting flexibility in service delivery.
- **Limited Customization:** Workers may have limited control over pricing and service offerings.

2. TaskRabbit

Merits:

- **On-Demand Services:** TaskRabbit offers quick access to a variety of local services, such as handyman work, furniture assembly, and running errands.
- **Flexible Work Opportunities:** Workers, known as “Taskers,” can set their own rates and

choose the jobs they want to take, giving them more control.

- **No Commission Fees:** Unlike many platforms, TaskRabbit does not charge commission fees; instead, Taskers pay a flat registration fee.
- **Local Marketplace:** TaskRabbit emphasizes local connections, allowing users to find skilled workers in their immediate vicinity.

Demerits:

- **High Competition:** Taskers face stiff competition from other workers, making it hard for new users to stand out.
- **Service Availability Gaps:** While TaskRabbit is popular in major cities, it may not be as widely available in smaller towns or rural areas.
- **Rating System Pressure:** Taskers heavily rely on positive reviews to secure more jobs, which can add pressure and stress.
- **Complex Pricing:** Some customers find the pricing system confusing, as rates can vary widely depending on the Tasker.

3. Upwork

Merits:

- **Global Marketplace:** Upwork connects freelancers and clients from around the world, providing access to a vast network of skilled professionals in fields like programming, writing, design, and marketing.
- **Freelancer Flexibility:** Freelancers have the freedom to set their own rates and choose projects that match their skill set and interests.
- **Multiple Payment Options:** Upwork offers various payment models, including hourly, milestone-based, or project-based payments.
- **Client Reviews:** Feedback and rating systems help freelancers build a reputation over time, which can lead to better job opportunities.

Demerits:

- **High Fees:** Upwork charges freelancers service fees ranging from 5% to 20%, depending on the client relationship, which can reduce overall earnings.
- **Overcrowded Market:** Due to the platform's popularity, freelancers face intense competition, making it difficult for newcomers to secure jobs without strong portfolios or reviews.
- **Time-Consuming Application Process:** Freelancers often need to submit multiple proposals to land a job, which can be time-consuming and competitive.
- **Delayed Payments:** Depending on the payment method, freelancers may experience delays in receiving their funds after completing a job.

2.2 Proposed System

Wage Web is designed as a dynamic platform to connect skilled yet lesser-known workers with customers seeking various services. The system begins with a streamlined user registration and authentication process that supports both customers and service providers. Users can register using their phone number and email, with secure login/logout mechanisms to ensure data protection.

Once registered, service providers can access a specialized dashboard to set up and maintain their profiles. This includes detailed service descriptions, pricing, and availability. Providers can manage bookings through this dashboard, accepting or declining requests and tracking their income.

For customers, the platform offers an intuitive search functionality to find service providers based on criteria such as location, service type, and ratings. Booking services is simplified with an integrated system that allows customers to select the service, schedule appointments, and make payments securely. After service completion, customers can leave reviews and rate their experiences, providing valuable feedback.

The admin dashboard provides a comprehensive view of the platform's operations. Admins can manage user accounts, oversee bookings, and monitor system performance through detailed metrics and reports. This ensures effective management and support for the platform's users.

The backend of Wage Web is powered by JSON-Server, which handles data management and simulation, while the frontend is developed using ReactJS for a responsive and engaging user experience. Notifications are sent via email and in-app messages to keep users updated on bookings, reminders, and important alerts.

Additionally, analytics and reporting tools within the system offer insights into user behavior, service usage, and financial performance. These tools help drive continuous improvement and enhance the overall user experience. Wage Web aims to provide a secure and user-friendly environment that facilitates seamless interactions between customers and service providers, supported by effective management and oversight mechanisms.

Chapter 3. SYSTEM REQUIREMENTS

The system requirements for Wage Web outline the necessary features and specifications to ensure the platform operates effectively. Key functional requirements include user registration and authentication, profile management for both service providers and customers, an intuitive service search and booking system, and comprehensive admin tools for user management and system monitoring. Non-functional requirements emphasize performance, scalability, security, usability, reliability, and maintainability. The technical requirements specify the use of ReactJS for the frontend, JSON-Server for backend data management, and reliable cloud hosting services. These requirements ensure that Wage Web delivers a secure, user-friendly, and scalable platform for connecting service providers with customers.

3.1 Hardware Requirements:

Server Hardware: Windows

Processor: Dual-core processor or higher

RAM: Minimum 4GB RAM, recommended 8GB or higher

Storage: SSD storage recommended for faster data access or HDD

Network: High-speed internet connection for reliable data transfer

Client Hardware: Desktop, laptop, or mobile device with a modern web browser, internet connection

3.2 Software Requirements:

Operating System: Windows

Server: Windows Server (Versions supported: 2012, 2016, 2019)

Client: Compatible with major operating systems Windows.

Web Server: Apache, Nginx, or Microsoft IIS

Database: JSON Server

Server-Side Scripting: JavaScript (Node.js).

Client-Side Scripting: JavaScript (ReactJS).

Development Tools:

- Code Editor/IDE: Visual Studio Code, WebStorm, or similar.
- Version Control: Git for source code management.
- Package Managers: npm or yarn for managing dependencies.

Chapter 4. SOFTWARE REQUIREMENT SPECIFICATIONS

SRS stands for Software Requirements Specification. It is a comprehensive document that outlines the functional and non-functional requirements of a software system. The SRS serves as a blueprint for software development, providing detailed information about what the system should do and how it should behave from the perspective of its users.

4.1 Introduction

The Software Requirements Specification (SRS) document serves as a comprehensive guide to the requirements of a software project. It outlines the functional and non-functional requirements of the software system, providing a clear understanding of what needs to be developed. The introduction section of the SRS document sets the stage for the rest of the document, providing an overview of the project and its objectives.

4.2 Purpose

The purpose of this document is to outline the requirements for the Wage Web platform, a web-based system aimed at connecting skilled but lesser-known workers with customers in need of various services. This Software Requirements Specification (SRS) ensures clear communication among all stakeholders by providing a detailed description of the project's objectives, functionality, and technical requirements. It defines the scope of the platform, specifying what Wage Web will and will not do, to help prevent scope creep and keep the project aligned with its core goals.

The document outlines both functional and non-functional requirements, such as user registration, service booking, system performance, security, and usability, ensuring that the platform operates smoothly and meets user expectations. Additionally, the SRS serves as a foundation for the design and development phases, providing developers with a reference to build the system according to the specified requirements. It also facilitates testing and validation by offering a clear basis for developing test cases to ensure the final product meets the defined criteria. Finally, this document will aid in future maintenance by providing a reference for understanding the original system requirements and design decisions.

4.3 Scope

The scope of the Wage Web project is to develop a user-friendly, web-based platform that connects skilled but lesser-known workers with customers seeking various services, such as plumbing, electrical work, carpentry, and more. The platform aims to empower workers by offering them a space to showcase their skills and gain visibility, while also providing customers with easy access to reliable and skilled service providers.

Key features within the scope of this project include user registration for both workers and customers, service listing, search functionality, booking and scheduling services, payment integration, and a review system to foster trust and accountability. The platform will also include an admin interface to manage users, oversee operations, and support workers who may not be tech-savvy. Non-functional aspects like performance optimization, security, data privacy, and scalability are also within the scope of the project to ensure the system is secure, efficient, and capable of handling a growing user base.

The system will primarily focus on simplifying the connection between customers and workers, improving service accessibility, and enhancing the livelihood of workers through increased job opportunities. However, certain advanced features, such as real-time chat support or mobile app integration, are considered beyond the current scope but may be included in future iterations.

4.4 Specific Requirements

Specific requirements refer to the detailed functionalities and characteristics that the system must possess to meet the needs of its users. In the context of the Wage Web platform, specific requirements include features, constraints, and quality attributes that are essential for the platform's functionality and usability. These specific requirements define the core functionalities and qualities that the Wage Web platform must possess to effectively connect skilled workers with customers and provide a seamless user experience. Here are some examples of specific requirements for the Wage Web platform:

4.4.1. Functional Requirements

1. User Registration and Login:

- Users (both service providers and customers) must be able to register with personal details such as name, phone number, email, and password.
- The system must allow users to log in securely using their email and password.

2. Profile Management

- Service Providers (Workers) must be able to create and manage profiles, which will include their skills, services offered, pricing, and availability.
- Customers should be able to update their personal information and view their booking history.

3. Service Listings

- Service providers must be able to list the services they offer, including service descriptions, pricing, and availability.
- Customers must be able to browse through service listings and filter them by price and service categories.

4. Booking System

- Customers must be able to book services by selecting a provider, choosing a time slot, and confirming the booking.
- Service providers must have the option to accept or decline bookings based on their availability.

5. Payment Transactions

- The platform must handle offline payments, meaning payment is made directly between the customer and the service provider after the service is completed. The system will not handle or track payment transactions.

6. Rating and Review System

- Customers must be able to leave reviews and rate service providers based on their service quality.
- Ratings and reviews should be visible to other users when selecting a service provider.

7. Admin Interface

- An admin dashboard must be provided to manage users, services, and disputes.
- Admins must have the ability to approve, suspend, or remove service provider accounts if necessary.

4.4.2. Non-Functional Requirements

1. **Performance:**

- The system should respond to user interactions within 2 seconds to ensure a smooth user experience and avoid delays.

2. **Scalability:**

- The platform must be scalable to handle an increasing number of users and service listings without significant changes to the system architecture.

3. **Security:**

- All user data must be encrypted both in transit and at rest. The system must implement secure authentication mechanisms to protect user accounts from unauthorized access.

4. **Usability:**

- The platform must have an intuitive, user-friendly interface, especially for service providers who may not be tech-savvy. It should also be optimized for mobile use.

5. **Availability:**

- The platform should maintain at least 99.9% uptime, ensuring that users can access it at all times, except during scheduled maintenance.

Chapter 5. SYSTEM DESIGN

The system design for the Wage Web project follows a simple client-server architecture, where the frontend and backend communicate through APIs. The frontend is developed using ReactJS, providing a user-friendly interface for both service providers and customers. The backend is built using Node.js with a JSON-Server to simulate data handling, focusing on managing user data, service listings, bookings, and reviews.

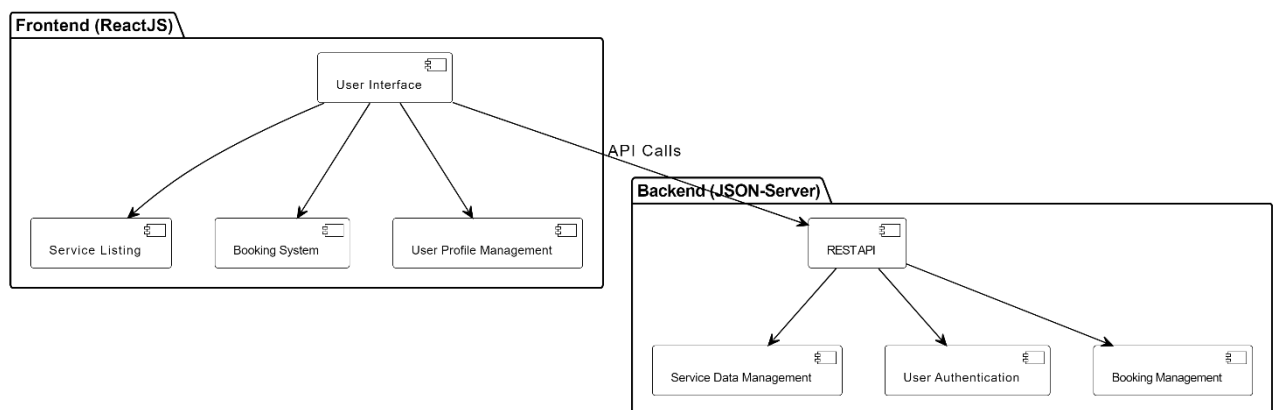
The platform stores user and service data in a JSON-based database, allowing for efficient management of information. The system does not include complex features like payment processing or advanced filters, keeping the design straightforward and focused on core functionalities like user registration, service listing, and booking.

The system also includes an admin interface for managing users and services, and it is designed to be responsive, ensuring that users can access the platform from both desktop and mobile devices.

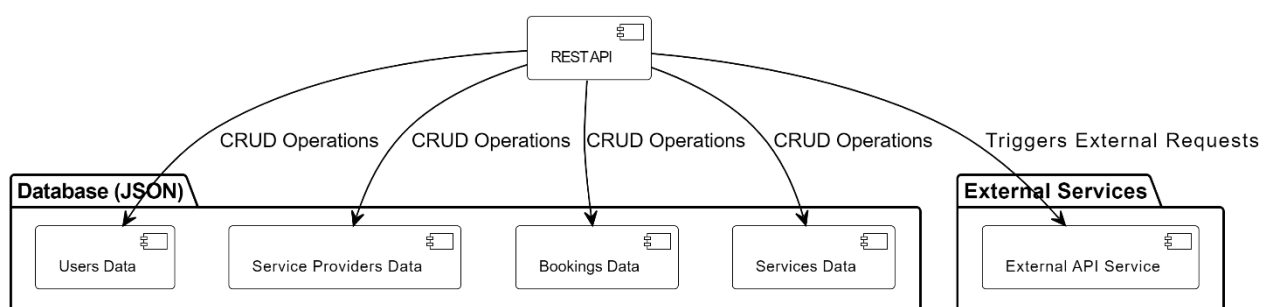
5.1 Architectural Design

The architecture diagram for Wage Web illustrates the platform's components and their interactions. It includes a front-end interface for users and service providers, powered by a backend server that handles data processing, service requests, and admin management. The backend connects to a database where user information, services, and transactions are stored. While the platform does not have notification systems, it provides user and service management features, enabling efficient bookings and service tracking.

Frontend and Backend:

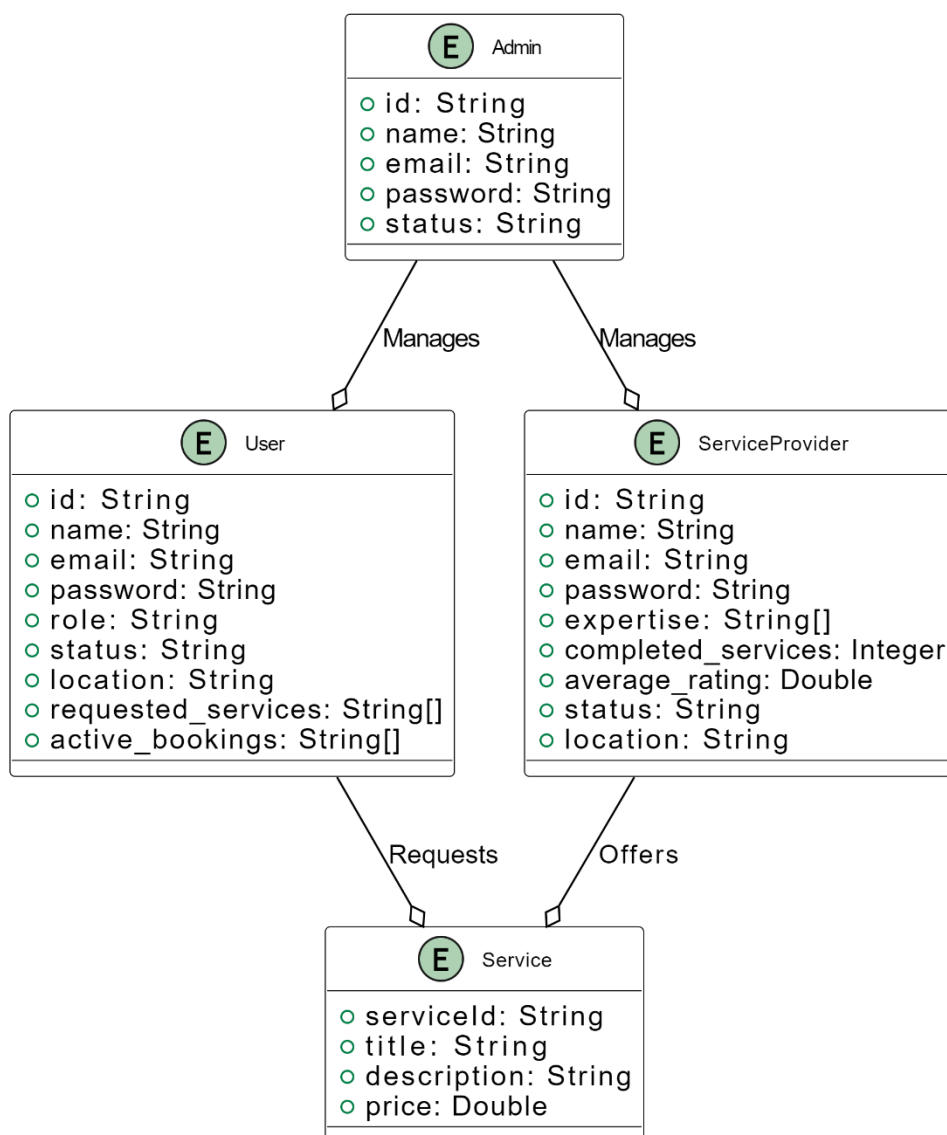


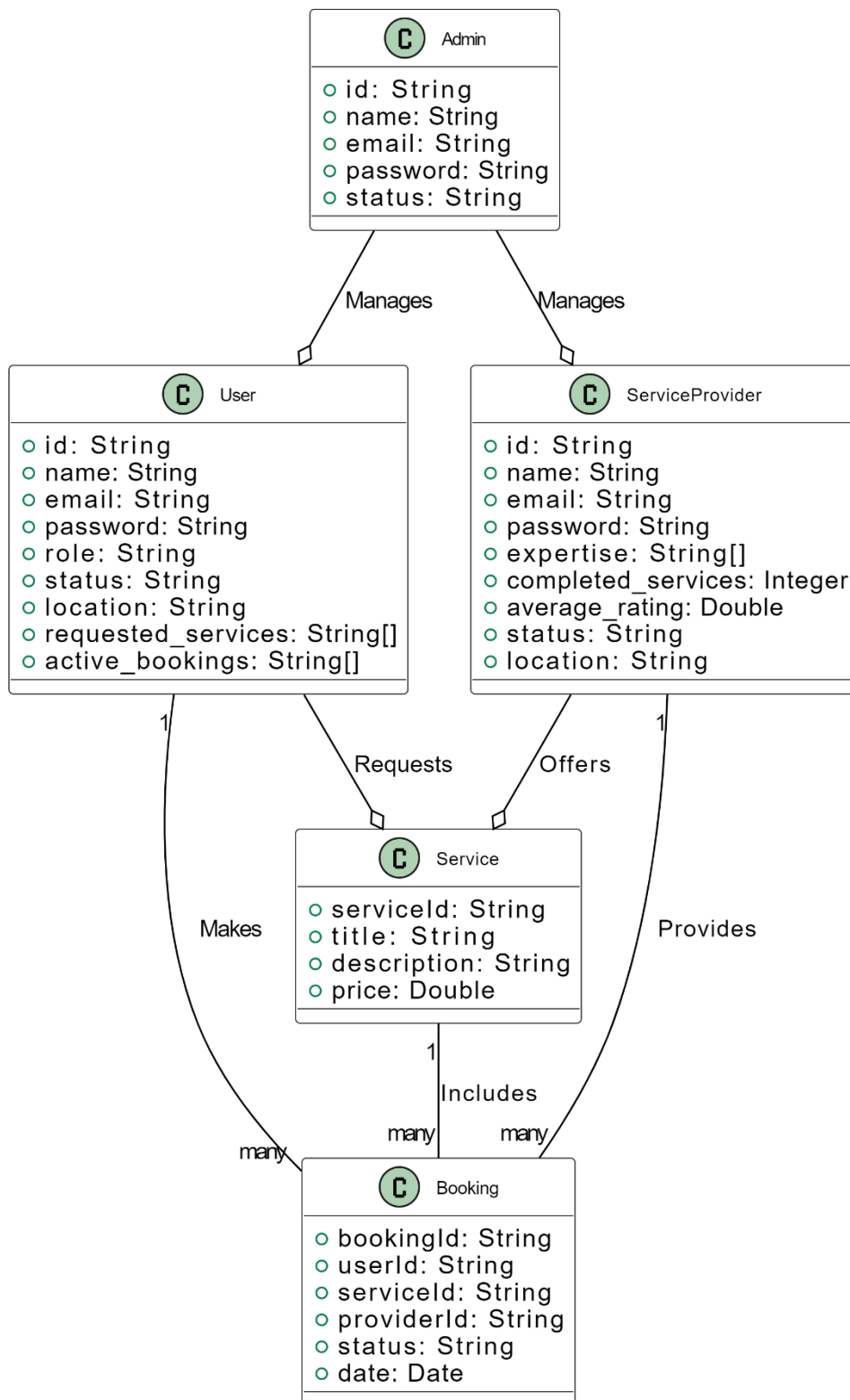
Database and External Services:



5.2 Database Design – ER Diagram

The ER diagram for Wage Web illustrates the core entities and their relationships within the platform. It includes User, Service provider, Admin, and Service entities, showcasing their attributes and how they interact with one another. Users request services, service providers offer them, and admins manage users and service providers. This diagram helps in understanding the data structure and the interactions between different components of the Wage Web system.

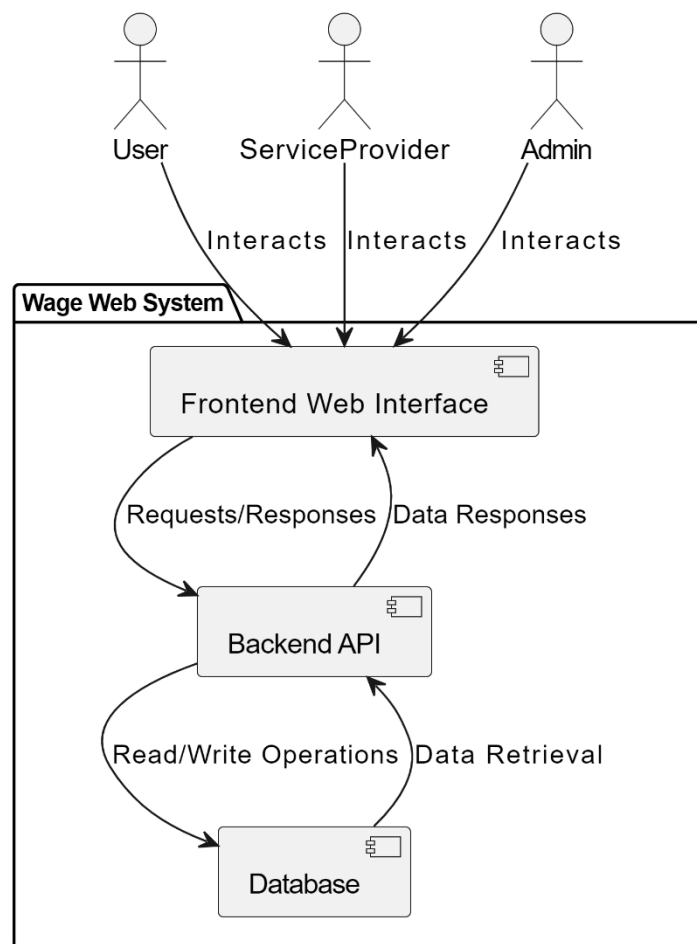




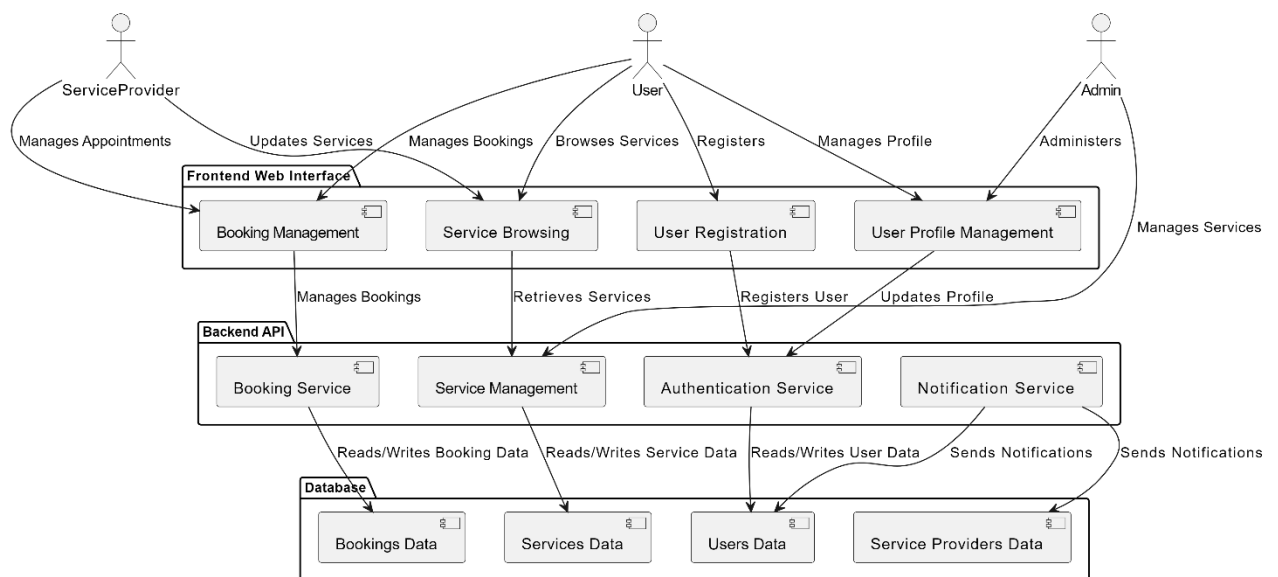
5.3 Data Flow Diagram

A Data Flow Diagram (DFD) is a visual representation that shows how data flows through a system or process. It is a useful tool for understanding system requirements, identifying processes, defining data flows, and designing systems. DFDs provide a high-level overview of how data moves through the system and are commonly used during the analysis and design phases of system development

5.3.1 DFD Level 0

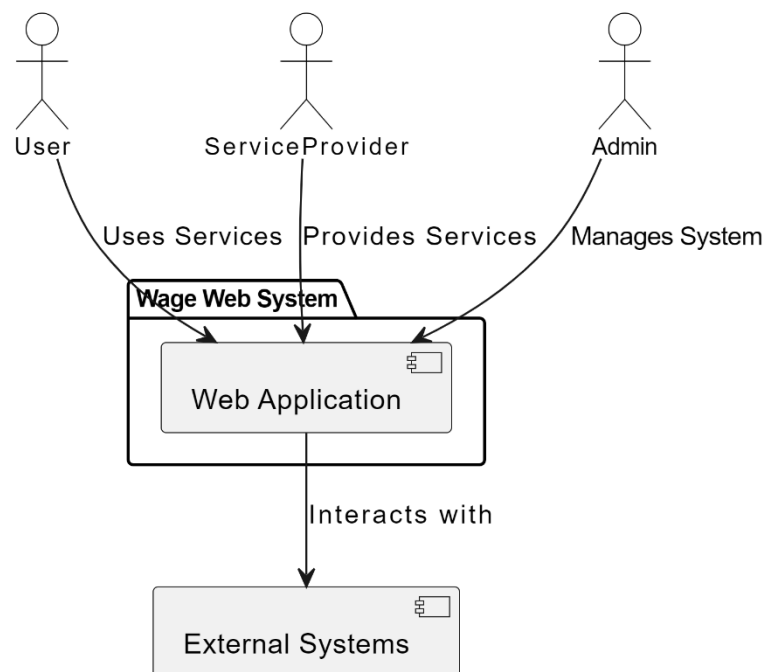


5.3.2 DFD Level 1

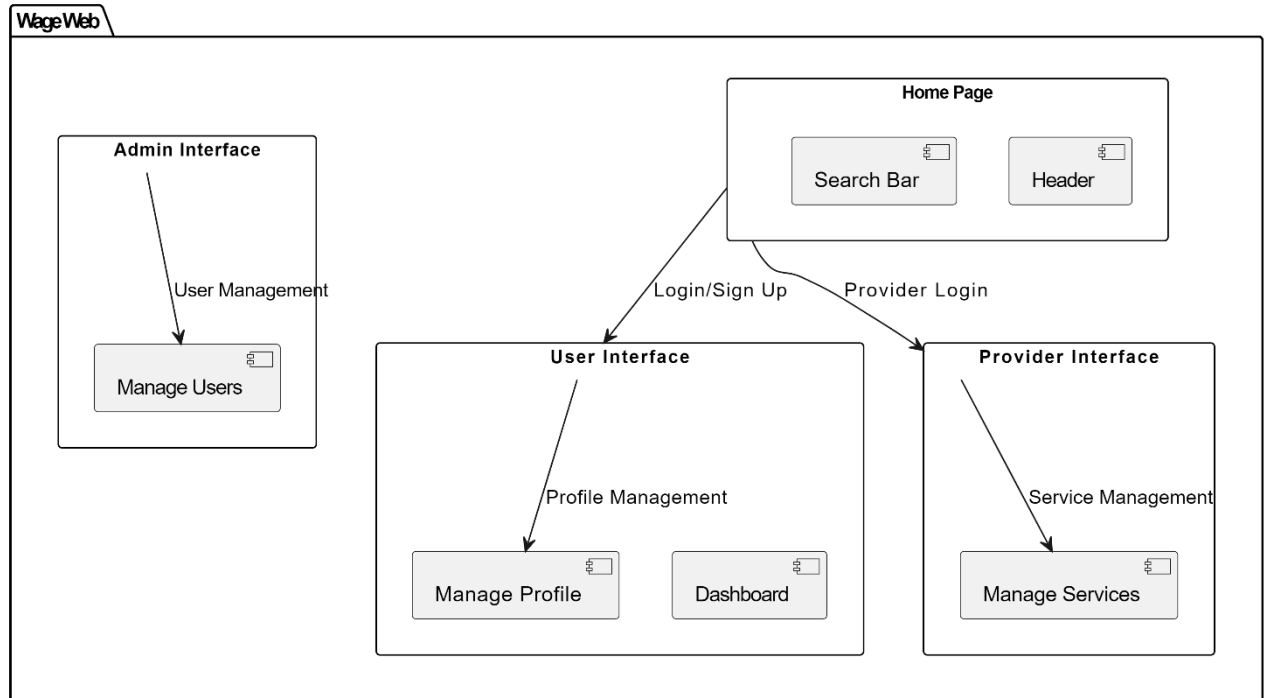


5.3.3 Context Diagram

A context diagram is a type of DFD that provides a high-level view of a system. It typically consists of a central system surrounded by external entities represented as circles or squares. Arrows indicate the flow of data or information between the central system and the external entities.



5.4 Interface Design

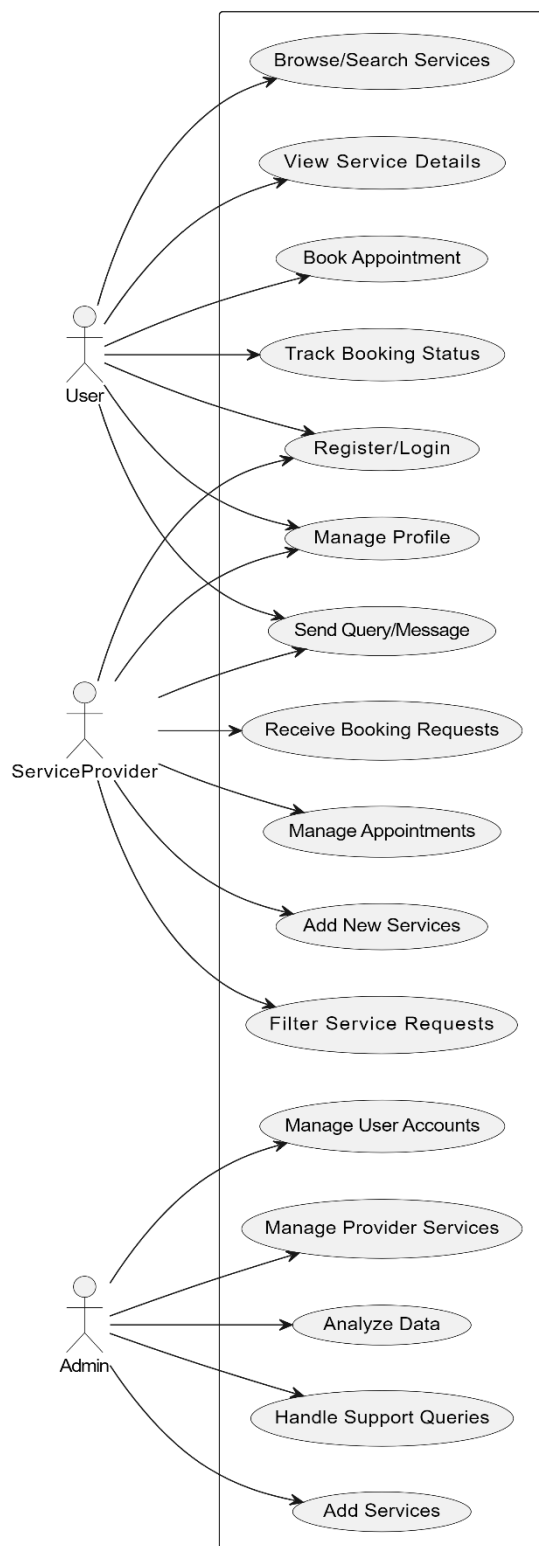


5.5 UML Design

A UML (Unified Modeling Language) diagram is a standardized visual tool used to model the structure and behavior of a system. It provides a way to illustrate relationships, interactions, and functionalities within a system in a clear and concise manner.

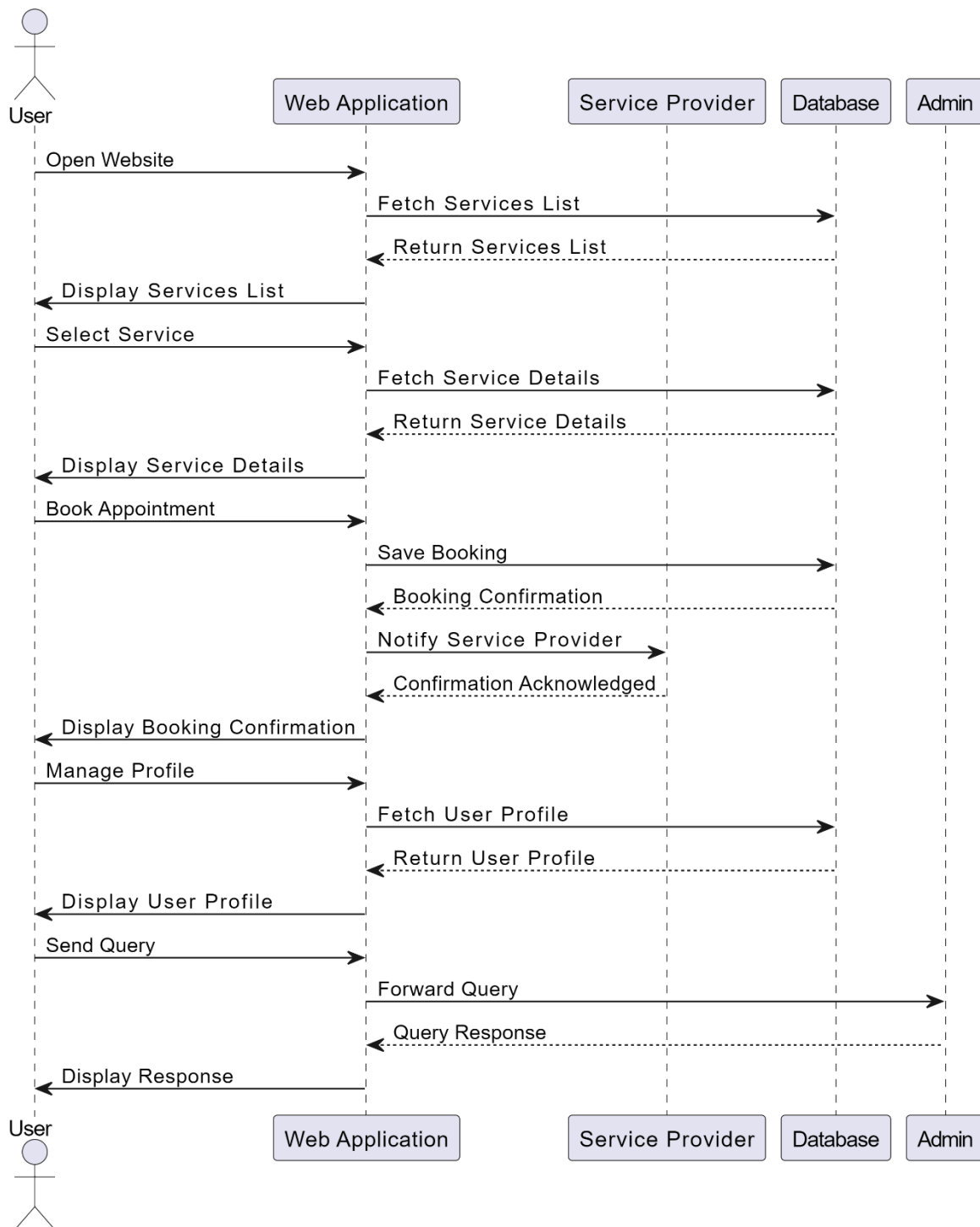
5.5.1 Use Case

A use case diagram visually represents the interactions between users (actors) and the system through various use cases. It illustrates the functional requirements of the system and how different actors engage with these functionalities. This diagram helps in understanding the system's requirements and its scope by highlighting the key processes and user interactions.



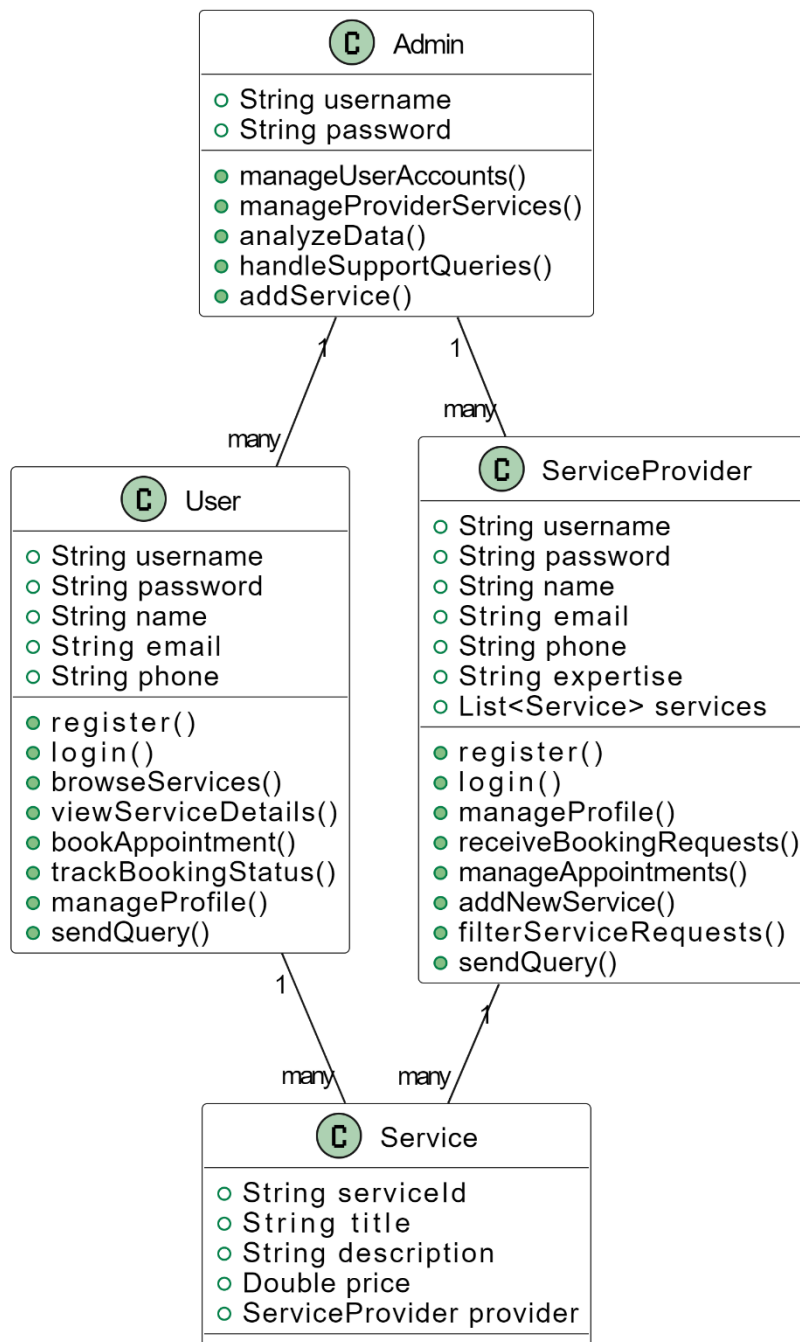
5.5.2 Sequence Diagram

A sequence diagram represents the flow of messages exchanged between different components over a period of time to achieve a specific functionality or scenario within the system.



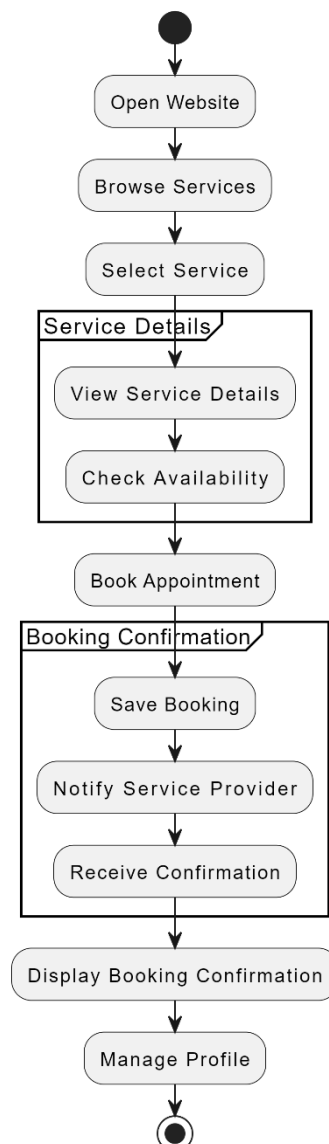
5.5.3 Class Diagrams

A class diagram is a type of static structure diagram in the Unified Modelling Language (UML) that represents the structure of a system by showing the system's classes, their attributes, methods, and the relationships among the classes. It provides a visual representation of the various entities (classes) within the system and how they interact with each other.



5.5.4 Activity Diagram

An Activity Diagram is a graphical representation of workflows of stepwise activities and actions with support for choice, iteration, and concurrency. It depicts the actions, decision points, and transitions involved in various processes or workflows within a system. Activity Diagrams are part of the Unified Modelling Language (UML) and are commonly used in software engineering to model the behaviour of systems, processes, or classes.



Chapter 6. IMPLEMENTATION

The implementation part typically includes detailed descriptions of how the proposed solution or system was developed, including the technologies used, the methodologies followed, and any challenges encountered during the implementation process. Here's how you can structure the implementation section of your project report.

6.1. Introduction To New Technologies Used in This Project

1. Setup Development Environment:

- **Visual Studio Code:**
 - **Description:** A powerful, open-source code editor that supports debugging, version control, and a wide range of extensions.
 - **Role in Project:** Used for coding, debugging, and managing the project files, enhancing development efficiency.
- **Git:**
 - **Description:** A distributed version control system that tracks changes in source code and facilitates collaboration.
 - **Role in Project:** Employed for version control to manage code revisions, collaborate with team members, and maintain a history of changes.

2. Backend Development:

- **JSON-Server:**
 - **Description:** A tool that allows developers to quickly set up a RESTful API using a JSON file as the database.
 - **Role in Project:** Used to simulate the backend for Wage Web, providing mock data and endpoints for CRUD operations, which supports frontend development and testing.

3. Frontend Development:

- **ReactJS:**
 - **Description:** A JavaScript library for building user interfaces, known for its component-based architecture and efficiency in creating dynamic applications.
 - **Role in Project:** Utilized to develop the interactive and responsive user interface of Wage Web, enabling a modular and maintainable codebase.
- **CSS3:**
 - **Description:** The latest standard for Cascading Style Sheets, offering advanced styling features and support for responsive design.
 - **Role in Project:** Employed to design a visually appealing and responsive layout, ensuring the platform's accessibility and consistency across various devices and screen sizes.

4. Authentication and Authorization:

- **Local JSON Files:**
 - **Description:** Used as a simple data storage solution instead of a traditional database system.
 - **Role in Project:** Handles user data and mock authentication processes, simplifying the development and testing of user-related features.

5. Testing:

- **Unit Testing:**
 - **Description:** Testing individual components or functions to ensure they work as expected.
 - **Role in Project:** Applied to verify that each component and function performs correctly and adheres to the specified requirements.

- **Integration Testing:**

- **Description:** Testing the interaction between different components or systems.
- **Role in Project:** Ensures that the frontend and backend components work together seamlessly and that data flows correctly between them.

6.2. Source code of challenging modules:

1. User Registration and Validation

One of the challenging tasks was implementing the **user registration** functionality with proper validation, particularly the phone number validation.

- **Challenge:** Ensuring the phone number input met specific criteria (i.e., 10 digits only), as well as handling other user input validations like email format and password strength.
- **Solution:** Implementing custom validation rules using regular expressions to ensure input correctness.

Code Snippet:

```
// Phone number validation rule (10 digits)
const phoneNumberRules = /^[0-9]{10}$/;

const handlePhoneNumberChange = (e) => {
  const { value } = e.target;
  if (phoneNumberRules.test(value)) {
    setPhoneNumber(value);
  } else {
    setError("Phone number must be exactly 10 digits.");
  }
};
```

2. User Profile Management

Another challenging aspect was ensuring that the **user profile page** fetched the correct details entered during the registration phase, particularly linking the phone number automatically without redundant inputs.

- **Challenge:** Fetching user details from the registration data dynamically and displaying them on the profile page.
- **Solution:** Leveraging state management to persist user data and pass it efficiently between components.

Code Snippet:

// Fetching the phone number from registration details to display on the profile page

```
const ProfilePage = ({ userDetails }) => {  
  const [phoneNumber, setPhoneNumber] = useState("");  
  
  useEffect(() => {  
    if (userDetails) {  
      setPhoneNumber(userDetails.phoneNumber);  
    }  
  }, [userDetails]);  
  return (  
    <div>  
      <h3>User Profile</h3>  
      <p>Phone Number: {phoneNumber}</p>  
    </div>  
  );  
};
```

3. Admin Interface for Managing Users

The **admin panel** for managing user information and overseeing service provider operations posed its own challenges. This module needed to provide a user-friendly interface while handling large amounts of user data dynamically.

- **Challenge:** Implementing efficient data retrieval, updates, and deletion for multiple users in the admin dashboard.
- **Solution:** Using React and JSON-Server to create a seamless admin interface for managing user data with CRUD operations.

Code Snippet:

```
// Fetch user's data for admin management
const fetchUsers = async () => {
  try {
    const response = await fetch("http://localhost:3000/users");
    const users = await response.json();
    setUsers(users);
  } catch (error) {
    console.error("Error fetching users:", error);
  }
};

// Rendering user list in Admin interface
return (
  <div>
    <h2>Admin Dashboard</h2>
    <ul>
      {users.map((user) => (
        <li key={user.id}>
          {user.name} - {user.phoneNumber}
          <button onClick={() => deleteUser(user.id)}>Delete</button>
        </li>
      )}
    </ul>
  </div>
);
```

```
    )})  
</ul>  
</div>  
);
```

4. Responsive Design for Cross-Device Compatibility

Ensuring that Wage Web was responsive and functional across different devices, such as desktops, tablets, and mobile phones, was a crucial yet challenging task.

- **Challenge:** Implementing a fully responsive design that adjusted layout and components based on screen size without breaking functionality.
- **Solution:** Using CSS3's media queries and Flexbox/Grid layout to create adaptive designs.

Code Snippet:

```
/* CSS for responsive design */  
@media (max-width: 768px) {  
  .container {  
    flex-direction: column;  
    padding: 10px;  
  }  
  .profile-section {  
    width: 100%;  
  }  
}  
  
@media (min-width: 768px) {  
  .container {  
    display: flex;  
    justify-content: space-between;  
  }  
  .profile-section {  
    width: 50%;  
  }  
}
```

5. Error Handling and Data Consistency

Ensuring **data consistency and error handling** across the application was another critical challenge, especially when dealing with simulated data from the JSON server.

- **Challenge:** Managing data consistency between frontend and backend while handling errors gracefully.
- **Solution:** Implementing proper error handling mechanisms with fallback options to maintain smooth user experience even when errors occur.

Code Snippet:

// Error handling during data fetch

```
const fetchData = async () => {  
  try {  
    const response = await fetch("http://localhost:3000/services");  
    if (!response.ok) {  
      throw new Error("Network response was not ok");  
    }  
    const data = await response.json();  
    setData(data);  
  } catch (error) {  
    console.error("Failed to fetch data:", error);  
    setError("Unable to fetch services at this time. Please try again later.");  
  }  
};
```

OUTPUT Screenshots:

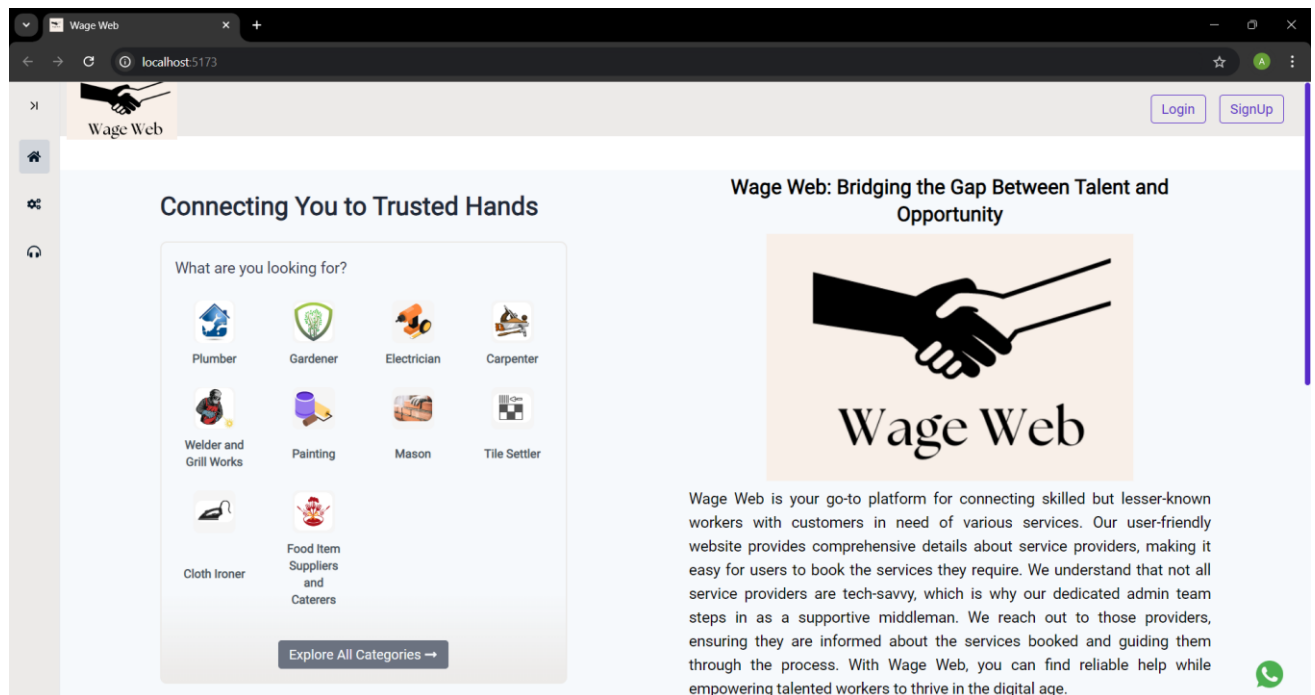


Fig 01. Landing Page / Home Page

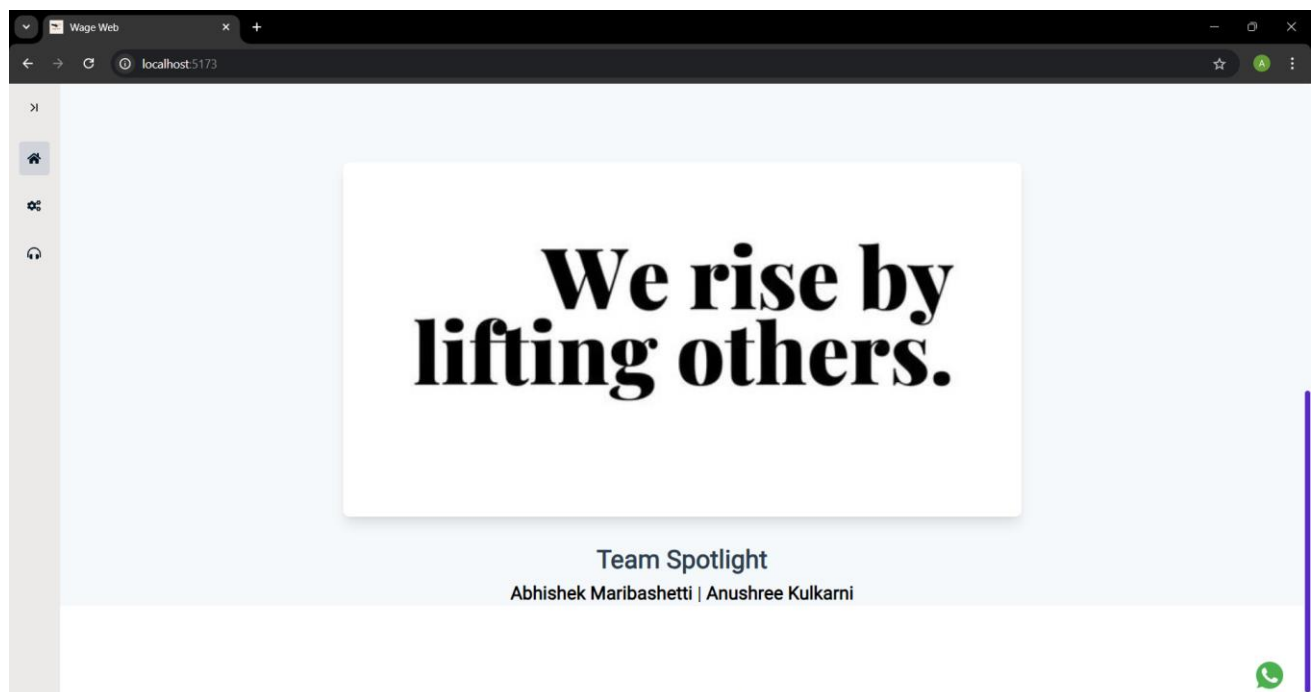
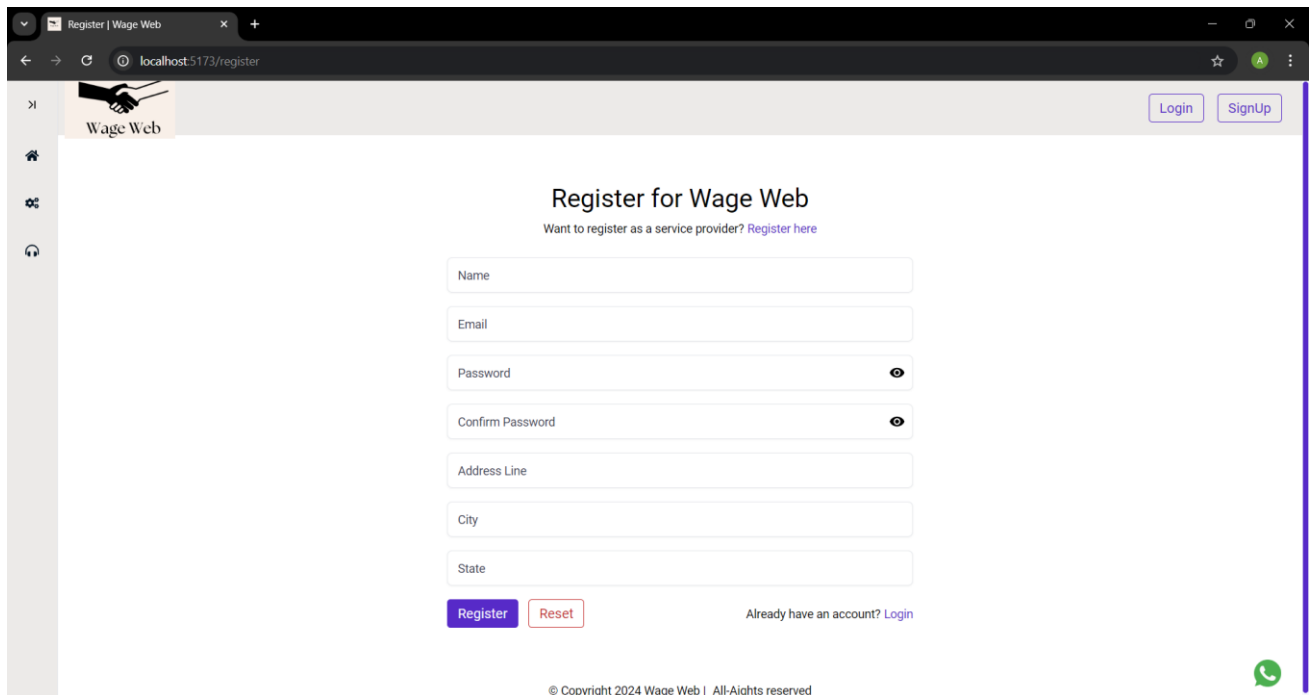


Fig 02. Team Spotlight



The screenshot shows a web browser window with the URL `localhost:5173/register`. The page has a sidebar on the left with icons for home, settings, and help. The main content area is titled "Register for Wage Web" and includes a link "Want to register as a service provider? Register here". The registration form contains the following fields: Name, Email, Password (with a toggle for visibility), Confirm Password (with a toggle for visibility), Address Line, City, and State. At the bottom of the form are "Register" and "Reset" buttons, and a link "Already have an account? Login". The footer of the page displays the copyright notice "© Copyright 2024 Wage Web | All-Aights reserved" and a WhatsApp icon.

Register for Wage Web

Want to register as a service provider? [Register here](#)

Name

Email

Password

Confirm Password

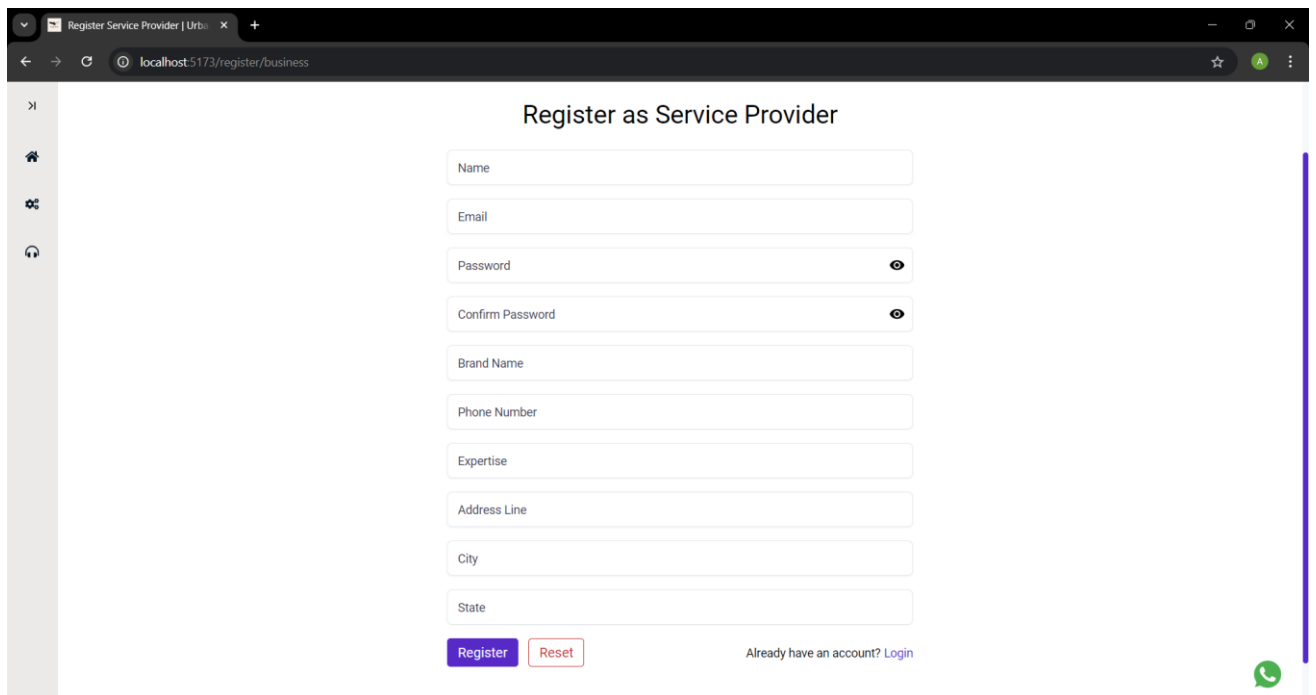
Address Line

City

State

[Register](#) [Reset](#) [Already have an account? Login](#)

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Fig 03. User Registration Page

The screenshot shows a web browser window with the URL `localhost:5173/register/business`. The page has a sidebar on the left with icons for home, settings, and help. The main content area is titled "Register as Service Provider". The registration form contains the following fields: Name, Email, Password (with a toggle for visibility), Confirm Password (with a toggle for visibility), Brand Name, Phone Number, Expertise, Address Line, City, and State. At the bottom of the form are "Register" and "Reset" buttons, and a link "Already have an account? Login". The footer of the page displays the copyright notice "© Copyright 2024 Wage Web | All-Aights reserved" and a WhatsApp icon.

Register as Service Provider

Name

Email

Password

Confirm Password

Brand Name

Phone Number

Expertise

Address Line

City

State

[Register](#) [Reset](#) [Already have an account? Login](#)

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Fig 04. Registration Page for Service Providers

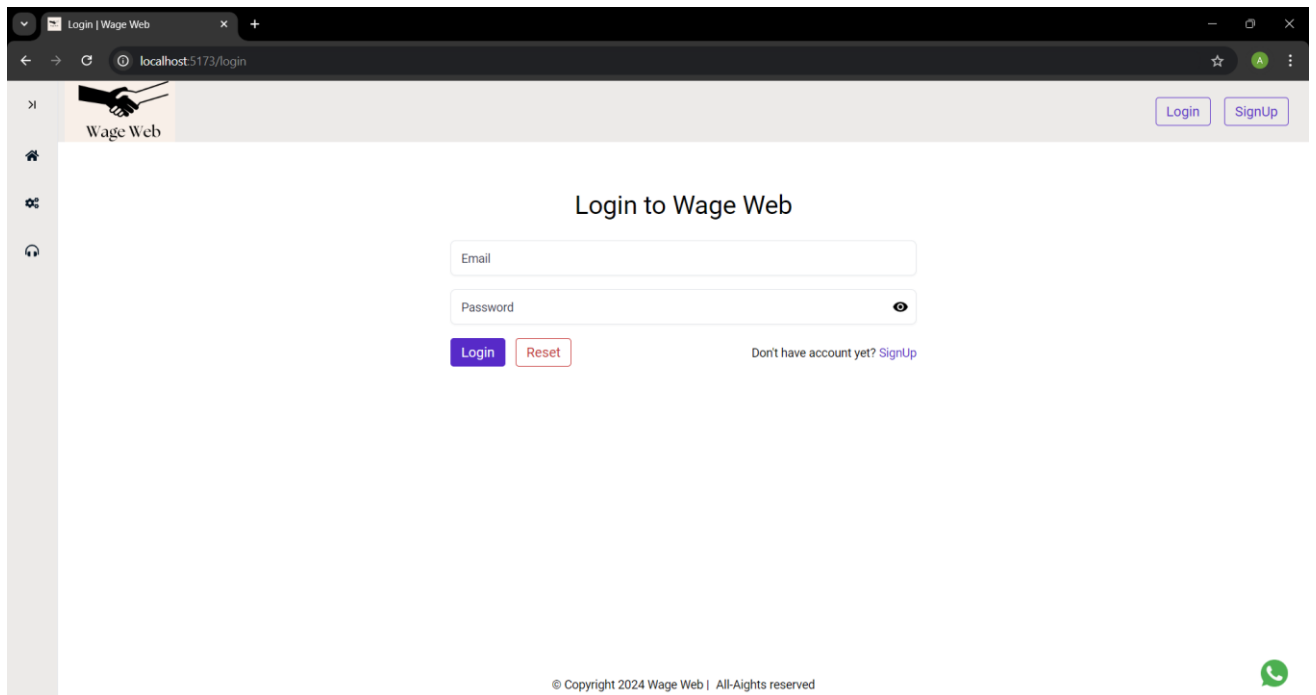


Fig 05. Login page

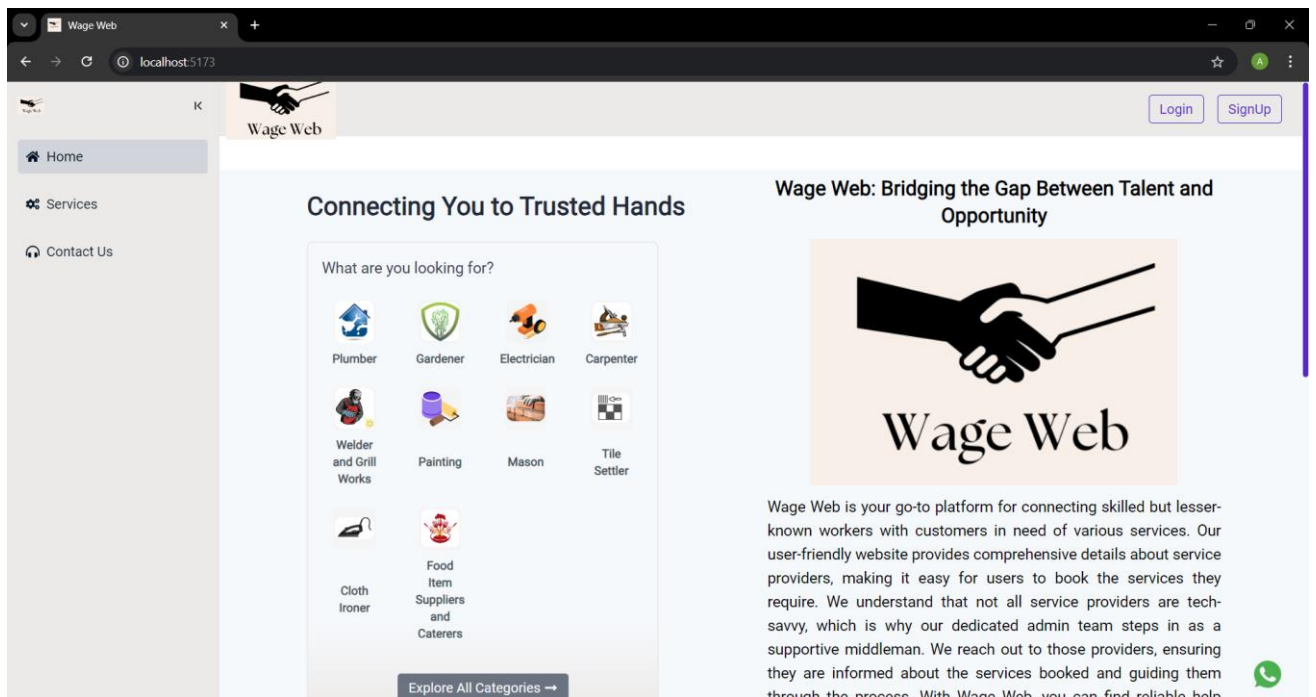


Fig 06. Side Bar view

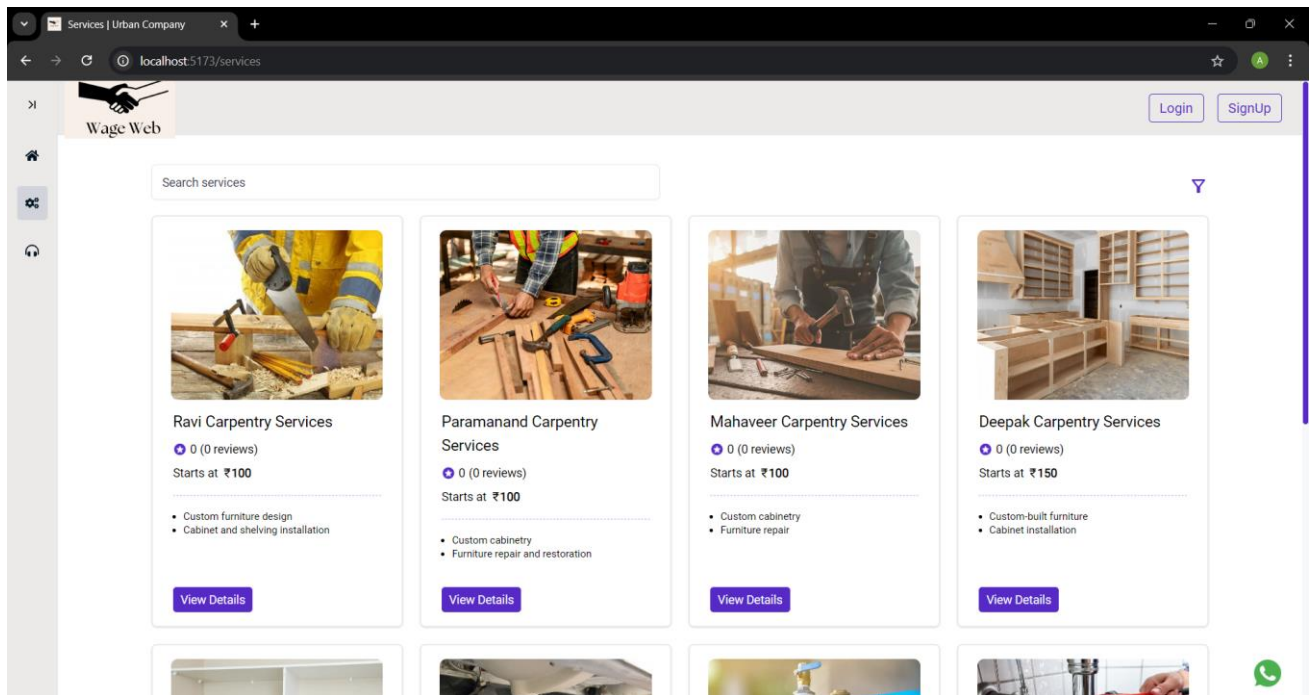


Fig 07. Services Page

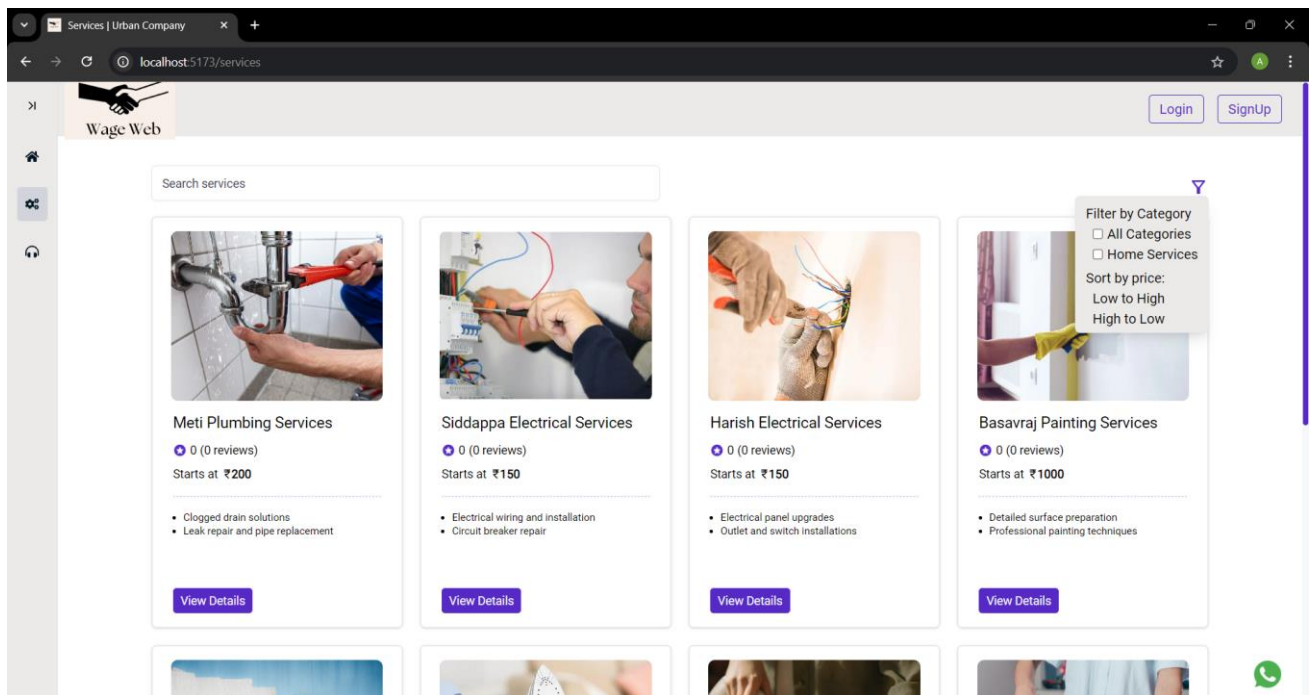


Fig 08. Filter Options

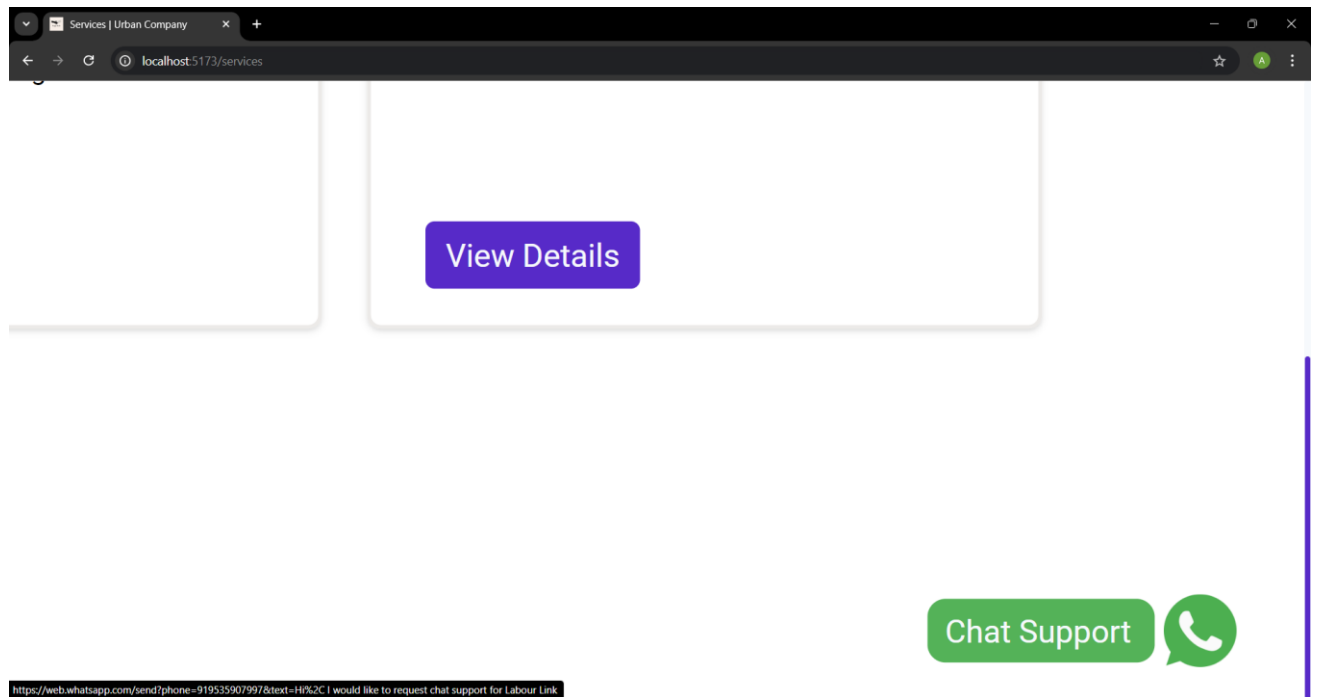


Fig 09. WhatsApp Support

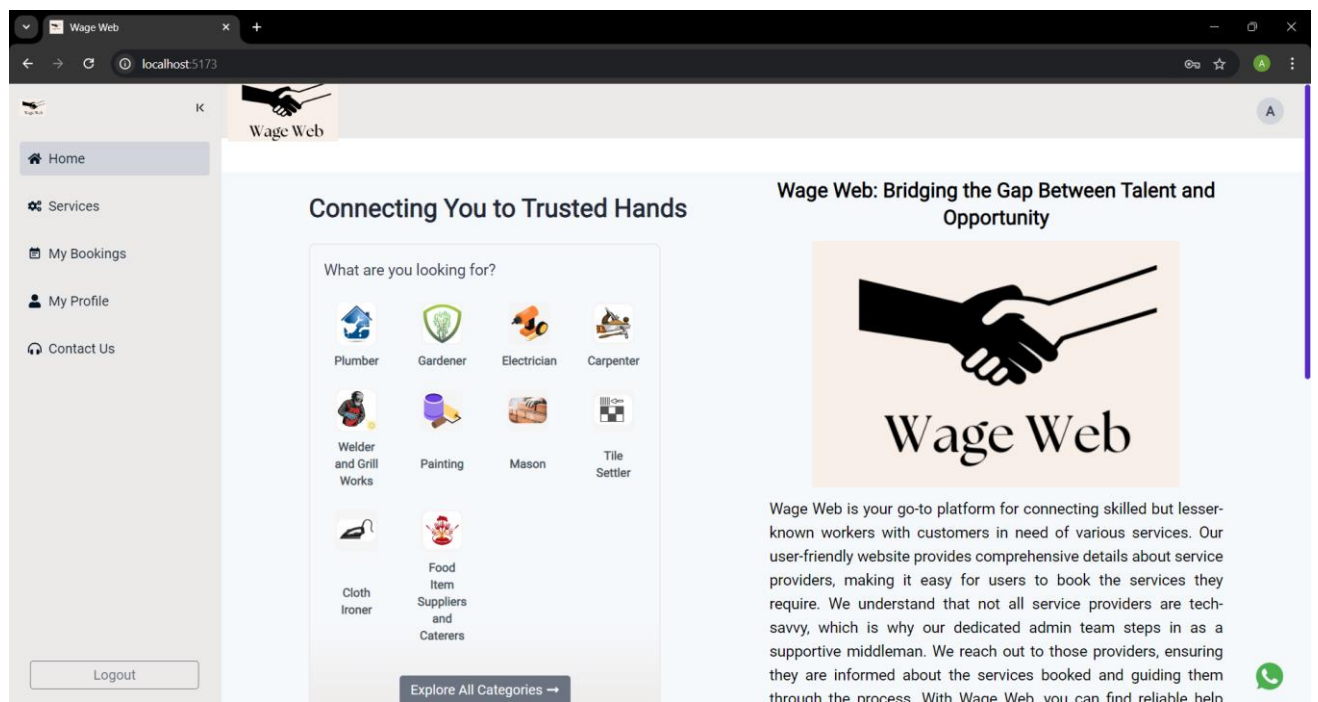


Fig 10. User view

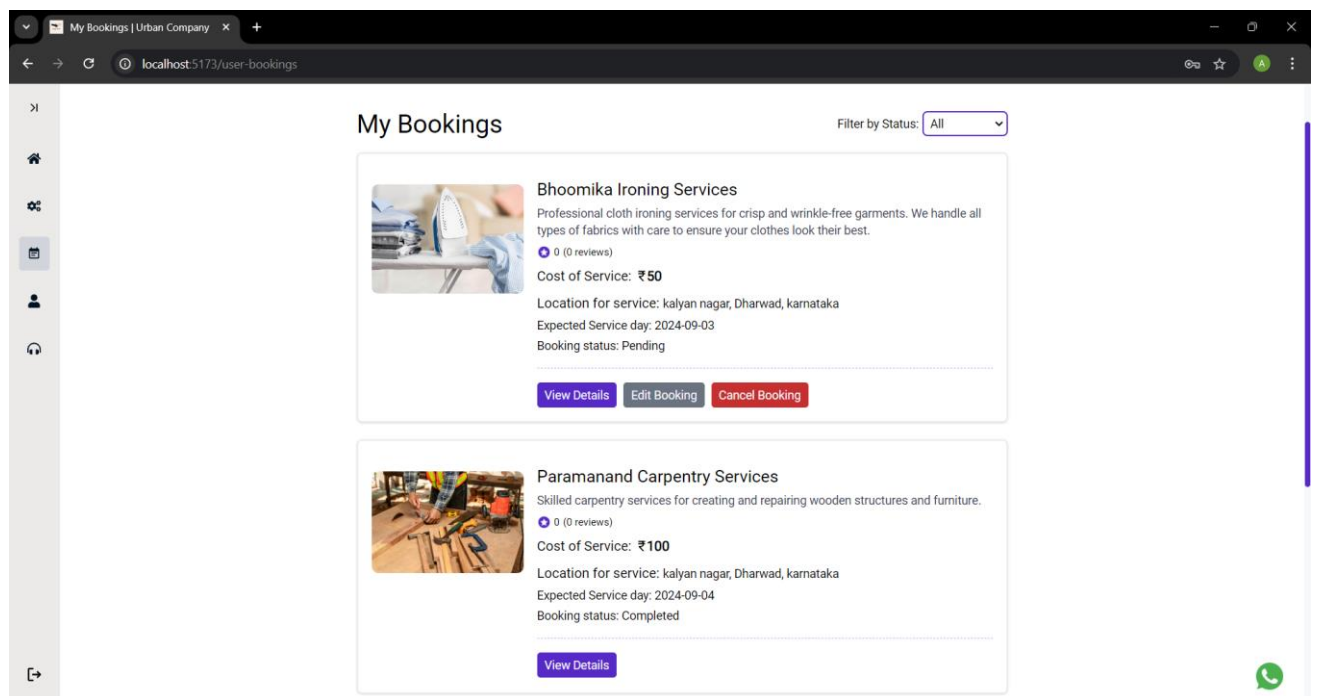


Fig 11. User Bookings Page

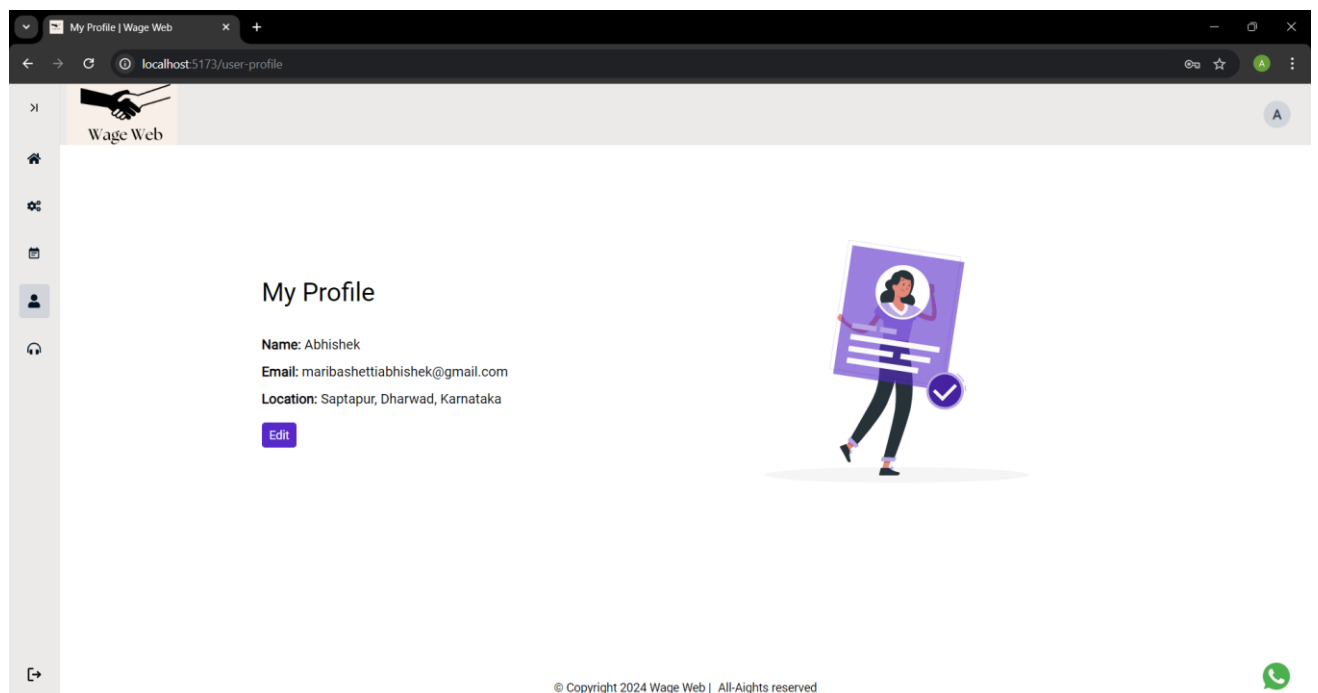
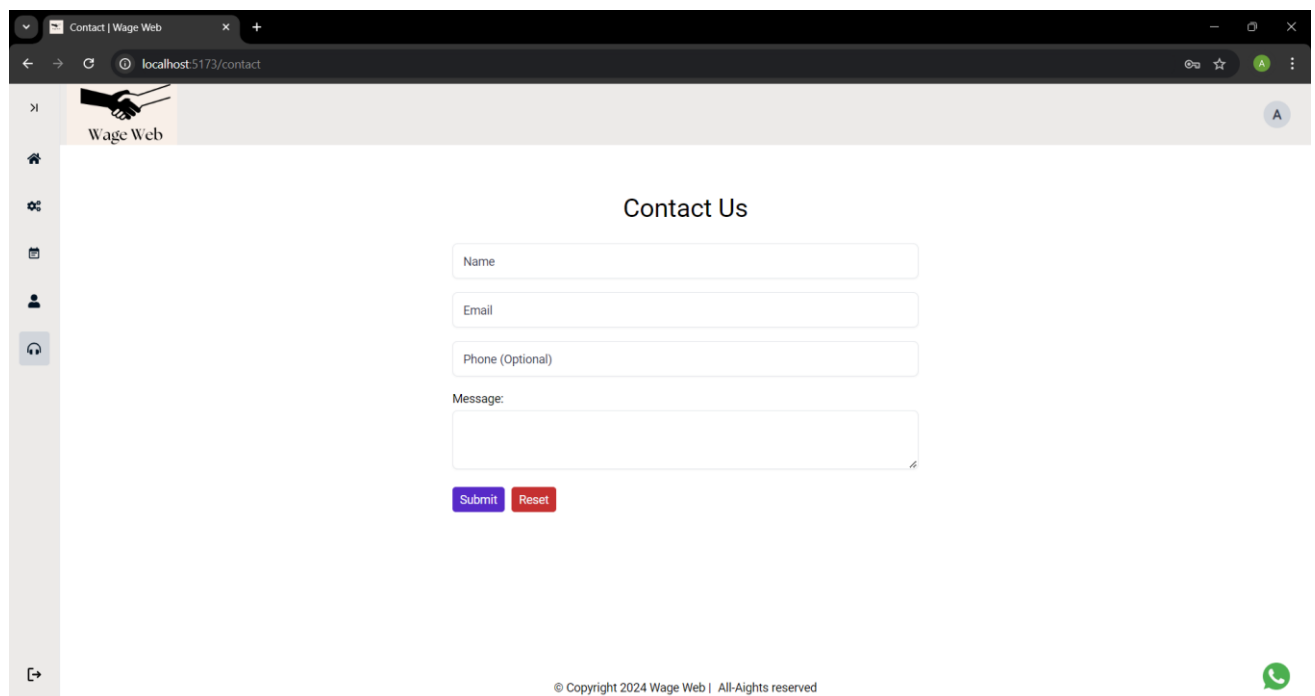
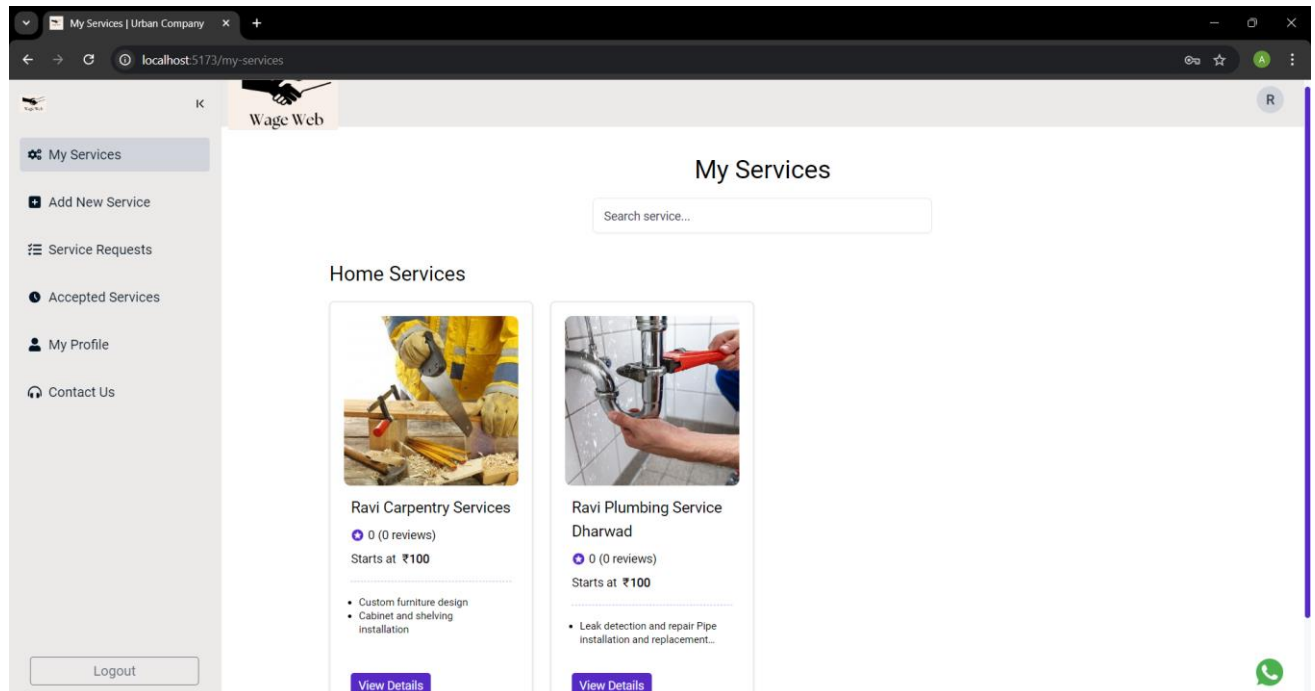
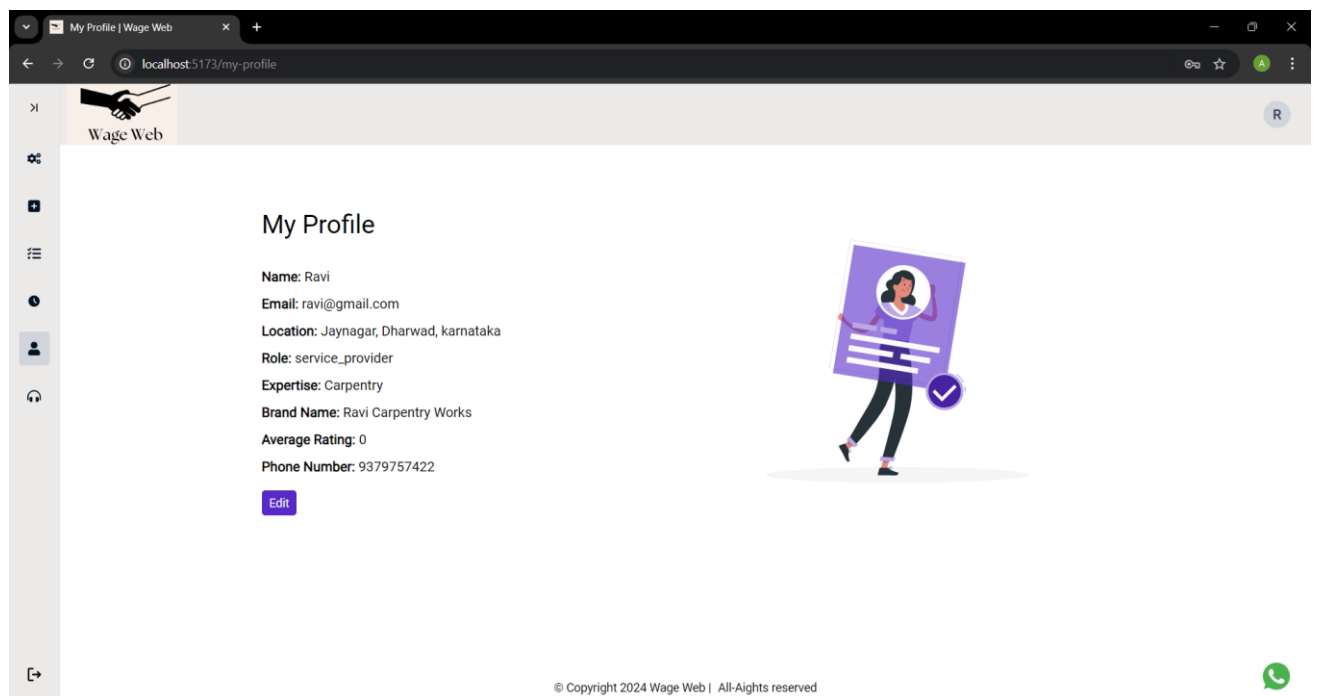
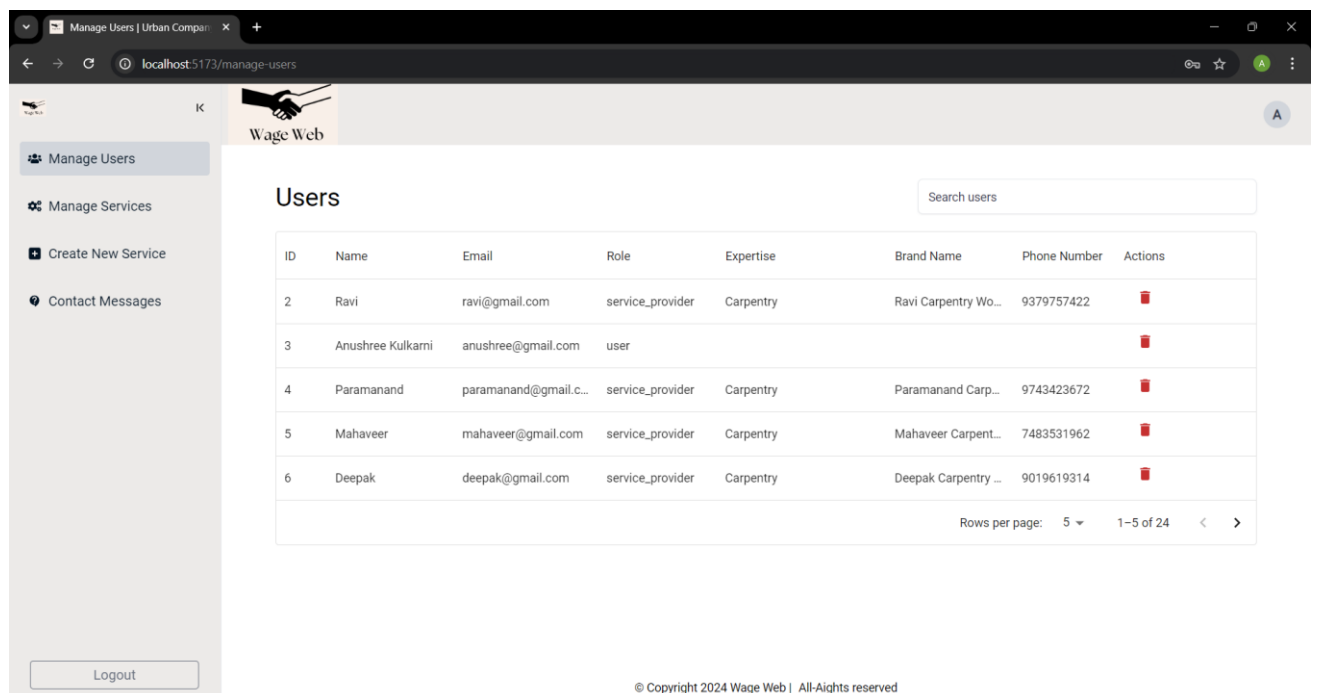


Fig 12. User Profile

**Fig 13. Contact Page****Fig 14. Service Provider Control Panel**

**Fig 15. Service Provider Profile****Fig 16. Admin control panel to manage users**

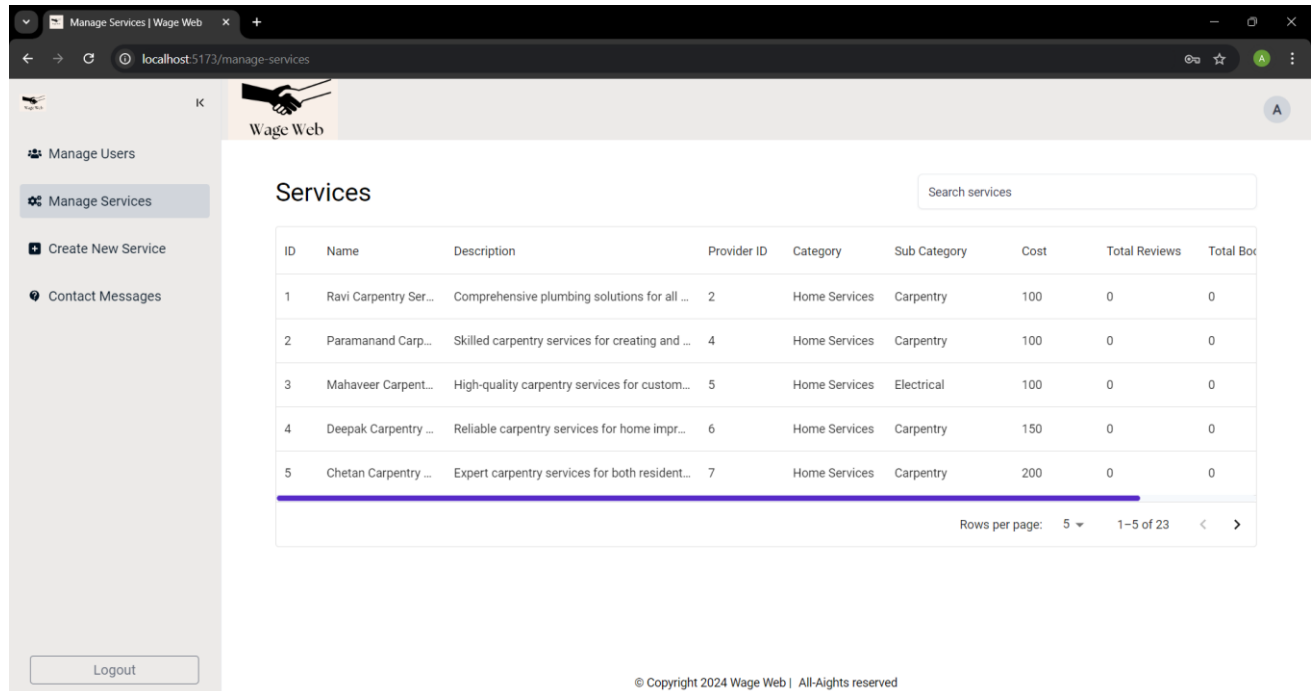


Fig 17. Admin control panel to manage services

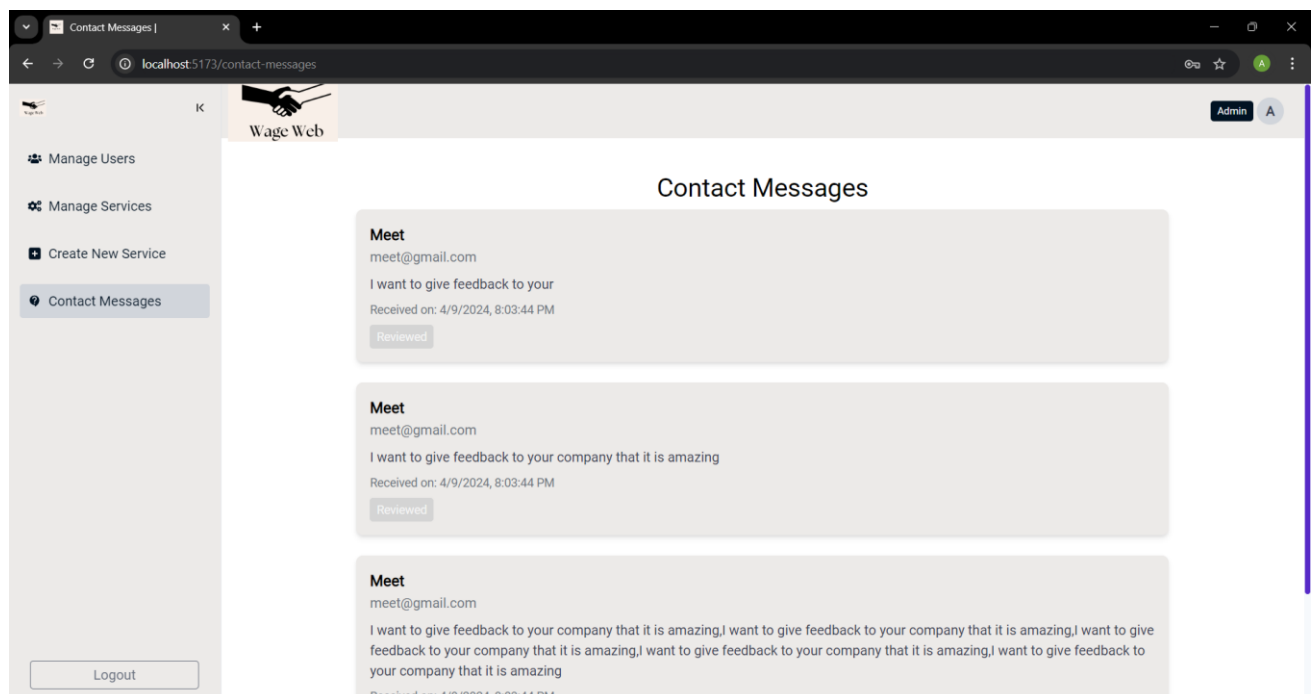


Fig 18. Admin control panel to Review contact messages

Chapter 7. TEST CASES AND RESULTS

Test Plan:

Objective: The objective of testing is to ensure the functionality and reliability of the Farmers Web Portal application.

Scope: Testing will cover all critical functionalities including crop suggestions, market features, user authentication, and admin functionalities.

Resources: Testing will be conducted using the Mocha testing framework and the Chai assertion library. Testing environments will include local development environments and deployment environments.

Schedule: Testing will be conducted iteratively during the development phase and before deployment to ensure that all functionalities meet the specified requirements.

Testing Environment: Testing will be conducted on both development and deployment environments to ensure compatibility and reliability.

Test Cases:

1. Unit Testing:

- **Definition:** Focuses on testing individual components or units of the code, like functions or methods, to ensure they work as expected in isolation.
- **Purpose:** Validate that each unit of the software performs as designed.
- **Example:** Testing if the function calculating a service provider's rating on Wage Web returns the correct value based on user inputs.

2. Integration Testing:

- **Definition:** Ensures that different modules or services used by your application work well together.
- **Purpose:** Identify issues that occur when units are combined and tested as a group.
- **Example:** Testing the integration of the registration component with the phone number validation system in Wage Web.

3. System Testing:

- **Definition:** Validates the complete and integrated software product to ensure it meets the requirements.
- **Purpose:** Evaluate the system's compliance with the specified requirements.
- **Example:** Testing the Wage Web platform's end-to-end user flow, from booking a service to receiving a confirmation message.

4. Acceptance Testing:

- **Definition:** Conducted to determine if the system satisfies the business requirements and is acceptable for delivery.
- **Purpose:** Validate the system in real-world conditions as per client or stakeholder requirements.
- **Example:** Testing if the Wage Web platform accurately matches users with service providers and if transactions can be completed successfully.

Acceptance Test Plan:

An **Acceptance Test Plan** defines the approach, scope, and criteria for acceptance testing. It details the processes to be followed, tools used, roles and responsibilities, and the acceptance criteria.

Components of an Acceptance Test Plan:

- **Objective:** Ensure the software meets the business requirements.
- **Scope:** Features that will be tested.
- **Entry Criteria:** Preconditions for starting acceptance testing (e.g., the system is fully integrated and functional).
- **Exit Criteria:** Conditions to meet before testing is complete (e.g., no critical defects).
- **Responsibilities:** Teams responsible for test execution, defect logging, etc.
- **Test Environment:** Describe the hardware and software environment.
- **Acceptance Criteria:** Defines what constitutes pass/fail conditions for the system.

Unit Test Plan & Test Cases:**Objective:**

The objective of unit testing is to verify that individual functions, methods, or components within the Wage Web platform work as expected. Each unit test focuses on a small piece of code, such as a function or method, ensuring that it performs correctly in isolation.

Scope:

- The test plan will cover the major functional components of the Wage Web project.
- Each function, method, or component will be tested for expected behavior with both valid and invalid inputs.
- Areas to be covered include:
 - Registration form validation (e.g., phone number validation)
 - Booking process
 - Filtering functionality
 - Admin operations (if applicable)

Tools:

- **Testing Frameworks:** Jest (for React components), Mocha/Chai (for JavaScript functions)
- **Test Environment:** Local development environment with mocked API calls using JSON-Server.

Entry Criteria:

- Development for the respective components has been completed.
- The components are free from syntax errors and ready for testing.

Exit Criteria:

- All critical components pass unit tests with no critical defects.
- Code coverage requirements (e.g., 80%) are met.

Assumptions:

- Test data has been properly set up.
- Test environment is configured properly for testing.

Unit Test Cases for Wage Web:**Component 1: Phone Number Validation in Registration**

Objective: Ensure that the phone number field only accepts valid inputs (10 digits).

Test Case ID	Test Description	Input Data	Expected Output	Actual Output	Pass/Fail
UT-001	Validate phone number with valid input	9876543210	Phone number is accepted and no error message is shown.	Phone number accepted without errors.	Pass
UT-002	Validate phone number with less than 10 digits	98765	Error message "Please enter a valid 10-digit phone number."	Error message shown.	Pass
UT-003	Validate phone number with non-numeric input	abcd12345	Error message "Please enter a valid 10-digit phone number."	Error message shown.	Pass

Component 2: Booking Service

Objective: Ensure that the booking process works correctly.

Test Case ID	Test Description	Input Data	Expected Output	Actual Output	Pass/Fail
UT-004	Book a service with valid inputs	Service ID: 12345, User ID: 987	Service booked successfully. Confirmation message shown.	Service booked successfully. Confirmation shown.	Pass
UT-005	Book a service without selecting a provider	No service selected	Error message "Please select a service provider."	Error message shown.	Pass

Component 3: Filtering Functionality

Objective: Ensure that the filter works correctly based on price and category.

Test Case ID	Test Description	Input Data	Expected Output	Actual Output	Pass/Fail
UT-006	Filter services by valid price and category	Price: 500-1000, Category: Electrician	Display list of electricians within the specified price range.	List displayed correctly.	Pass
UT-007	Filter services with no matches	Price: 5000-6000, Category: Carpenter	Show message "No service providers found."	Message shown correctly.	Pass

Component 4: Admin Operations (User Management)

Objective: Ensure that admin actions like deactivating a user work as expected.

Test Case ID	Test Description	Input Data	Expected Output	Actual Output	Pass/Fail
UT-008	Deactivate a registered user	User ID: 456	User is deactivated, and status is updated in the system.	User deactivated successfully.	Pass
UT-009	Deactivate a non-existent user	User ID: 999	Error message "User not found."	Error message shown.	Pass

Chapter 8. FUTURE ENHANCEMENT

1.Mobile App Development

- **Enhancement:** Develop a dedicated mobile app for Android and iOS to complement the responsive website.
- **Benefit:** A mobile app will provide users with a more convenient and streamlined experience, especially on mobile devices.

2. Service Provider Ratings and Reviews

- **Enhancement:** Introduce a rating and review system for customers to share feedback on service providers.
- **Benefit:** Helps users make informed decisions and encourages service providers to maintain high standards.

3. Advanced Filtering Options

- **Enhancement:** Add additional filters like ratings, availability, and location proximity to refine service provider search results.
- **Benefit:** Enhances user convenience by helping them find the most suitable service providers quickly.

4. Loyalty and Referral Program

- **Enhancement:** Launch a loyalty program where users can earn points for bookings and redeem them for discounts, along with a referral system to bring in more users.
- **Benefit:** Increases user engagement and retention, while also expanding the customer base through referrals.

5. In-App Messaging System

- **Enhancement:** Enable users to communicate directly with service providers through an in-app messaging feature to discuss service details before confirming a booking.
- **Benefit:** Improves communication and trust between users and service providers, leading to more successful bookings.

6. Analytics Dashboard for Service Providers

- **Enhancement:** Provide service providers with a dashboard to track performance metrics like earnings, bookings, and customer reviews.
- **Benefit:** Empowers service providers to monitor and improve their services, fostering long-term engagement with the platform.

Chapter 9. CONCLUSION

Wage Web represents a forward-thinking approach to connecting skilled workers with customers in need of a wide range of services. By focusing on accessibility and real worker data, the platform offers a unique value proposition that sets it apart from competitors. The integration of a user-friendly interface ensures that both customers and service providers can easily navigate the system, making it an ideal solution for users of varying technical expertise.

The platform's design aims to uplift lesser-known, skilled workers by providing them with a professional online presence, which in turn helps increase their visibility and income. For customers, Wage Web simplifies the process of finding trusted service providers by offering a streamlined interface with essential filtering options. As the platform grows, adding more advanced filters and enhanced features, the overall user experience will become even more tailored and efficient.

Moreover, Wage Web is built with scalability in mind, offering future potential for growth and expansion. The planned enhancements, such as introducing mobile apps, adding a service provider rating system, and creating loyalty programs, will further enrich the platform's ecosystem. These improvements aim to foster greater engagement, retain users, and create a sense of trust and reliability, both for customers and service providers.

In conclusion, Wage Web is not just a marketplace for services—it is a platform that empowers workers and facilitates meaningful connections with customers. Its thoughtful design and future enhancements ensure that it will continue to provide value, making it a key player in the service industry. As it evolves, Wage Web has the potential to make a lasting positive impact on both local economies and the livelihoods of its users, ultimately creating a more inclusive and digitally enabled workforce.

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