
Software Requirements Specification

for

HomeCarePro

Version 1.0 approved

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<organization>

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

This SRS document specifies the software requirements for HomeCarePro, version 1.0. It outlines the scope of the product and defines its key functionalities that are to be implemented.

1.2 Document Conventions

Standard conventions for this document include using bold text for headings, italics and underlines for emphasis, and bullet points for lists. Priorities for requirements are indicated using a numerical scale, with 1 being the highest priority and the last number being the lowest priority .

1.3 Intended Audience and Reading Suggestions

This document is intended for developers, project managers, marketing staff, users, testers, documentation writers, customer support representatives, system administrators, business analysts, legal officers and UX/UI designers. It is organized into sections covering different aspects of the software requirements. Readers are encouraged to begin with the overview sections and proceed to the sections most relevant to their roles for their ease and understanding.

1.4 Product Scope

HomeCarePro aligns closely with our corporate goals of enhancing customer experience, optimizing operational efficiency, and fostering innovation in the home services industry. By providing a centralized platform for homeowners to access a wide range of services, we aim to differentiate ourselves in the market by offering convenience, reliability, and transparency. This strategic approach not only addresses the evolving needs of our customers but also positions us as a leader in delivering comprehensive home service solutions. Ultimately, HomeCarePro contributes to our overarching business strategy of driving growth, profitability, and customer satisfaction.

2. Overall Description

2.1 Product Perspective

HomeCarePro introduces a groundbreaking solution tailored to revolutionize the landscape of the home services industry. By amalgamating diverse home service platforms into a ***unified, user-centric interface***, it offers a transformative experience to users. This innovative platform serves as a one-stop destination, providing homeowners with seamless access to an extensive array of services. From cleaning and maintenance to shifting and security tasks, HomeCarePro streamlines the process, eliminating the hassle of navigating multiple service providers. With its intuitive design and comprehensive features, HomeCarePro sets a new standard for ***convenience, efficiency, and reliability*** in home service management.

2.2 Product Functions

- Registration and Profile Creation
- Profile Management for Service Providers
- Provider Profile Verification
- Search Result Filtering
- Calendar Booking for Users
- Appointment Calendar Management for Providers
- Real-Time Calendar Syncing

2.3 User Classes and Characteristics

- **Homeowners**: Individuals or families who own or rent residential properties. They seek various home services to maintain, enhance, or manage their living spaces. Homeowners may range from first-time property owners to experienced homeowners with different preferences, budgets, and levels of technical proficiency.
- **Service Providers**: Professionals or businesses offering home-related services such as cleaning, maintenance, repairs, installations, and security. This user class includes independent contractors, small businesses, and larger companies with unique specialties, qualifications, and availability.
- **Administrators**: Responsible for managing and overseeing the operation of HomeCarePro, administrators ensure the platform's functionality, security, and user satisfaction. This category includes platform administrators, system administrators, and customer support staff. They monitor user activity, resolve disputes, and maintain platform integrity.
- **Customer Support Representatives**: These individuals assist users with inquiries, issues, or concerns encountered while using HomeCarePro. Equipped with strong communication and troubleshooting skills, they provide guidance on platform features and effectively resolve user complaints through various support channels.
- **System Administrators**: Tasked with managing the technical infrastructure and backend systems supporting HomeCarePro, system administrators ensure reliability, scalability, and security. They handle server management, database administration, and network security measures, monitoring server performance, implementing software updates, and troubleshooting technical issues to maintain platform stability and functionality.
- **Business Analysts**: Analyzing user needs, market trends, and business requirements, business analysts drive strategic decisions and enhancements. They conduct data analysis, market research, and user feedback analysis to identify opportunities for product improvement. Collaborating with stakeholders, they prioritize features, define product roadmaps, and optimize the user experience of HomeCarePro.
- **Marketing Staff**: Responsible for promoting HomeCarePro to target audiences, marketing staff attract new users and increase brand awareness. They develop marketing strategies, campaigns, and promotional materials to showcase platform benefits and features effectively. Utilizing various channels such as social media, email marketing, content creation, and advertising, they reach potential users and drive user acquisition and retention efforts.

2.4 Operating Environment

HomeCarePro operates in a **diverse environment**, compatible with various hardware platforms, operating systems, and software components.

2.5 Design and Implementation Constraints

- **Corporate Security Policies**: HomeCarePro must adhere to stringent corporate security policies to ensure the protection of user data and privacy. This includes implementing robust data encryption, access control mechanisms, and secure communication protocols to safeguard sensitive information from unauthorized access or breaches.
- **Regulatory Compliance Requirements**: Compliance with industry regulations and legal standards is essential for HomeCarePro. This includes adherence to data protection laws, consumer rights regulations, and any other relevant legislation governing the operation of online platforms and personal data handling.
- **Scalability and Performance Requirements**: HomeCarePro must be designed to accommodate potential growth in user base and service demand over time. The platform should be scalable, capable of handling increasing volumes of user interactions, data processing, and service transactions without compromising performance or user experience.
- **Technology Compatibility**: Compatibility with a wide range of hardware devices, operating systems, web browsers, and network environments is crucial for HomeCarePro's accessibility and usability. The platform must be designed and implemented using technologies and standards that ensure compatibility across different platforms and devices.
- **Integration with Third-Party Systems**: HomeCarePro may need to integrate with external systems, APIs, or services to provide additional functionalities or enhance user experience. Integration with payment gateways, mapping services, or communication tools may be necessary, requiring careful design and implementation to ensure seamless interoperability and data exchange.
- **Data Storage and Management**: Effective data storage and management are essential for HomeCarePro to store user profiles, service provider information, booking records, and other essential data securely and efficiently. The platform must employ appropriate database technologies, data storage strategies, and backup procedures to ensure data integrity, availability, and resilience against failures or data loss.
- **User Interface and Experience Design Guidelines**: HomeCarePro's user interface and experience design must align with established design guidelines, usability principles, and accessibility standards to provide an intuitive, user-friendly experience for all users. Consistency in layout, navigation, visual elements, and interaction patterns is crucial for enhancing usability and user satisfaction.
- **Localization and Internationalization**: HomeCarePro may need to support multiple languages, currencies, time zones, and cultural preferences to cater to a diverse user base across different regions and markets. The platform should be designed with localization and internationalization capabilities to adapt its content, features, and functionalities according to the preferences and requirements of different user demographics.
- **Continuous Maintenance and Support**: Ongoing maintenance, updates, and technical support are essential for ensuring the long-term success and sustainability of HomeCarePro. The platform must have provisions for regular updates, bug fixes, security patches, and user support services to address evolving user needs, technology advancements, and emerging challenges.

2.6 Assumptions and Dependencies

- **Assumptions:**

- **Third-Party Components:** HomeCarePro assumes the availability and reliability of third-party components, such as APIs, libraries, or frameworks, that are integral to its functionality. Any changes or disruptions to these third-party components could impact the platform's performance and reliability.
- **Regulatory Environment:** HomeCarePro assumes compliance with relevant regulatory requirements, data protection laws, and industry standards governing the operation of online platforms and handling of personal data. Changes in regulatory requirements or legal obligations may necessitate updates or modifications to the platform to ensure compliance.
- **User Behavior and Preferences:** The design and features of HomeCarePro are based on assumptions about user behavior, preferences, and expectations regarding home service platforms. These assumptions may include user preferences for certain types of services, preferred payment methods, or expectations regarding service quality and reliability.
- **Market Acceptance and Adoption:** HomeCarePro assumes market acceptance and adoption of the platform by its target audience, including homeowners seeking home services and service providers offering their services. Factors such as competition, pricing, and perceived value may influence the platform's adoption and success in the market.

- **Dependencies:**

- **Software Components:** HomeCarePro may depend on external software components, libraries, or frameworks to provide specific functionalities or integrate with other systems. Dependencies on third-party software components may introduce risks related to compatibility, reliability, and support.
- **Data Sources and APIs:** HomeCarePro may depend on external data sources, APIs, or web services to access additional information, such as mapping data, weather forecasts, or service provider availability. Dependencies on external data sources may introduce risks related to data availability, reliability, and latency.
- **Infrastructure and Hosting Providers:** HomeCarePro depends on infrastructure and hosting providers to deploy and operate the platform, including web servers, databases, and networking services. Dependencies on infrastructure providers may introduce risks related to uptime, performance, and security.
- **Team Skills and Expertise:** The successful development and maintenance of HomeCarePro depend on the skills, expertise, and availability of the development team, including software developers, designers, testers, and project managers. Dependencies on team members may introduce risks related to resource constraints, skill gaps, and project delays.
- **External Stakeholders and Partners:** HomeCarePro may depend on relationships with external stakeholders, partners, or vendors to support various aspects of its operation, such as marketing, customer support, or service delivery. Dependencies on external stakeholders may introduce risks related to alignment

of interests, contractual obligations, and communication channels.

3. External Interface Requirements

3.1 User Interfaces

The user Interface of HomeCarePro is designed to provide a seamless and intuitive experience for both homeowners and service providers. This includes:

- **Illustrative Screen Samples**: Screenshots showcasing essential functions such as user registration, service booking, and profile management.
- **GUI Conformity**: Alignment with recognized design principles and usability standards within the industry.
- **Screen Layout Consistency**: Uniform layout maintained across screens to facilitate smooth navigation and information accessibility.
- **Standard Controls and Functions**: Integration of commonly used buttons and features (e.g., "Submit," "Cancel," "Help") for user convenience.
- **Keyboard Shortcut Options**: Provision of optional shortcuts for enhanced operational efficiency (e.g., Ctrl + S for saving).
- **Error Message Presentation Standards**: Implementation of clear and informative error messages to aid users in issue resolution.

3.2 Hardware Interfaces

HomeCarePro interfaces with various hardware components to support its operation on different devices. The characteristics of each interface include:

- **Supported Device Types**: HomeCarePro is designed to be compatible with desktop computers, laptops, smartphones, and tablets.
- **Nature of Data and Control Interactions**: Interaction between the software and hardware components involves data input, processing, and output for tasks such as user authentication, service selection, and booking management.
- **Communication Protocols**: HomeCarePro utilizes standard communication protocols such as HTTP(S) for data exchange between the software and hardware devices

3.3 Software Interfaces

HomeCarePro interacts with various software components to deliver its functionalities. The connections between HomeCarePro and other software components include:

- **Databases**: HomeCarePro interacts with a relational database management system (e.g., MySQL, PostgreSQL) to store user profiles, service provider information, booking records, and other relevant data.

- **Operating Systems**: HomeCarePro is compatible with multiple operating systems, including Windows, macOS, iOS, and Android.
- **Integrated Commercial Components**: Integration with commercial components such as payment gateways and mapping services may be required to facilitate transactions and location-based services.

3.4 Communications Interfaces

The communication requirements associated with HomeCarePro include:

- **Email**: HomeCarePro sends email notifications for account registration, booking confirmations, and other important updates to users.
- **Web Browser**: HomeCarePro is accessed through web browsers, ensuring compatibility and accessibility across different platforms.
- **Network Server Communications Protocols**: HomeCarePro utilizes HTTP(S) for communication between client devices and the server hosting the application.
- **Security and Encryption**: HomeCarePro implements security measures such as SSL/TLS encryption to protect sensitive user data during communication.
- **Data Transfer Rates and Synchronization Mechanisms**: HomeCarePro ensures efficient data transfer rates and synchronization mechanisms to maintain real-time updates and consistency across user devices.

4. System Features

4.1 System Feature: User Registration and Profile Management

4.1.1 Description and Priority

Enables users to securely register and create profiles for accessing personalized services. High priority due to its fundamental role in user engagement.

4.1.2 Stimulus/Response Sequences

User initiates registration; System processes registration and requests email verification; User completes profile setup.

4.1.3 Functional Requirements

REQ-1: Validate email and secure password during registration.
REQ-2: Send email confirmation link for account verification.
REQ-3: Encrypt and securely store personal information.
REQ-4: Allow users to update profile information.

4.2 System Feature: Service Provider Profile Management

4.2.1 Description and Priority

Allows service providers to create and manage their profiles, highlighting services and availability. High priority to ensure service providers can effectively showcase

their offerings.

4.2.2 Stimulus/Response Sequences

Service provider completes registration with detailed service offerings; Provider updates profile, immediately reflecting changes on the user side.

4.2.3 Functional Requirements

REQ-1: Registration for service providers must include additional fields for services and availability.

REQ-2: Profiles must be editable for service detail updates.

REQ-3: Updates to availability must be immediately reflected on the user side.

4.3 System Feature: Service Provider Profile Verification

4.3.1 Description and Priority

Administrators review and verify new provider profiles to maintain a trustworthy platform. High priority for ensuring the integrity and trustworthiness of the platform.

4.3.2 Stimulus/Response Sequences

Administrator reviews new provider applications on the dashboard; Decision to approve or reject is made, with notifications sent to the provider.

4.3.3 Functional Requirements

REQ-1: Dashboard for reviewing provider applications must be available.

REQ-2: System must include a checklist for verification criteria.

REQ-3: Administrators should have the option to approve or reject with notifications.

4.4 System Feature: Service Provider Visibility in Search Results

4.4.1 Description and Priority

Improves service provider's visibility in search results based on relevancy, location, and ratings. Medium priority, as it directly impacts the ability of providers to reach potential clients.

4.4.2 Stimulus/Response Sequences

User searches for services which the system ranks providers based on algorithm; Provider updates profile for better match in search results.

4.4.3 Functional Requirements

REQ-1: Algorithm to rank providers in search results.

REQ-2: Providers can update keywords for better search result matching.

REQ-3: Analytics dashboard for providers to view visibility and stats.

4.5 System Feature: Dynamic Search Filtering

4.5.1 Description and Priority

Facilitates users with dynamic filtering options in search results for finding the best service provider. Medium priority, as it enhances user experience by allowing users to tailor search results to their needs.

4.5.2 Stimulus/Response Sequences

User inputs search criteria and selects filters; System dynamically updates the search results based on selected filters.

4.5.3 Functional Requirements

REQ-1: System must offer search filter options for service type, location, and rating.

REQ-2: Search results must dynamically update based on applied filters.

REQ-3: System must clearly indicate which filters have been applied.

4.6 System Feature: Robust Search Engine Management

4.6.1 Description and Priority

Ensures the search engine is robust, providing effective matches between users and providers. High priority for maintaining an effective and user-friendly search experience.

4.6.2 Stimulus/Response Sequences

Administrator adjusts search relevance tools; System undergoes regular updates to search algorithms based on feedback.

4.6.3 Functional Requirements

REQ-1: Tools for monitoring and adjusting search relevance must be provided.

REQ-2: Regular updates to search algorithms based on user feedback are required.

REQ-3: System must have a method for testing search performance before live updates.

4.7 System Feature: User-Friendly Booking Calendar

4.7.1 Description and Priority

Provides an interactive calendar interface for easy booking of services. High priority, as it directly affects the booking process and user satisfaction.

4.7.2 Stimulus/Response Sequences

User selects a service and uses the calendar to book an appointment; System checks availability and sends an email confirmation upon booking.

4.7.3 Functional Requirements

REQ-1: An interactive calendar interface for booking must be developed.

REQ-2: System must perform availability checks before booking confirmations.

REQ-3: Email confirmations for bookings to both user and provider are required.

4.8 System Feature: Service Provider Appointment Calendar Management

4.8.1 Description and Priority

Allows service providers to efficiently manage their appointment calendars. Medium priority, as it helps providers maintain their schedules and availability accurately.

4.8.2 Stimulus/Response Sequences

Provider updates their appointment calendar; System sends automated notifications for new or changed appointments.

4.8.3 Functional Requirements

REQ-1: Calendar tool for managing appointments and blocking out times must be provided.

REQ-2: Automated notifications for new or changed appointments are required.

REQ-3: System must offer easy rescheduling options for users and providers.

4.9 System Feature: Synchronization and Conflict Resolution

4.9.1 Description and Priority

Ensures that the calendar system is synchronized across users and providers, minimizing scheduling conflicts. High priority for the smooth operation of booking and scheduling services.

4.9.2 Stimulus/Response Sequences

System detects a double booking or scheduling conflict; Administrators receive alerts and can use the dashboard to resolve issues.

4.9.3 Functional Requirements

REQ-1: Real-time calendar updates across user and provider interfaces are required.

REQ-2: System must have checks for double bookings or scheduling conflicts.

REQ-3: A dashboard for administrators to monitor and resolve scheduling issues must be developed.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The platform is designed to offer a responsive and reliable user experience. System response times are expected to be under 2 seconds for user interactions under normal conditions and should not exceed 5 seconds even under peak load, accommodating up to 10,000 concurrent users. To ensure continuous service, the system boasts an availability target of 99.9%, with exceptions only during scheduled maintenance. Furthermore, real-time functionalities such as calendar synchronization and search result updates aim for sub-second processing times, emphasizing our commitment to a dynamic and fluid user experience.

5.2 Safety Requirements

To safeguard user data against loss, damage, or harm, the platform employs rigorous data integrity measures, including regular backups and a comprehensive disaster recovery strategy. Moreover, an incident response plan is meticulously crafted to address potential security breaches swiftly, minimizing impact on users and operations.

5.3 Security Requirements

Security is paramount, with stringent authentication and authorization processes in place, including options for two-factor authentication and role-based access controls to protect user information. All sensitive data, encompassing personal and payment details, undergoes encryption both in transit and at rest. The platform commits to regular security audits and penetration testing to proactively identify and rectify vulnerabilities.

5.4 Software Quality Attributes

The design philosophy of the platform prioritizes adaptability, allowing for the seamless introduction of new features as user needs evolve. Correctness and reliability are core to our operations, aiming for a negligible incident rate stemming from bugs. Interoperability with third-party services ensures a cohesive ecosystem, enhancing user convenience. Maintenance and updates are streamlined through adherence to best coding practices and comprehensive documentation, facilitating long-term platform sustainability. Usability is a focal point, with the interface designed to be intuitive and efficient, reflecting in high user satisfaction scores.

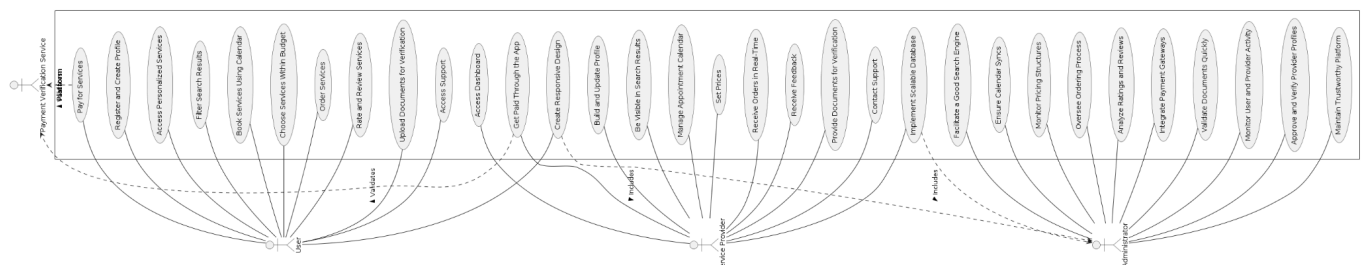
5.5 Business Rules

The platform operates under clear business rules to ensure a structured and fair environment for all users. Service providers undergo a verification process before their listings become accessible, guaranteeing quality and trustworthiness. User roles are distinctly defined, with specific permissions attached to each, governing their interactions with the platform. A data retention policy compliant with legal standards dictates the handling of user information, ensuring privacy and security. In cases of disputes, the platform provides a resolution mechanism, empowering administrators to mediate based on predefined terms of service.

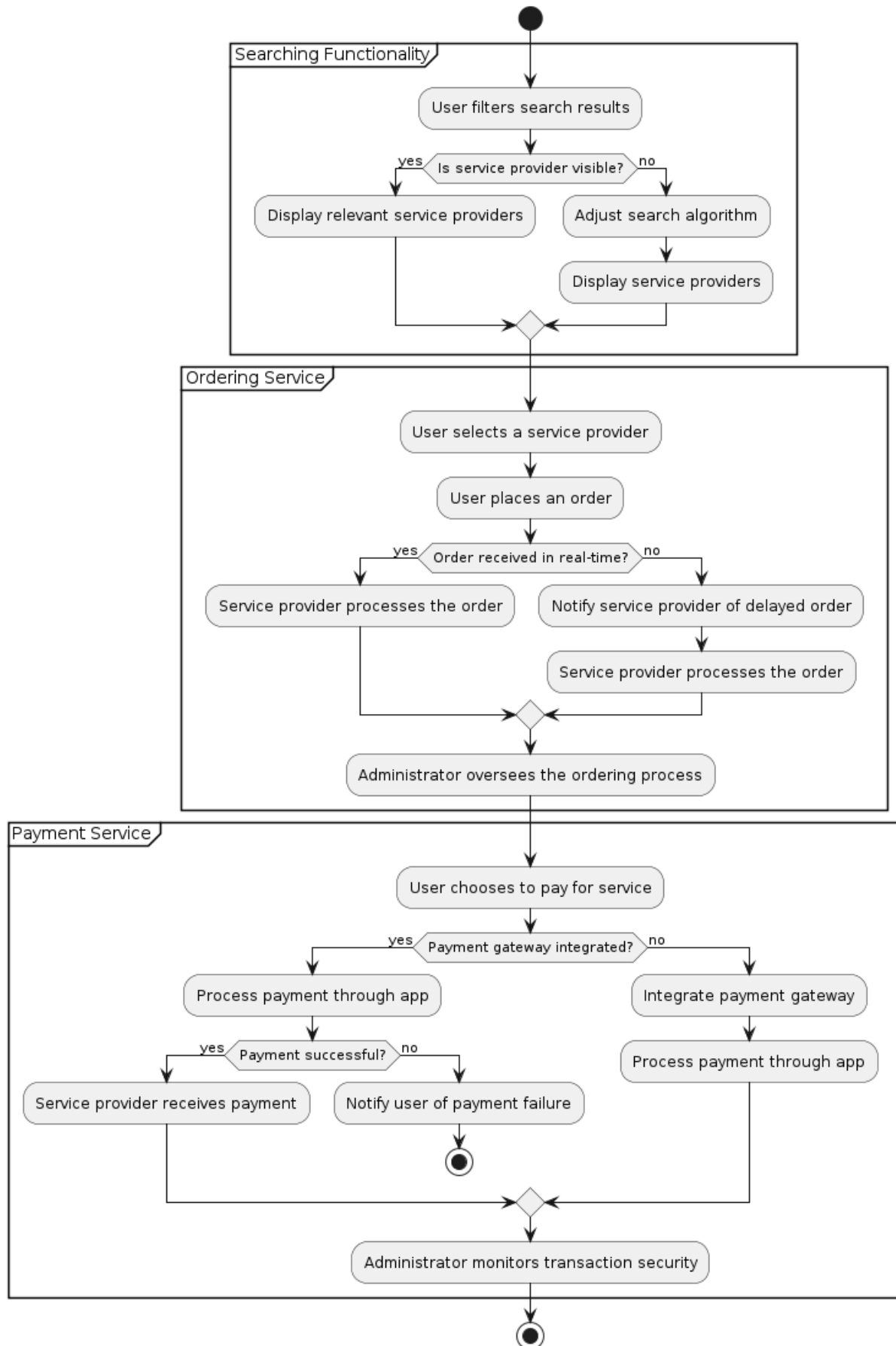
6. Diagrams

<Include visual representations that help convey the structure, behavior, and interactions within the software system.

6.1 Use Case Diagram

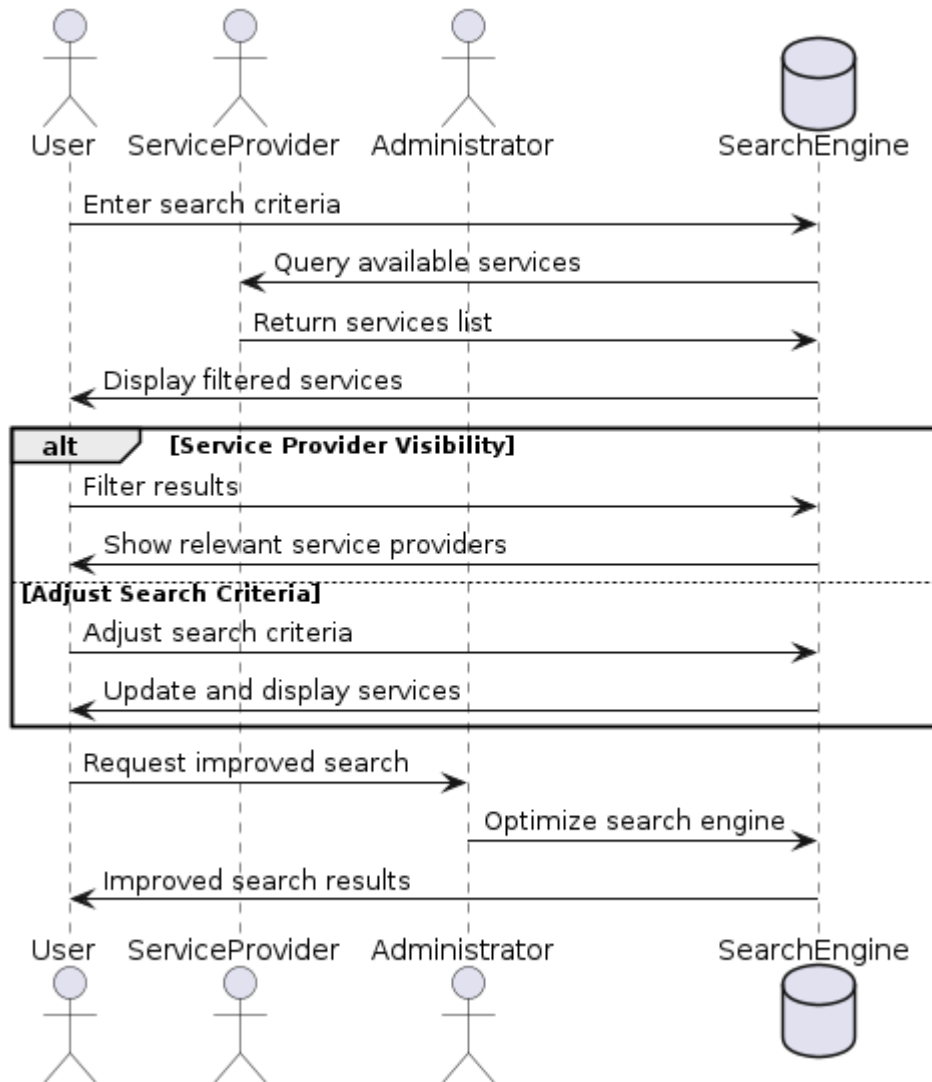


6.2 Activity Diagram

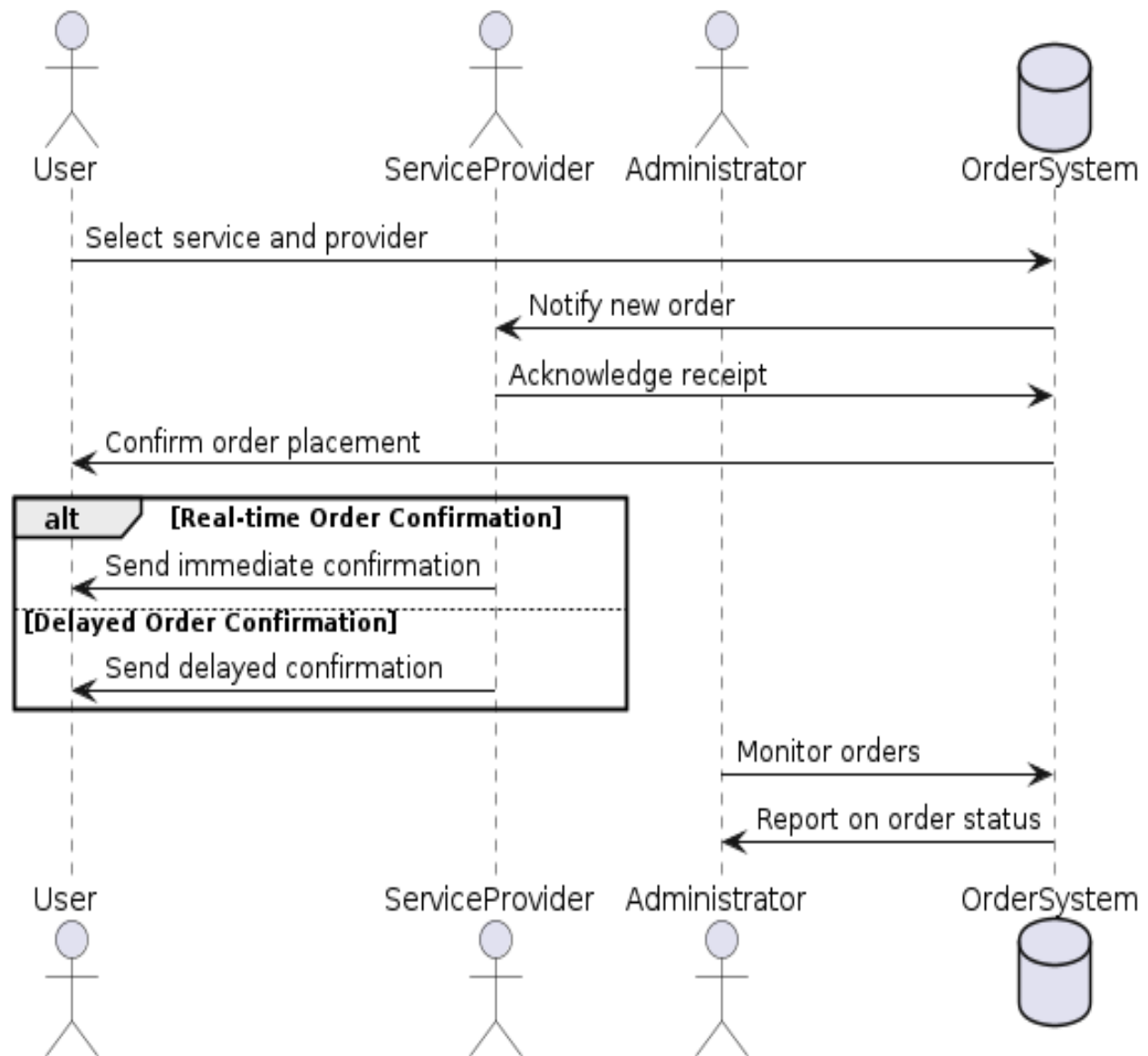


6.3 Sequence Diagrams

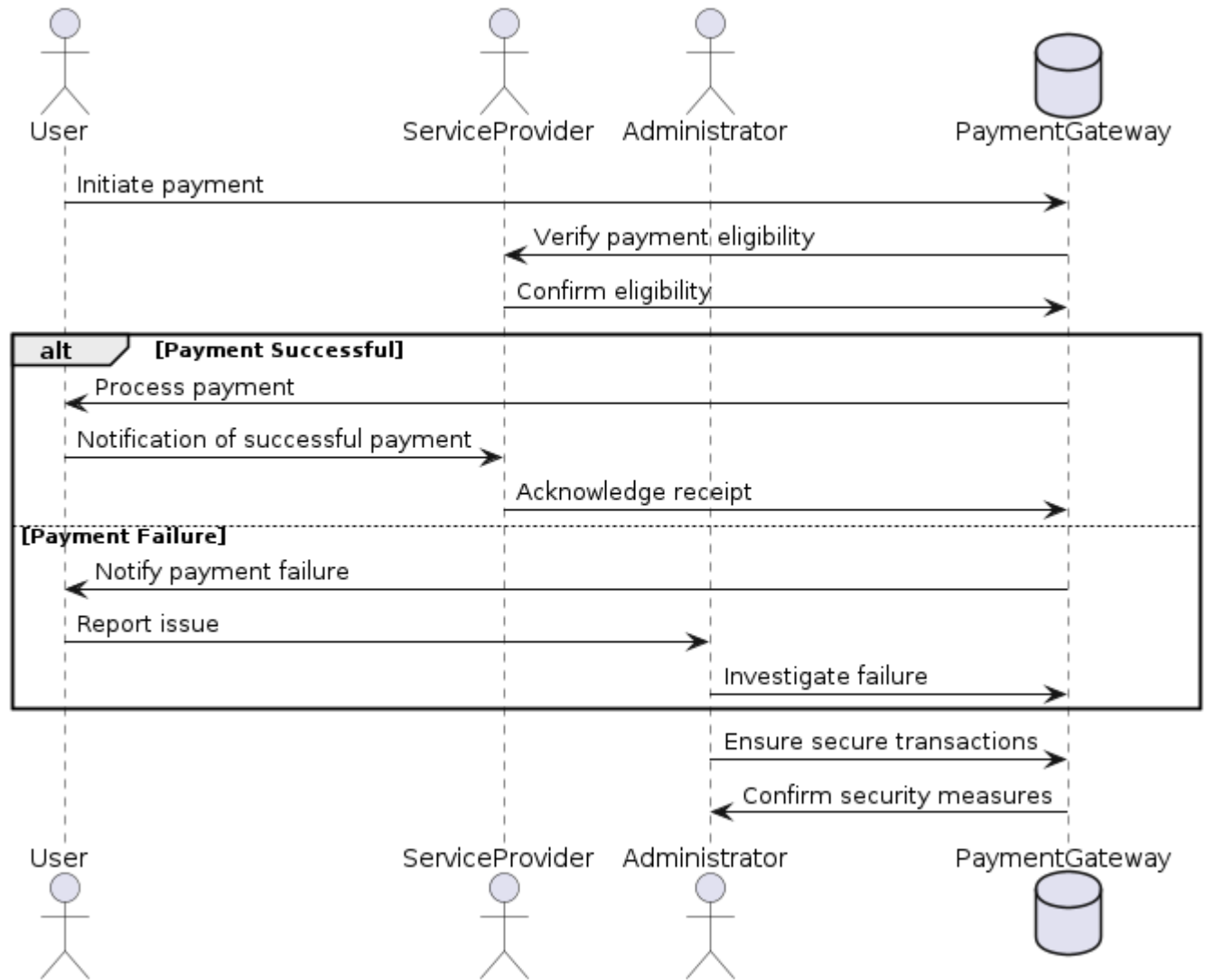
1. Search



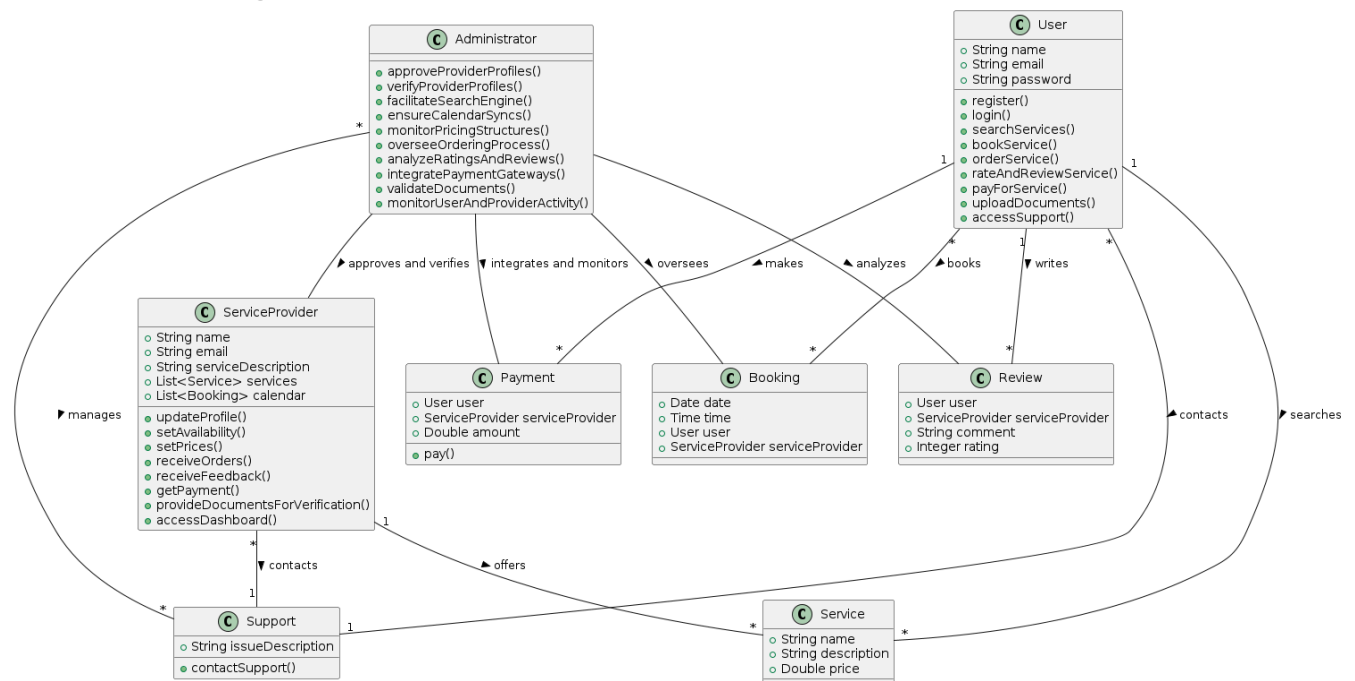
2. Order



3. Pay



6.4 Class Diagram



Appendix A: Glossary

This Glossary serves to define terms, acronyms, and abbreviations used throughout the Software Requirements Specification (SRS) document for HomeCarePro, ensuring clarity and common understanding among all project stakeholders.

- **API (Application Programming Interface)**: A set of protocols and tools for building software applications, specifying how software components should interact.
- **Encryption**: The process of converting information or data into a code, especially to prevent unauthorized access.
- **Two-factor Authentication (2FA)**: An extra layer of security used to ensure that people trying to gain access to an online account are who they say they are.
- **Service Provider**: An entity that provides home-related services, such as cleaning, maintenance, or security, to homeowners through the HomeCarePro platform.
- **User**: An individual or entity utilizing the HomeCarePro platform to seek and book home service providers.
- **Administrator**: A user with elevated privileges responsible for managing the HomeCarePro platform, including user and service provider verification.
- **SSL/TLS (Secure Sockets Layer/Transport Layer Security)**: Protocols for establishing authenticated and encrypted links between networked computers.
- **Backend**: The server-side of a website, where data processing is executed.
- **Frontend**: The client-side of a website, encompassing everything users visually interact with within their web browser.

Appendix B: Analysis Models

<Optionally, include any pertinent analysis models, such as data flow diagrams, class diagrams, state-transition diagrams, or entity-relationship diagrams.>