***Home Services System***

**Functional Requirements and non functional**

**Functional Requirements**

1. **FR-001: Client, Admin, and Worker Authentication**
   * **Clients** must register and log in to book services and manage their bookings.
   * **Admins** must register to oversee system operations, manage providers, and add workers.
   * **Workers** must register and log in to update their availability and view bookings.
   * **Post-Condition**: The user is logged in, and their role-based dashboard is accessible.
   * **Justification**: Ensures secure access and personalized experiences for all users while clearly defining roles.
2. **FR-002: Service Search**
   * Clients must be able to browse and search for available services, including:
     + Electrician
     + Gardener
     + Plumber
     + Cleaning Services
   * **Post-Condition**: The system displays the results matching the user's query or suggests alternatives.
   * **Justification**: Core functionality to allow clients to find the desired home services easily.
3. **FR-003: Service Booking**
   * The system must allow clients to book a service provider based on availability.
   * **Post-Condition**: The booking details are stored, and a confirmation is sent to both the client and provider.
   * **Justification**: Critical for enabling the primary purpose of the system: scheduling services.
4. **FR-004: Provider Availability Management**
   * Workers must be able to update their availability through the system.
   * Admins must add workers to the system after verifying their IDs and government-issued documents.
   * **Post-Condition**: Worker availability is updated and visible to clients.
   * **Justification**: Enhances the system\u2019s reliability by ensuring real-time data accuracy and provider legitimacy.
5. **FR-005: Booking Confirmation**
   * The system must send booking confirmations via email or SMS to clients.
   * **Post-Condition**: Clients and providers receive confirmation of the booking details.
   * **Justification**: Keeps clients informed and provides documentation of their booking.
6. **FR-006: Service Reviews**
   * Clients should be able to view reviews and ratings for service providers.
   * **Post-Condition**: The user gains insight into the provider's quality and credibility.
   * **Justification**: Encourages trust and better decision-making for clients.
7. **FR-007: Multiple Payment Options**
   * The system should support multiple payment options, including credit/debit cards and digital wallets.
   * **Post-Condition**: The payment is successfully processed, and the booking is confirmed.
   * **Justification**: Makes the system more client-friendly and accessible to a larger audience.
8. **FR-008: Booking Management**
   * Clients must be able to reschedule or cancel bookings through the platform.
   * **Post-Condition**: Booking details are updated or removed, and notifications are sent to relevant parties.
   * **Justification**: Adds flexibility and improves client satisfaction.
9. **FR-009: Admin Dashboard**
   * The system must include an admin dashboard for:
     + Managing client and worker accounts.
     + Adding or removing services.
     + Monitoring platform activity and generating reports.
   * **Post-Condition**: Changes made by the admin are applied and logged for audit purposes.
   * **Justification**: Essential for operational control and oversight by administrators.
10. **FR-010: Cancel Booking**
    * Clients must have the option to cancel a booking after scheduling a service.
    * **Post-Condition**: The booking is canceled, and the client receives confirmation and refund details if applicable.
    * **Justification**: Provides flexibility and accommodates changes in client plans.

**Non-Functional Requirements**

1. **NFR-001: Performance Testing**
   * The platform must ensure an average page load time under 3 seconds.
   * **Justification**: Provides a responsive user experience, critical for client retention.
2. **NFR-002: Multilingual Support**
   * The system must support interfaces in the top three languages: English, Spanish, and French.
   * **Justification**: Enhances accessibility and usability for a diverse audience.
3. **NFR-003: Cross-Platform Compatibility**
   * The platform must be compatible with desktop browsers, including Firefox, Chrome, and Edge.
   * **Justification**: Provides seamless access across devices, catering to modern user behavior.

**Won’t Haves**

1. **Advanced AI Chatbot**
   * No advanced AI-based customer support chatbot is planned for the current phase.
2. **Offline Booking System**
   * The system will not support offline booking capabilities.
3. **Custom Pricing for Services**
   * Clients cannot negotiate or set custom pricing for the services.
4. **Service Delivery Time Guarantees**
   * The system will not guarantee exact service delivery times.

**Use Case Scenarios for Functional Requirements**

**FR-001: User Registration and Login**

* **Title**: User Registration and Login
* **Actors**: Client, Admin, Worker, System
* **Precondition**: The user has access to the platform via a browser or mobile app.
* **Main Flow**:
  1. The user accesses the platform.
  2. The user selects the “Sign Up” option and provides details (e.g., name, email, role, and password).
  3. The system validates the details and sends a confirmation email.
  4. The user confirms their email, completing registration.
  5. The user logs in using their credentials.
  6. The system verifies credentials and redirects the user to their role-specific dashboard.
* **Alternative Flow**:
  1. If the user forgets their password, they can click "Forgot Password" and reset it via a link sent to their email.
* **Post-Condition**:
  1. The user is authenticated, and their dashboard reflects their role (e.g., booking options for clients, availability management for workers, and admin controls for admins).

**FR-002: Searching for Home Services**

* **Title**: Searching for Home Services
* **Actors**: Client, System
* **Precondition**: The client is logged into the platform.
* **Main Flow**:
  1. The client navigates to the search bar or selects a service category.
  2. The client enters keywords or applies filters (e.g., type of service, location, or date).
  3. The system retrieves and displays matching services with details (e.g., provider name, reviews, and availability).
  4. The client selects a service to view additional details.
* **Alternative Flow**:
  1. If no results are found, the system suggests related services or prompts the client to refine their search.
* **Post-Condition**:
  1. Matching services are displayed, and the client can proceed to book a service or refine their search.

**FR-003: Booking a Service**

* **Title**: Booking a Service
* **Actors**: Client, Worker, System
* **Precondition**: The client has found a suitable service via the platform.
* **Main Flow**:
  1. The client selects a service and views the worker\u2019s availability.
  2. The client picks a date and time for the service.
  3. The system verifies the availability and confirms the booking.
  4. The system notifies both the client and the worker about the booking.
* **Alternative Flow**:
  1. If the selected time is unavailable, the system prompts the client to choose another slot.
* **Post-Condition**:
  1. The booking is confirmed, and both parties are notified with the service details.

**FR-004: Updating Provider Availability**

* **Title**: Updating Provider Availability
* **Actors**: Worker, Admin, System
* **Precondition**: The worker is logged into the platform.
* **Main Flow**:
  1. The worker navigates to the availability settings.
  2. The worker adds, edits, or removes time slots for their availability.
  3. The system updates the availability calendar and reflects the changes to clients.
  4. Admins can oversee the changes made by the worker.
* **Alternative Flow**:
  1. If a conflict arises with an existing booking, the system prompts the worker to resolve it before finalizing updates.
* **Post-Condition**:
  1. Worker availability is updated and visible to clients for booking.

**FR-010: Cancel Booking**

* **Title**: Canceling a Booking
* **Actors**: Client, System
* **Precondition**: A booking exists in the client\u2019s account.
* **Main Flow**:
  1. The client navigates to their booking history.
  2. The client selects the booking to cancel.
  3. The system prompts for confirmation and processes the cancellation.
  4. Notifications are sent to both the client and the worker about the cancellation.
* **Alternative Flow**:
  1. If the booking is within a restricted cancellation period, the system notifies the client of penalties or restrictions.
* **Post-Condition**:
  1. The booking is canceled, and the client is informed of any applicable refunds or penalties.

*GitHub Link:* https://github.com/HamzaAlhodaiby/CCAS-4.3-Project