

Proposed System name: **QuickClaim**

The system will be connected to the following systems for efficient claim processes through API's

- Existing hospital systems
- Insurance provider systems
- Banking systems

User Journey and Business Process of the System

User Journey

1. Hospital Administrator

- Logs into the web-based portal.
- Manages patient records, appointments, and billing.
- Monitors real-time data analytics on patient trends.
- Collaborates with insurance agents for claim processing.
- Receives notifications on policy updates and compliance checks.

2. Insurance Agent

- Accesses the mobile application interface.
- Reviews policies, submits claims, and processes payments.
- Utilizes machine learning algorithms for fraud detection.
- Engages in training modules for fraud detection awareness.
- Communicates securely with hospital administrators through the system.

3. System Administrator

- Oversees hardware and software integrations.
- Monitors server performance and security measures.
- Conducts compliance checks and generates reports.
- Provides technical support and training materials.

Business Process

1. Interface Development

- Develop interfaces for hospitals, insurance providers, and banking systems.
- Design intuitive web and mobile interfaces for stakeholders.
- Integrate biometric scanners and blockchain technology for security.

2. Core Functionalities Implementation

- Implement AI modules for fraud detection and predictive analytics.
- Utilize machine learning for pattern recognition and fraud prevention.
- Ensure secure transactions with blockchain technology.
- Enable real-time claims processing and payment systems.

3. Compliance and Reporting

- Establish regulatory compliance features.
- Create templates for fraud reporting pathways.
- Conduct audits and compliance checks regularly.

4. Quality Assurance and Documentation

- Define performance benchmarks and software quality attributes.
- Develop technical documentation and user manuals.
- Provide training materials for stakeholders on system usage.

5. Additional Considerations

- Design diagrams for system development documentation.
- Implement a change management process for requirement alterations.

Creative Designer Tasks

UI/UX Requirements for Hospital Administrators and Insurance Agents System

Communication Enhancement

Requirement: Include a messaging feature for real-time communication between administrators and agents.

Requirement: Implement notifications for policy updates, claims processing status, and important announcements.

Process Streamlining

Requirement: Design intuitive workflows with minimal steps for tasks like data entry and documentation.

Requirement: Incorporate automation features to reduce manual effort and errors in routine processes.

Collaboration Tools

Requirement: Develop a shared workspace with secure file sharing capabilities.

Requirement: Ensure access controls and version history for collaborative documents.

Training Programs Integration

Requirement: Include a section for onboarding resources and training materials within the system.

Requirement: Offer interactive training modules on industry regulations, best practices, and system functionalities.

Feedback Mechanism

Requirement: Integrate a feedback form or mechanism within the system for users to provide input.

Requirement: Display feedback results for administrators and agents to review and act upon.

Technology Adoption

Software Developer Tasks

System Interface Development

- Develop interfaces for existing hospital and insurance provider systems.
 - Develop API's with Mobile money, banking systems for payment processing.
 - Develop Hospital and Insurance wallets for those who want to prefund and receive funds into the system (Optional module)
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- User Interface (UI) Development
 - Design and implement the web-based portal for hospital administrators.
 - Develop the mobile application interface for insurance agents.
 - Create dashboards for monitoring and reporting.

 - Hardware Interface Integration
 - Implement integration with biometric scanners.
 - Set up servers for hosting the central system.

 - Software Interface Development
 - Configure the Database Management System (DBMS).
 - Develop and integrate the blockchain platform interface.
 - Integrate data analytics and AI tools.

 - Communication Interface Setup
 - Establish HTTPS for secure web communications.
 - Create RESTful API services for external system interfacing.

 - Core Functionalities Implementation

Requirement: Ensure the UI is user-friendly and intuitive for easy adoption of new technologies.

Requirement: Incorporate interactive elements for features like telemedicine platforms and data analytics tools.

Cross-Training Opportunities

Requirement: Include resources for cross-training materials and programs within the system.

Requirement: Facilitate access to resources that help administrators and agents understand each other's roles better.

- Develop advanced data analytics and AI modules for fraud detection and predictive analytics.
- Implement machine learning algorithms for pattern recognition and fraud detection.
- Integrate biometric verification for authenticating identities.
- Employ blockchain technology for secure, immutable transaction records.
- Build real-time claims adjudication and payment systems.
- Implement link analysis to evaluate interactions for fraud detection.
- Create a training module for regular fraud detection training.
- Develop a system for audits and compliance checks.
- Facilitate secure collaboration and information sharing between entities.
- Ensure robust verification processes for data and provider credentials.
- Implement enhanced security measures for data protection.

- Compliance and Reporting

- Create features for regulatory compliance and reporting.
- Ensure the system supports templates and pathways for reporting fraud.

- Quality Assurance

- Define and implement performance benchmarks.
- Enforce safety, security, and software quality attributes.

- Documentation and Training Development

- Prepare technical documentation for the system.
- Develop user manuals and training materials for stakeholders.

	<ul style="list-style-type: none">• Additional Development Considerations<ul style="list-style-type: none">- Design use case, activity, and sequence diagrams as part of the development documentation.- Establish a change management process to handle any alterations in requirements.
<ol style="list-style-type: none">1. Design Strategy<ul style="list-style-type: none">- Define user personas and journey maps.- Establish design language and UI guidelines to maintain consistency across all platforms.2. Wireframing<ul style="list-style-type: none">- Sketching initial concepts for the layout of the web portal and mobile app.- Creating wireframes for each screen or page.- Developing wireframes for dashboards that will be used by various user roles.3. Prototyping<ul style="list-style-type: none">- Developing interactive prototypes for the web and mobile interfaces.- Creating prototypes for the administrative dashboard.4. User Interface Design<ul style="list-style-type: none">- Designing the visual elements of the UI, including color schemes, typography, icons, and buttons.- UI development for the web portal tailored to hospital administrators' needs.	

- Mobile app UI design focusing on usability for insurance agents on the go.

5. Usability Testing

- Conducting usability testing sessions with prototypes.
- Gathering feedback and making necessary revisions to the designs.

6. High-Fidelity Design

- Creating high-fidelity designs that are close to the final product.
- Designing high-detail dashboards for real-time monitoring and reporting.

7. Interaction Design

- Defining how users interact with the UI, including animations and transitions.
- Ensuring that the interactions meet accessibility standards and enhance user experience.

8. Design Handoff

- Preparing design specifications and assets for the development team.
- Providing detailed documentation for the interactions, animations, and responsive design.

9. Collaboration with Developers

- Collaborating closely with front-end developers during the implementation phase to ensure the final product aligns with the designed UI/UX.

- Conducting design QA to validate that the built interfaces match the designs and function as intended.

10. Iterative Improvement

- Refining UI components based on user feedback and analytics post-launch.
- Iterating on the design to improve user experience and accommodate additional features or changes.

11. Branding and Graphic Design

- Developing branding materials that align with the system's visual identity.
- Creating graphics for in-app use and for marketing materials.

12. Documentation and Style Guides

- Creating a UI/UX style guide and component library for future reference and scalability.
- Documenting the design process and decisions for the project archive and for stakeholder review.