

Business Requirements Document (BRD)

Project Name: Digital Healthcare Platform 2.0

Company Name: [Assumed Healthcare Brand]

BRD Prepared By: Chena Ram Kumawat

Role: Business Analyst

Date: [Assumed Date]

1. Introduction

1.1 Purpose

The purpose of this document is to define the business requirements for the enhanced digital healthcare platform. The upgraded system aims to provide AI-driven healthcare solutions, improved patient engagement, and seamless integration with modern health technologies.

1.2 Scope

The system will continue to serve patients, doctors, and healthcare administrators, with added AI-powered diagnostics, blockchain-based medical records, and improved insurance claim processing. The core functionalities include:

- AI-assisted doctor consultations and predictive diagnostics.
- Blockchain-secured storage and access to medical records.
- Automated prescription and medication management.
- Integration with IoT-based health monitoring devices.
- Enhanced insurance and billing automation with real-time claim tracking.

1.3 Stakeholders

- **Patients** – Access enhanced AI-driven healthcare services.
 - **Doctors** – Provide smarter medical consultations with AI assistance.
 - **Healthcare Administrators** – Optimize operations with predictive analytics.
 - **Insurance Providers** – Streamline claim processing with real-time tracking.
 - **Regulatory Authorities** – Ensure compliance with evolving healthcare standards.
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2. Business Objectives

1. Integrate AI for predictive healthcare diagnostics.

2. Enhance patient-doctor engagement with real-time data insights.
 3. Improve data security with blockchain-based EMR storage.
 4. Automate administrative tasks for reduced operational costs.
 5. Strengthen regulatory compliance with evolving health laws.
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3. Functional Requirements

3.1 Patient Portal

- AI-driven symptom checker and consultation suggestions.
- Secure blockchain-based medical record management.
- Automated appointment scheduling with doctor availability insights.
- Prescription tracking with predictive medication reminders.

3.2 Doctor Portal

- AI-assisted diagnostics and treatment recommendations.
- Predictive analytics for patient history evaluation.
- Real-time collaboration with other healthcare professionals.
- Integration with wearable health devices for live data insights.

3.3 Administration Module

- AI-driven patient flow and hospital resource optimization.
- Smart billing and invoice automation with fraud detection.
- Real-time insurance claim validation and tracking.
- Compliance monitoring using blockchain technology.

3.4 Third-Party Integrations

- IoT-based health monitoring devices (smartwatches, glucose monitors, etc.).
 - AI-driven virtual health assistants for 24/7 patient support.
 - Automated chatbot integration for appointment scheduling.
 - Cloud-based EHR system for interoperability across platforms.
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4. Non-Functional Requirements

- **AI Security:** Implement AI-driven fraud detection mechanisms.
- **Blockchain Scalability:** Ensure rapid transaction processing.
- **Enhanced Performance:** Reduce system response time to <1 second.
- **Future-Proof Compliance:** Adapt to emerging global health regulations.
- **Advanced UI/UX:** Leverage AI-driven personalized user interfaces.

5. Assumptions and Constraints

- The system will integrate AI and blockchain technologies for scalability.
 - Initial deployment will focus on AI-assisted urban hospitals and clinics.
 - Compliance with new healthcare regulations will be continuously monitored.
 - High-speed internet connectivity is essential for AI-driven real-time data processing.
 - User education programs will be required for AI adoption.
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6. Risk Management

Risk	Impact	Mitigation Strategy
AI Misdiagnosis	High	Implement AI validation layers with doctor approvals.
Data Breach	High	Enhance security with AI anomaly detection and blockchain storage.
Adoption Issues	Medium	Conduct extensive training for doctors and patients.

7. Project Timeline

Phase	Timeline	Deliverables
Requirements Gathering	3 Weeks	Revised BRD with AI & Blockchain
Design & Prototyping	5 Weeks	AI & UI/UX Mockups
Development	14 Weeks	AI Model, Blockchain, Web & App
Testing	5 Weeks	AI Validation, Security Audits
Deployment	3 Weeks	Pilot Launch & AI Optimization
Maintenance	Ongoing	Continuous AI Model Training

8. Approval

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Reviewed By:

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