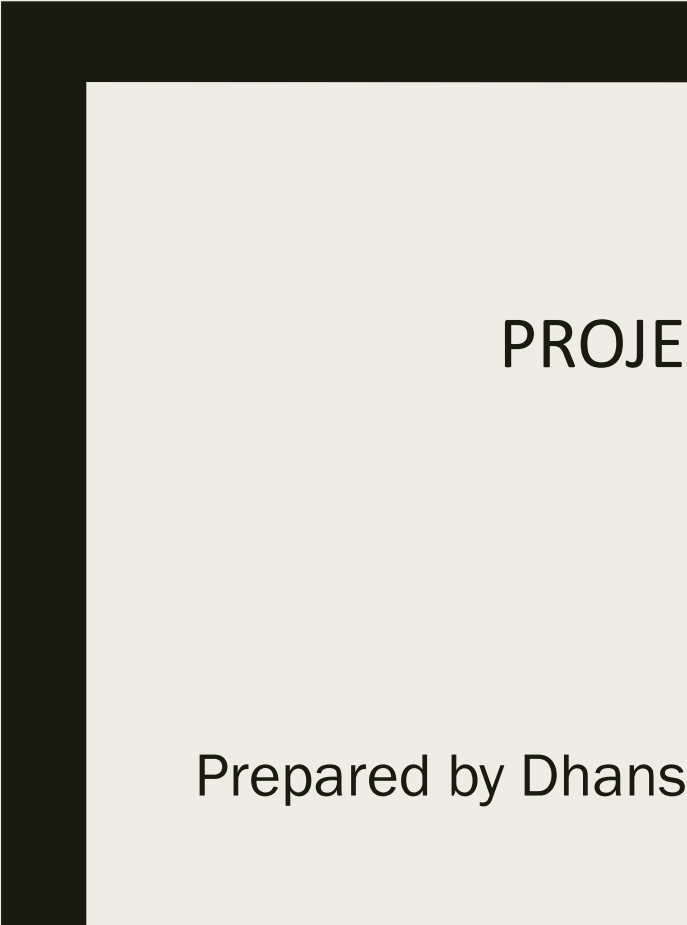
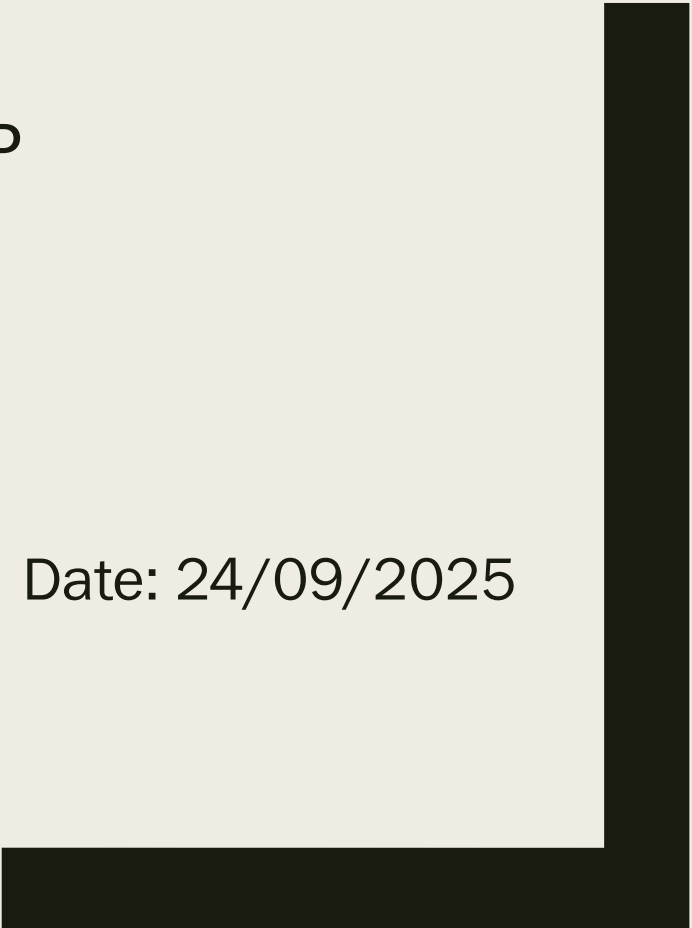




PROJECT TITLE : TELEMEDICINE APP

Prepared by Dhanshree Adbhaiya

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Situation

Growing demand for remote healthcare: Patients increasingly seek convenient, accessible care without visiting hospitals or clinics.

Digital transformation in healthcare: Hospitals and providers are adopting technology to streamline operations and improve patient engagement.

Post-pandemic normalization: COVID-19 accelerated telehealth adoption, and now it's becoming a standard expectation.

Regulatory support: Many governments and insurers are expanding coverage for virtual consultations.

Problems

- **Disconnected systems:** Many apps don't talk to hospital billing platforms, leading to manual work, billing errors, and delayed reimbursements.
- **Poor user experience:** Patients struggle with clunky interfaces, while doctors face workflow disruptions.
- **Security risks:** Sensitive health data is often poorly protected, raising compliance concerns.
- **Limited reach:** Low-bandwidth areas and non-English speakers are often left out.
- **Unclear ROI:** Hospitals hesitate to invest without clear financial or operational benefit

Opportunists

- **End-to-end integration**: Sync with hospital billing systems to ensure accurate claims, faster payments, and fewer disputes.
- **Smart scheduling & triage**: Help patients reach the right doctor at the right time, reducing no-shows and improving outcomes.
- **Adaptive UI/UX**: Design for all users—whether they're using a smartphone in Mumbai or a basic tablet in a remote village.
- **Built-in compliance**: Bake in HIPAA/GDPR safeguards and audit trails from day one.
- **Actionable insights**: Give hospitals dashboards that show usage, revenue impact, and patient satisfaction.
- **Scalable architecture**: Handle thousands of concurrent sessions without compromising speed or security.

Purpose Statement

The purpose of this project is to analyze, design, and implement a secure and user-friendly telemedicine application that enables remote healthcare delivery. The app will facilitate virtual consultations, integrate seamlessly with hospital billing systems, and support scalable, compliant workflows for both patients and providers. This initiative aims to enhance accessibility, reduce operational inefficiencies, and improve patient outcomes across diverse healthcare settings.

Goals

Develop a telemedicine platform that supports video, audio, and chat-based consultations.

Ensure seamless integration with hospital billing systems for accurate claims and reimbursements.

Design intuitive interfaces for both patients and healthcare providers, adaptable to varying levels of digital literacy.

Implement robust data security and compliance features aligned with HIPAA/GDPR standards.

Enable smart scheduling, triage, and follow-up mechanisms to optimize care delivery.

Support multilingual access and low-bandwidth environments to reach underserved populations.

Provide analytics dashboards for hospitals to monitor usage, revenue, and clinical performance.

Project Objectives

Solution selection according to design criteria, specifications, and requirements

Identify and select a telemedicine solution that aligns with clinical workflows, hospital billing systems, and user experience standards.

Solution prototyping and testing

Develop a functional prototype of the telemedicine app and conduct iterative testing with real users (patients and providers) to validate usability, performance, and compliance.

Integration with hospital billing and EMR systems

Ensure seamless interoperability with existing hospital infrastructure to support accurate claims processing, documentation, and care continuity.

Deployment and stakeholder training

Roll out the solution across target facilities and provide comprehensive training to healthcare staff, billing teams, and support personnel to ensure smooth adoption and usage.

Success Criteria

Enhanced accessibility of health records and documentation

By the end of key sprints, users (patients and providers) should be able to securely access medical records, consultation notes, billing forms, and collateral within 3 clicks or less. Accessibility improvements will be validated through usability testing and stakeholder demos.

Reduced system downtime and improved response times

System performance metrics—such as uptime, page load speed, and video session stability—will be tracked sprint by sprint. Success is defined as achieving 99.9% uptime and reducing average response time to under 2 seconds for core actions (e.g., login, record retrieval, billing submission).

Methods / Approach

Define vision and build cross-functional team

Assemble a product team including clinicians, billing experts, IT staff, and patient advocates. Align on the app's core purpose, target users, and success metrics.

Create and prioritize product backlog

Break down requirements into user stories—e.g., “As a patient, I want to book a video consult,” or “As a billing admin, I want to auto-generate claims.” Prioritize based on value, risk, and stakeholder input.

Sprint planning and iterative development

Organize work into short sprints (2–3 weeks). Each sprint delivers working features—starting with MVP essentials like secure login, video consults, and billing integration.

Continuous testing and stakeholder feedback

Conduct usability testing and demos at the end of each sprint. Gather feedback from doctors, patients, and billing teams to refine features and workflows.

User training and support readiness

Develop training materials and support channels in parallel with development. Use feedback loops to improve onboarding and helpdesk processes.

Go Live with phased rollout

Launch the app in stages—starting with pilot departments or regions. Monitor performance, collect metrics, and adapt based on real-world usage.

Resources

People

Agile team composed of:

Product Owner (from hospital/client side)

Scrum Master (from ITS or PMO)

2–3 Developers, 1 UI/UX Designer, 1 QA Tester

Clinical advisor and billing specialist for sprint reviews

Estimated Cost: ₹12,00,000 over 6 months (team salaries and consulting fees)

Time

Implementation planned over 6 months, structured into 12 sprints (2 weeks each), with continuous delivery and stakeholder feedback.

Budget

Hardware & Infrastructure: ₹5,00,000

Software Licenses & APIs (video consult, billing modules): ₹3,50,000

Training & Onboarding: ₹2,00,000

Implementation Services: ₹4,50,000

Total Budget Cap: ₹15,00,000

Other

Third-party software evaluation: ₹1,00,000

Site visits to pilot hospitals: ₹75,000

Reference materials (Dataquest reports, compliance guides): ₹25,000

Total Additional Expenses Cap: ₹2,00,000

Technology

Java

REACT.js

MySQL

Apache Kafka

Microsoft Azure

Google Cloud Platform

GitHub and GitLab

Jenkins (Automated Deployment)

Risks

Legacy system familiarity

The current solution has been in place for over **N years** and is intuitive to existing users. Transitioning to a new system may face resistance due to comfort with existing workflows.

Cost justification challenges

Improvements in usability, data quality, accessibility, and support efficiency are difficult to quantify in financial terms, making it hard for management to see clear ROI.

Integration complexity

Dependencies on EMRs, billing systems, and third-party APIs may introduce delays or technical challenges during sprints.

Compliance and data security risks

Any lapse in HIPAA/GDPR compliance could result in legal and reputational damage.

Connectivity and device limitations

Patients in low-bandwidth or rural areas may face challenges accessing the app reliably

Dependencies

Stakeholder engagement

Active participation from clinicians, billing staff, and IT teams is essential during sprint reviews and backlog grooming.

Third-party services

Reliable performance of video APIs (e.g., Twilio, WebRTC), billing engines, and cloud infrastructure is critical to core functionality.

Regulatory guidelines

Adherence to evolving healthcare regulations and data protection laws must be continuously monitored and embedded into sprint planning.

Training and change management

Timely training and support for users are necessary to ensure adoption and minimize disruption during rollout.

To Be Completed by Appropriate Manager

Kimaya hospital
Project Sponsor

Mr. Barbarik
Project Manager