

# PROJECT PROPOSAL: DIGITIZING HEALTHCARE

**Project Title: NUBMed, Digitizing Healthcare at Northern University**

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**Submitted by (Group C):**

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# PROJECT OVERVIEW

NUBMed is a cross-platform mobile application developed using Flutter, designed to introduce a modern and efficient healthcare management system at Northern University Bangladesh. Currently, there is no digital infrastructure in place to manage hospital operations at the university, which leads to manual processes, increased workload, and Fragmented information handling.

NUBMed aims to solve this gap by offering a unified mobile platform for managing patient data, booking doctor appointments, accessing medical reports, and streamlining hospital workflows. By bringing essential medical services to smartphones, this app sets the foundation for digitizing healthcare at NUB — making it faster, more organized, and accessible for everyone involved.

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## TECHNOLOGIES USED

Component	Tools & Frameworks
Frontend	Flutter (for Android & iOS)
Backend	Firebase (Authentication, Firestore, Functions)
Database	Cloud Firestore (via Firebase)

This combination allows us to develop a versatile, maintainable, and scalable mobile app with a reliable database backend.

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# PROPOSED FEATURES

- **Available Doctors** – View a list of on-duty and available doctors with their specialization and visiting hours.
- **Appointment Booking** – Patients or students can request and schedule appointments directly through the app.
- **Emergency Services** – Quick access to emergency contacts, nearest ambulance availability, and urgent care instructions.
- **Lab Test** – Users can view available lab tests, pricing, and submit requests or see test results (future feature).
- **Blood Bank** – A system for blood donation and sharing, allowing users to request or offer blood based on group and urgency.
- **Medicine** – View prescribed medicines, with names, dosages, and instructions from doctors; future support for refill reminders.
- **Health Tips** – Regularly updated wellness tips, news, and preventive health advice tailored for students and general users.
- **History** – Access to personal appointment history, lab test records, prescriptions, and previous interactions for quick reference.
- **Support / Feedback** – Allows users to contact support or share feedback and suggestions for improving the app experience.

**Potential Additions** may include features like prescription uploads, individual login access for doctors and patients, health report tracking, online consultation modules, and admin analytics for hospital activities.

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## WHAT WE AIM TO DO?

In our university, most hospital-related tasks are still handled manually, with no centralized digital system in place. This often results in delays, communication-errors, and difficulty in tracking patient information or managing appointments effectively.

We chose to work on this project to solve that problem. Our goal is to bring all essential hospital operations—like patient records, appointments, prescriptions, and reports—into one mobile app. This will help save time, reduce errors, and make communication between patients, doctors, and staff much smoother and more organized. It's our small step toward making healthcare at NUB more efficient and tech-friendly.

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### PROJECT TIMELINE

Week	Planned Activities
Week 1	Finalizing project topic and organizing the team
Week 2	Designing the user interface and app layout
Week 3	Implementing user authentication and login features
Week 4	Creating and structuring the Firestore
Week 5	Connecting the app with the database backend

Week	Planned Activities
Week 6	Testing the application and fixing bugs
Week 7	Preparing the final report and project presentation

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## EXPECTED DELIVERABLES

- A fully functional, cross-platform **Healthcare Management System** app
  - Source code files (**Flutter project**)
  - Firebase configuration and **Firestore database structure**
  - Project **documentation/report** (PDF or DOC)
  - Final **presentation slides** (PowerPoint format)
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## PROJECT WRAP-UP

With this project, we aimed to build a simple yet effective hospital management app for Northern University Bangladesh, where no digital system currently exists. Developing it using Flutter helped us improve our cross-platform app development skills while focusing on solving a real problem.

Our goal was to make the system user-friendly, organized, and useful for both students and medical staff. While it's still a student project, we believe it has the potential to grow with more features in the future. We're proud of what we've built so far and look forward to improving it further in the next phases.