Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	29th January 2025
Team ID	SWUID20250152937
Project Name	DocSync
Maximum Marks	4 Marks

Functional Requirements:

The following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Authentication & Management	Patient registration and profile management Doctor registration with credential verification Admin dashboard for user management Role-based access control Password recovery and account management
FR-2	Doctor Discovery & Selection	Searchable doctor directory Advanced filtering options< Detailed doctor profiles with specialties, qualifications Ratings and review system Favourites/bookmarking capability
FR-3	Appointment Management	Calendar-based scheduling system Real-time availability display Multiple appointment types Rescheduling and cancellation functionality Waiting list for popular doctors
FR-4	Communication System	Automated email/SMS notifications Appointment reminders In-app messaging between patients and doctors Notification preferences management Video consultation capability
FR-5	Medical Records	Secure storage of patient medical history Document upload functionality Visit history tracking Prescription management Lab result sharing
FR-6	Payment Processing	Multiple payment methods Insurance information management Invoice generation Refund processing Payment history tracking

FR-7	Reviews & Feedback	Post-appointment review submission Rating system for doctors Review moderation Response capability for doctors Reputation management tools

Non-functional Requirements:

The following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The system must have an intuitive, responsive design with accessibility compliance. It should support multiple languages, follow a mobile-first approach, and require minimal steps for core functions to ensure ease of use for all users.
NFR-2	**Security**	The system must be HIPAA compliant for patient data protection, implement end-to-end encryption for sensitive information, provide secure authentication with MFA options, undergo regular security audits, and ensure data encryption both at rest and in transit.
NFR-3	**Reliability**	The system must guarantee 99.9% uptime, implement robust data backup and recovery procedures, handle errors gracefully, include failover mechanisms to prevent service interruptions, and maintain comprehensive logging for troubleshooting.
NFR-4	**Performance**	The system must achieve page load times under 3 seconds, support 1000+ concurrent users without degradation, process database queries in under 200ms, and provide smooth functionality on mobile devices even with 3G+ connections.
NFR-5	**Availability**	The system must be accessible 24/7 with planned maintenance windows clearly communicated to users in advance. It should implement redundant systems to minimize downtime and provide status updates during any service interruptions.
NFR-6	**Scalability**	The system architecture must support horizontal scaling, implement database sharding for growing data volumes, utilize caching mechanisms for improved performance, follow microservices architecture principles, and incorporate load balancing to distribute traffic efficiently.