Project Design Phase-II

Solution Requirements (Functional & Non-functional)

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| Date | 21 March 2025 |
| Team ID | SWTID1744456946 |
| Project Name | MediBoard |
| Maximum Marks | 4 Marks |

# Functional Requirements:

Following are the functional requirements of the proposed solution.

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| **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:

Following are the non-functional requirements of the proposed solution.

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| **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. |