Hospital System Function Requirements

| ID | Category | Requirement | Justification |
| --- | --- | --- | --- |
| FR1 | M | The system must store patient details (name, age, gender, contact, address). | Core for patient management. |
| FR2 | M | The system must record doctor information (specialization, availability, contact). | Needed for appointments and scheduling. |
| FR3 | M | The system must register appointments between patients and doctors. | Fundamental operation in hospitals. |
| FR4 | M | The system must manage patient medical history. | Enables continuity of care. |
| FR5 | M | The system must store prescriptions and medications per patient. | Supports pharmacy and patient treatment. |
| FR6 | M | The system must track room and bed availability. | Required for inpatient management. |
| FR7 | M | The system must record admissions and discharges. | Vital for hospital operations. |
| FR8 | M | The system must store billing and payment details. | Needed for finance and reporting. |
| FR9 | M | The system must support user login for doctors, nurses, and admins. | Controls data access. |
| FR10 | S | The system should link lab results to patient records. | Enhances data accuracy. |
| FR11 | S | The system should generate patient discharge summaries. | Improves workflow efficiency. |
| FR12 | C | The system could send appointment reminders via email/SMS. | Convenience feature. |
| FR13 | S | The system should allow report generation (daily, monthly). | Helps in management decisions. |
| FR14 | M | The system must support search and filtering for patients and doctors. | Speeds up data retrieval. |
| FR15 | M | The system must ensure referential integrity among all tables. | Prevents data loss and errors. |
| FR16 | C | The system could store insurance details for patients. | Helpful for billing and claims. |
| FR17 | S | The system should maintain audit logs of database changes. | Supports accountability. |
| FR18 | M | The system must record nurse and staff details. | Essential for internal management. |
| FR19 | S | The system should allow exporting patient data reports (PDF/Excel). | Facilitates external analysis. |
| FR20 | W | The system won’t integrate with external hospital APIs in the current version. | Deferred for later upgrade. |

Hospital System non-functional requirements

| **ID** | **Category** | **Requirement** | **Justification** |
| --- | --- | --- | --- |
| NFR1 | M | **Performance:** Queries should return results within 3 seconds. | Ensures smooth use in real-time operations. |
| NFR2 | M | **Security:** All patient data must be encrypted. | Protects sensitive information. |
| NFR3 | S | **Reliability:** The database should have automatic daily backups. | Prevents data loss. |
| NFR4 | S | **Scalability:** Should handle up to 10,000 concurrent records. | Future-proofing the system. |
| NFR5 | C | **Usability:** Data entry forms should be simple and validated. | Reduces human error. |