**Non-functional requirements:**

**8.1 Availability Requirements**

**8.1.1 NFR** - System must be available 99% of the time outside of scheduled maintenance.

**8.2 Compatibility Requirements**

**8.2.1 NFR** - System must be compatible with different operating systems, such as Windows, macOS, Linux, and mobile operating systems like iOS and Android.

**8.2.2 NFR** - System must be compatible with device types, including desktop computers, laptops, tablets, and smartphones.

**8.3 Reliability Requirements**

**8.3.1 NFR** - System must install any available software updates nightly to remain up to date.

**8.3.2 NFR** - System must install any available software updates nightly to remain up to date. The system must have failover mechanisms to ensure continuous functioning of the website in case of software failures.

**8.4 Scalability Requirements**

**8.4.1 NFR** - System must be able to handle a large volume of concurrent users without affecting performance or availability.

**8.4.2 NFR** - System must have a caching mechanism that stores frequently accessed data and pages, reducing the load on the database and speeding up page load times.

**8.5 Interoperability Requirements**

**8.5.1 NFR** - System should be able to integrate with other existing hospital systems such as laboratory equipment, billing systems, and electronic health record (EHR) systems.

**8.5.2 NFR** - The system should support industry-standard data exchange formats and protocols for seamless interoperability.

**8.6 Security Requirements**

**8.6.1 NFR** - The system should have robust security measures to protect sensitive patient data and maintain patient privacy.

**8.6.2 NFR** - System should include authentication mechanisms, access controls, encryption, and audit logs to prevent unauthorized access or data breaches.

**8.7 Performance Requirements**

**8.7.1 NFR** - The system should be capable of handling a large number of concurrent users and high volumes of data without significant performance degradation.

**8.7.2 NFR** - Response times should be within acceptable limits to ensure efficient user interactions.

**8.8 Maintainability Requirements**

**8.8.1 NFR** - The system should be designed in a modular and extensible manner, facilitating easy maintenance, upgrades, and bug fixes.

**8.8.2 NFR** - Changes to the system should be manageable and should not disrupt the overall functionality.