Requirements

The document provides sample of hospital management system for software requirement engineering.

Functional requirements:

The functional requirements for a system describe what the system should do. In principle, the functional requirements specification of a system should be both complete and consistent.

- **Patient management**: The system should allow for the registration, admission, discharge, and transfer of patients, as well as the management of their medical records.
- **Appointment scheduling**: The system should enable patients to schedule appointments with doctors or specialists.
- **Staff management**: The system should allow for the management of hospital staff, including doctors, nurses, and administrative personnel.
- **Inventory management**: The system should allow for the management of hospital supplies, including medicines, medical equipment, and consumables.
- **Billing and insurance**: The system should provide functionality for the generation and management of invoices and support for insurance claims.

Non Functional Requirements

The non-functional requirements are not directly concerned with the specific functions delivered by the system. They may specify system performance, security, availability, and other emergent properties.

- **Security**: The system should ensure the privacy and security of patient information and comply with relevant regulations such as HIPAA.
- **Performance**: The system should be able to handle large volumes of data and traffic and provide fast response times to users.
- **Reliability**: The system should be reliable and available 24/7, with backup and disaster recovery systems in place.
- **Usability**: The system should be easy to use and intuitive for users, with clear navigation and a user-friendly interface.
- **Scalability**: The system should be scalable to accommodate the hospital's growth and changing needs, with the ability to handle increasing data volumes and users.

Business Requirement

Business requirements are an outline description of the system and how the system is intended to support business processes.

- **Cost-effectiveness**: The system should provide cost-effective solutions for the hospital's administrative and clinical operations, resulting in cost savings for the hospital.
- **Compliance**: The system should comply with all relevant regulations, as well as any industry standards and best practices.

- **Workflow optimization**: The system should optimize hospital workflows and reduce inefficiencies, resulting in increased productivity and improved patient care.
- **Integration**: The system should integrate with existing hospital systems and technologies.
- **Customization**: The system should be customizable to meet the unique needs of the hospital, such as specific workflows, reports, and data analysis.

Business rules:

Business rules are specific rules that govern the behavior of a software system in relation to the business processes and policies of an organization.

- **Access control**: The system should have access control mechanisms to ensure that only authorized personnel have access to sensitive patient information.
- **Data validation**: The system should perform data validation checks to ensure that entered data is accurate and consistent.
- **Workflow rules**: The system should have predefined workflows for specific tasks, such as patient admission and discharge, to ensure that hospital staff follows standardized procedures.
- **Billing rules**: The system should have predefined billing rules to ensure that patients are billed accurately and in a timely manner.
- **Compliance rules**: The system should have predefined compliance rules to ensure that the hospital complies with all relevant regulations and laws.

User requirements:

User requirements reflect the specific needs or expectations of the software's customers.

- **User-friendly interface**: The system should have a user-friendly interface that is easy to navigate for healthcare providers and other users.
- **Mobile access**: The system should be accessible via mobile devices, allowing healthcare providers to access patient information and manage appointments on the go.
- **Patient management**: The system should be able to manage patient information, including demographics, medical history, diagnoses, and treatments.
- **Appointment scheduling**: The system should allow patients to book appointments with healthcare providers, and healthcare providers should be able to view their schedules and manage appointments.
- **Electronic health records (EHRs)**: The system should be able to store, retrieve, and share patient medical records securely.
- **Reporting and analytics**: The system should provide reports and analytics that allow healthcare providers and hospital administrators to make informed decisions.

Physical product Requirements:

- Backup and storage devices
- Mobile devices
- Computer hardware
- Networking equipment

- Peripheral devices

External interfaces

- **User interfaces**: graphical user interfaces (GUIs), command-line interfaces (CLIs), or voice recognition systems.
- **Application programming interfaces (APIs)**: interfaces through which the software system interacts with other software applications or services, such as web services, databases, or third-party software components
- **Network interfaces**: These are the interfaces through which the software system communicates over a network, such as through protocols like TCP/IP or HTTP.
- **Device interfaces**: These are the interfaces through which the software system interacts with external hardware devices, such as sensors, actuators, or data acquisition systems.
- **File interfaces**: These are the interfaces through which the software system reads and writes files, such as text files, spreadsheets, or databases.

Development constraints

- Budget constraints
- Time constraints
- Resource constraints
- Technical constraints
- Regulatory constraints

Wireframes

Wireframes are visual representations of a software system's user interface that depict the layout and functionality of different screens or pages.

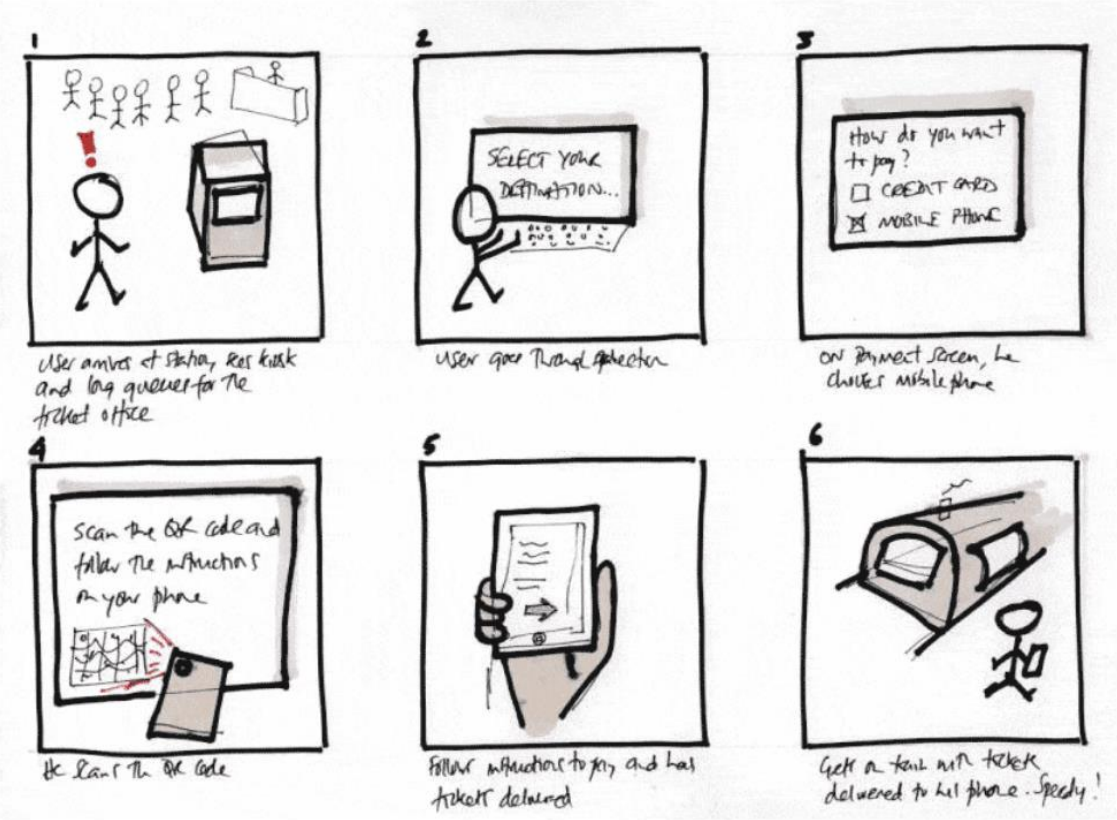
- Login screen
- Dashboard
- Patient information screen
- Appointment scheduling screen
- Billing and payment screen
- Complaint screen

High Level and Low Level Story Boards

A storyboard is an illustrated, step-by-step presentation describing how people will perform a target activity using your new product concepts.

- Low-level storyboarding typically involves a high degree of specificity and detail, with a focus on individual features and functions.
- High-level storyboarding is used to create a rough outline of the product and its major components, without going into detail about specific features or functions.

Storyboard example



Storyboard example: ticket purchase process by User Experience.