Use Case diagram description of Hospital management system

    A use case diagram provides a high-level overview of the functionalities and interactions of a system from the perspective of its users. In the context of a Hospital Management System, the use case diagram outlines the various actions or tasks that different users (actors) can perform perform within the system. Here's a description of the main components and interactions in a Hospital Management System use case diagram.

Actors:

Patient: Represents individuals who seek medical assistance or treatment from the hospital.

Doctor: Refers to the healthcare professionals responsible for diagnosing and treating patients.

Nurse: Represents the nursing staff responsible for patient care and support

Administrator: Manages the overall functioning of the hospital system, including user roles, permissions, and system configurations.

Use Cases:

Register/Login:
Actors: Patient, Doctor, Nurse, Administrator
Description: Users should be able to register or log in to the system based on their roles of access prof personalized features.

Schedule Appointment :
Actors: Patient, Doctor
Description: Patients can request appointments, and doctors can schedule or reschedule appointments.

Admit / Discharge Patient :
Actors : Administrator, Nurse
Description: The administrator and nursing staff can admit or discharge patients from the hospital

Manage Inventory:
Actors: Administrator
Description: The administrator can manage the inventory of medical supplies and equipment.

Associations:
Relationships between actors and use cases are represented by lines connecting them

System Boundary:
'The boundary of the use case diagram represents the scope of the Hospital Management System.

This use case diagram provides a visual representation of the key functionalities and interactions within a Hospital Management System, offering a clear understanding of how different uses interact with the system to perform specific tasks.

Activity diagram description of Hospital Management System:

An activity diagram for a Hospital Management system illustrates the flow of activities and actions within the system to achieve specific goals. Below is a description of the main components and activities in an activity diagram for a Hospital Management System.

Patient Registration Process:

Activities:

Input patient information

Verify patient details.

Create a patient record

Flow: Starts when a patient arrives at the hospital. Ends when the patient registration is complete. and a patient record is created.

Patient admission process:

Activities:

Admin patient

Assign room

Record admission details

Flow: Triggered when a patient arrives for admission. Includes assigning a room and recording admission details. Ends when the patient is successfully admitted.

Nursing Care Process:
Activities:
Patient monitoring
Medication administration
Record patient status.
Flow: Initiated by nursing staff responsible for patient care.
Involves monitoring the patient, administering medications, and updating patient records.
Ends when the nursing care tasks are complete.

Inventory Management Process:
Activities:
Monitor inventory levels
Reorder supplies.
Update inventory records.
Flow: Initiated by the administrator responsible for managing inventory.
Involves monitoring levels, reordering supplies, and updating inventory records.
Ends when the inventory management tasks are complete.
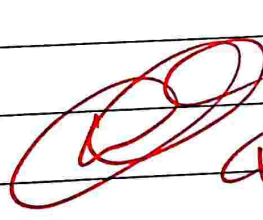
System Maintenance Process:
Activities:
Regular updates
Security checks.
Backup procedures

Flaw: Represents routine maintenance tasks carried out by the system administrator
Involves activities such as software updates, security checks, and data backups.
Ends when the system maintenance tasks are completed.

These activity diagrams provide a visual representation of the sequential and parallel activities within the Hospital Management system, showcasing the flow of actions from the initiation of various processes to their completion.

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