

NATIONAL UNIVERSITY OF COMPUTER AND EMERGING SCIENCES
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SDA Assignment 2
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Logical View:

In the logical view, the key components include:

1. **User Interface Layer:** This layer consists of interfaces for different users such as patients, doctors, nurses, receptionists, pharmacists, lab assistants, and cashiers.
2. **Application Layer:** This layer contains modules for patient registration, appointment booking, patient management, doctor scheduling, prescription management, examination management, test result management, medicine management, and billing.
3. **Data Layer:** This layer manages the data storage and retrieval. It includes the database schema for storing information related to patients, doctors, appointments, prescriptions, tests, medicines, and billing.

Physical View:

The physical view describes the deployment of the system components across different hardware resources. It includes:

1. **Client Devices:** These include mobile phones, tablets, and computers used by patients and hospital staff to access the HMS web application.
2. **Server Infrastructure:** This consists of web servers, application servers, and database servers hosted either on-premises or on cloud platforms.
3. **Network Infrastructure:** This includes routers, switches, and other networking equipment facilitating communication between client devices and server infrastructure.

Development View:

The development view focuses on the software development aspects of the system. It includes:

1. **Programming Languages and Frameworks:** Selection of programming languages (Like Java, Python, C , Cpp) and frameworks (Like React) for building different components of the HMS.
2. **Development Tools:** IDEs like vs code, IJ , CL & version control systems (e.g., Git), and collaboration tools used by development teams.
3. **Development Process:** Agile methodologies like Scrum, Kanban and practices such as continuous integration and continuous deployment (CI/CD) used during software development.

Process View:

The process view describes the runtime behavior of the system, focusing on how different components interact to fulfill user requests. It includes:

1. **User Interaction Flows:** Sequence diagrams illustrating the interactions between users and system components for various use cases such as patient registration, appointment booking, prescription management, and billing.
2. **Concurrency and Parallelism:** Identification of concurrent and parallel processes within the system to ensure efficient utilization of resources and responsiveness.

Scenario View:

In assignment 1 i already uploaded the use cases and swim-lane diagram of this scenario.

NOTE:

I try to make every diagram for all the views for 2 reason to for my practice and for your better understanding