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S No.	**Category**	**Code**	Name of Experiment	Date of **Allotment**	Date of **Evaluation**	**Max. Marks**	**Marks obtained**	**Sign.** of **Faculty**
1.		LR (10)	To formulate the problem statement for Hospital Management System	09/01/2023	23/01/2023	1		
2.			Class Diagram in UML for Hospital Management System	23/01/2023	30/01/2023	1		
3.			Use Case Diagram in UML for Hospital Management System	30/01/2023	06/02/2023	1		
4.			State Diagram in UML for Hospital Management System	06/02/2023	13/02/2023	1		
5.			Object Diagram in UML for Hospital Management System	13/02/2023	20/02/2023	1		
6.			Activity Diagram in UML for Hospital Management System	20/02/2023	27/02/2023	1		
7.			Sequence Diagram in UML for Hospital Management System	27/02/2023	06/03/2023	1		
8.			Collaboration Diagram in UML for Hospital Management System	06/03/2023	13/03/2023	1		
9.			Component Diagram inUML for Hospital Management System	13/03/2023	20/03.2023	1		
10.			Deployment Diagram in UML for Hospital Management System	20/03/2023	27/03/2023	1		

EXPERIMENT 7

Date: **27/02/2023**

Objective: Sequence Diagram in UML for Hospital Management System

Software Used: StarUML / Visual Paradigm

Theory:

A sequence diagram is a type of interaction diagram because it describes how—and in what order—a group of objects works together. These diagrams are used by software developers and business professionals to understand requirements for a new system or to document an existing process. Sequence diagrams are sometimes known as event diagrams or event scenarios.

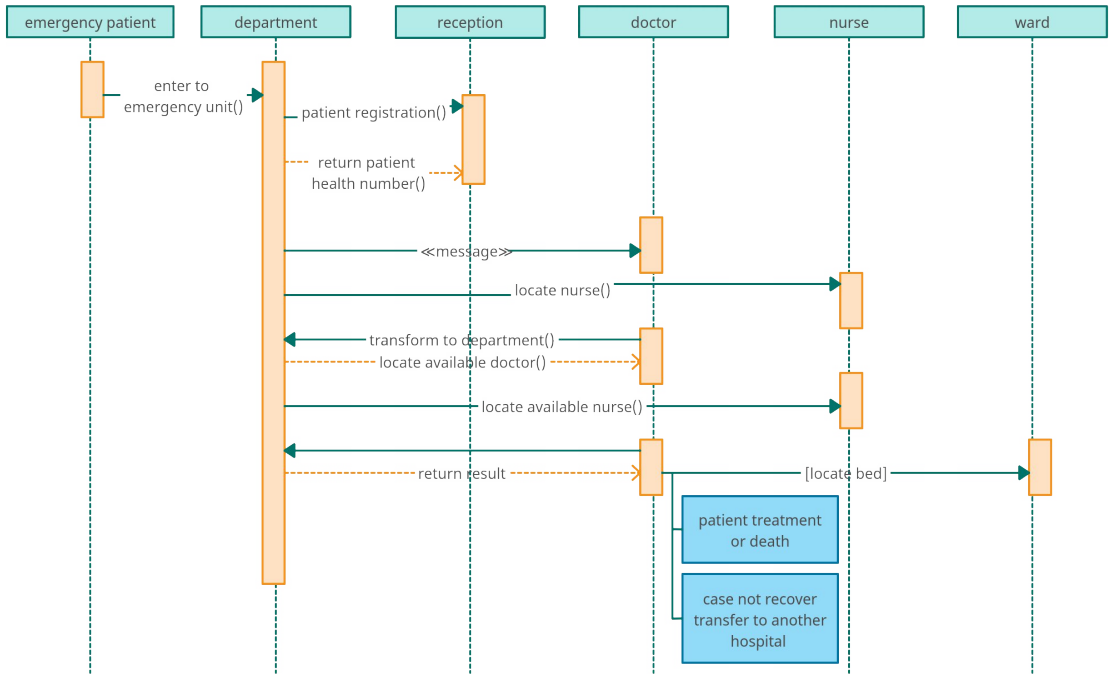
Purpose of a sequence diagram:

a. The sequence diagram is used primarily to show the interactions between objects in the sequential order that those interactions occur. Much like the class diagram, developers typically think sequence diagrams were meant exclusively for them.

b. However, an organization's business staff can find sequence diagrams useful to communicate how the business currently works by showing how various business objects interact. Besides documenting an organization's current affairs, a business level sequence diagram can be used as a requirements document to communicate requirements for a future system implementation.

c. During the requirements phase of a project, analysts can take use cases to the next level by providing a more formal level of refinement. When that occurs, use cases are often refined into one or more sequence diagrams.

Sequence Diagram:



Internal Assessment (Mandatory Experiment) Sheet for Lab ExperimentDepartment of Computer Science & Engineering
Amity University, Noida (UP)

Programme	B. Tech CSE	Course Name	Software Engineering
Course Code	[IT-301]	Semester	6
Student Name	Suchinton Chakravarty	Enrollment No.	A2345920063
	Marking Criteria		
Criteria	Total Marks	Marks Obtained	Comments
Concept (A)	2		
Implementation (B)	2		
Performance (C)	2		
Total	6		

EXPERIMENT 8

Date: **06/03/2023**

Objective: To design a collaboration diagram for Hospital Management System

Software Used: StarUML / Visual Paradigm

Theory:

collaboration diagram, also known as a communication diagram, is a type of interaction diagram that depicts the objects and messages exchanged between them in a system. In the context of a Hospital Management System, a collaboration diagram can be used to illustrate the interactions between the different objects in the system, such as records, patients, doctors, and the central database.

Here are some possible components and interactions that could be depicted in a collaboration diagram for a Hospital Management System:

1. Objects: Books, Borrowers, Librarians, Library Database

2. Messages/Interactions:

Purpose of a collaboration diagram:

The purpose of a collaboration diagram for a library management system is to provide a clear understanding of how different components of the system interact with each other to achieve the desired functionality. It can help to identify potential bottlenecks or areas where improvements can be made to optimize the system's performance. Additionally, a collaboration diagram can serve as a useful communication tool for developers, designers, and stakeholders to discuss and refine the system's design and functionality.

The main purposes of a collaboration diagram are:

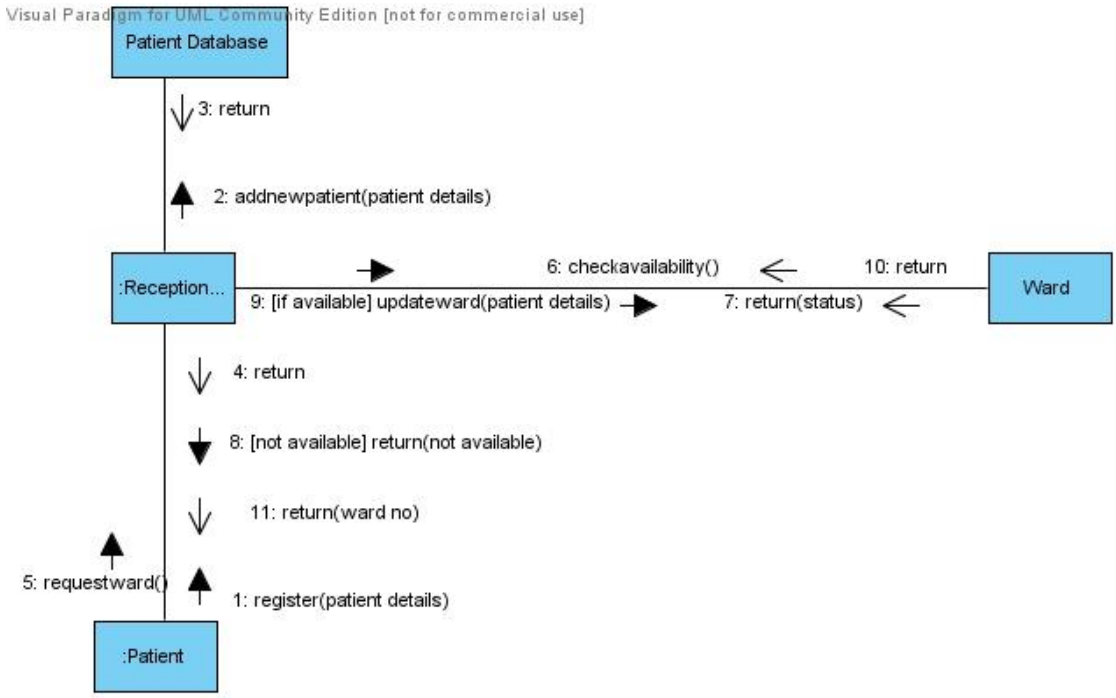
1. Illustrating interactions: Collaboration diagrams help to visualize the interactions between objects or components in a system.

2. Identifying issues: By analyzing the interactions depicted in the collaboration diagram, potential issues or bottlenecks in the system can be identified.

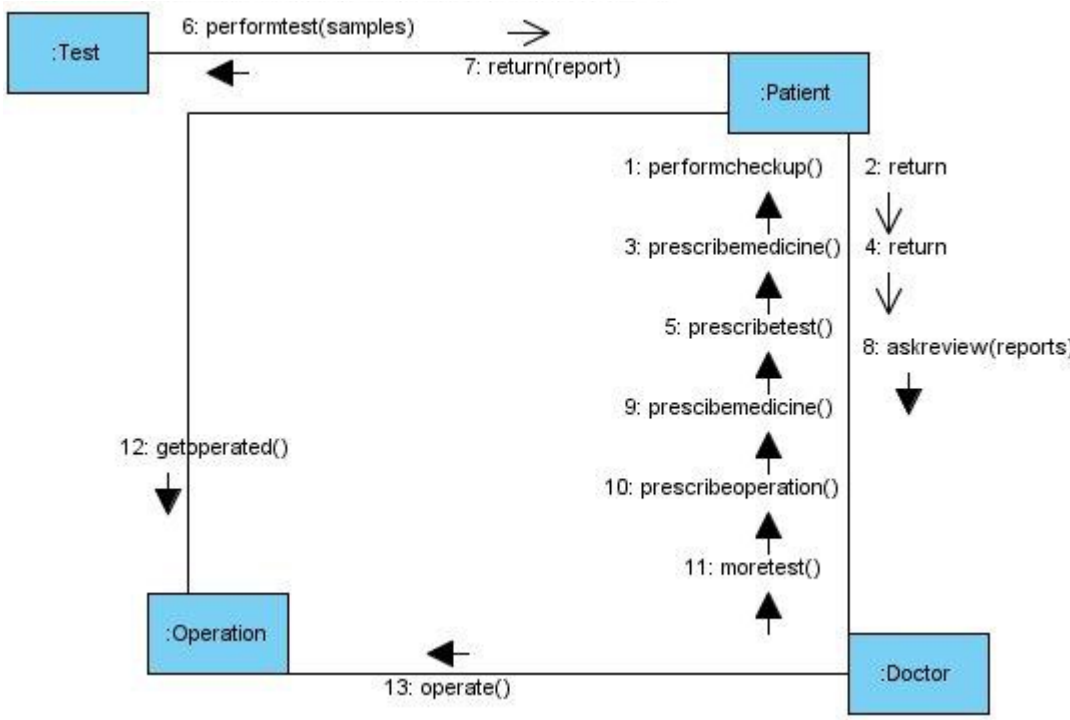
3. Communication tool: Collaboration diagrams can serve as a useful communication tool for developers, designers, and stakeholders to discuss and refine the system's design and functionality. They can also be used to document the system's design for future reference.

Collaboration Diagram:

1) Collaboration Diagram Admit to Hospital:



2) Collaboration Diagram for Treatment at Hospital:



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	Marking Criteria		
Criteria	Total Marks	Marks Obtained	Comments
Concept (A)	2		
Implementation (B)	2		
Performance (C)	2		
Total	6		

EXPERIMENT 9

Date: 13/03/2023

Objective: To design a component diagram for Hospital Management System

Software Used: StarUML / Visual Paradigm

Theory:

A component diagram is a type of UML (Unified Modeling Language) diagram that shows the components of a system and their relationships. It is used to represent the physical structure of a system, including the components that make up the system, their interfaces, dependencies, and interactions.

a. User Interface Component: This component is responsible for presenting the user interface to the library patrons, including the ability to search for books, reserve books, and manage their account information.
b. Book Catalog Component: This component manages the book catalog and associated information, including book titles, authors, ISBN numbers, and availability status.
c. User Account Component: This component manages user accounts, including user authentication, personal information, and loan history.

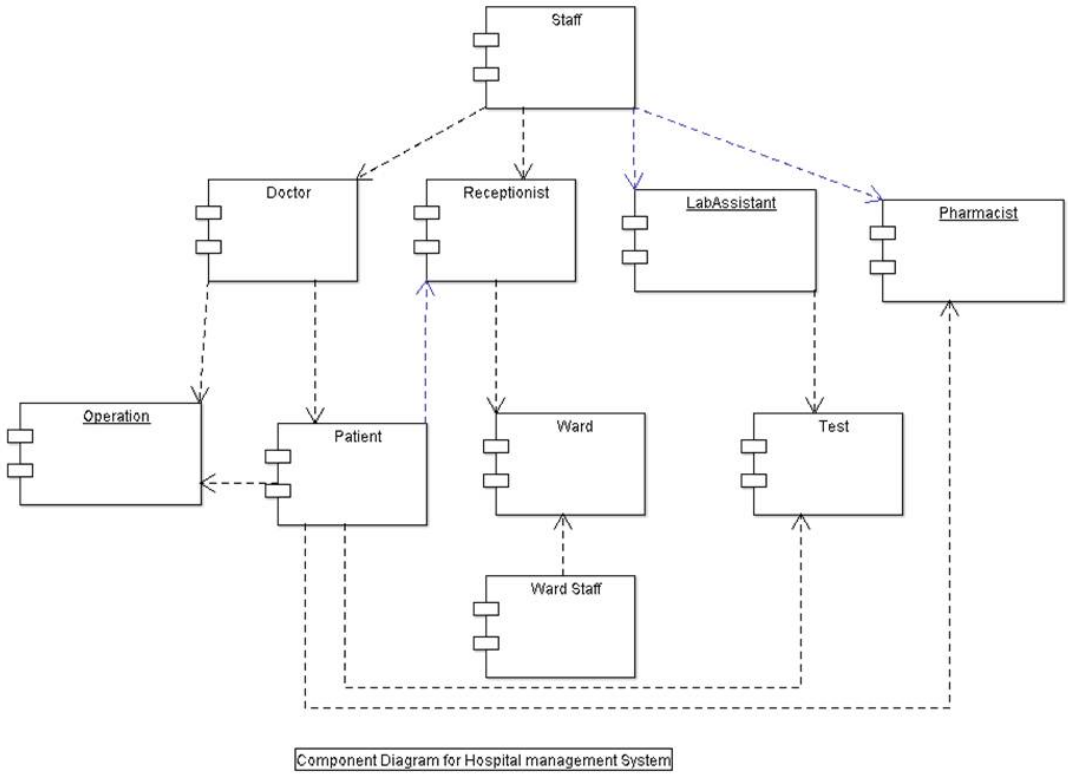
Purpose of a component diagram:

The purpose of a component diagram for a Library Management System is to provide a visual representation of the system's architecture and the components that make up the system. It is used to show the relationship between the various components of the system, their interfaces, and dependencies.

The component diagram can help the software development team to:

a. Understand the system's architecture: The diagram can be used to understand the different components that make up the Library Management System and how they are related to each other.
b. Identify the components that need to be developed: The diagram can help identify the components that need to be developed for the system, as well as the interfaces and dependencies that need to be defined between them.
c. Plan system maintenance and upgrades: The diagram can be used to plan system maintenance and upgrades, as it shows the dependencies between components and the potential impact of changes on the system.

Component Diagram:



Component Diagram for Hospital management System

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Amity University, Noida (UP)

Programme	B. Tech CSE	Course Name	Software Engineering
Course Code	[IT-301]	Semester	6
Student Name	Suchinton Chakravarty	Enrollment No.	A2345920063
	Marking Criteria		
Criteria	Total Marks	Marks Obtained	Comments
Concept (A)	2		
Implementation (B)	2		
Performance (C)	2		
Total	6		

EXPERIMENT 10

Date: 20/03/2023

Objective: To design a deployment diagram for Hospital Management System

Software Used: StarUML

Theory:

A deployment diagram for a Library Management System is a type of UML diagram that shows the physical deployment of the software components of the system on hardware devices. The deployment diagram represents the topology of the hardware and software components of the system and the connections between them.

In a deployment diagram for a Library Management System, the following components can be included:

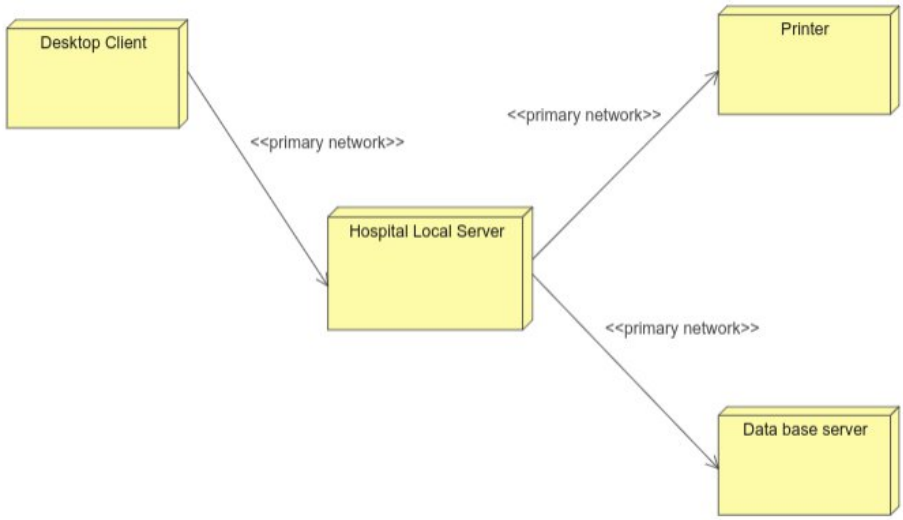
a. Client devices: This component represents the devices used by the library patrons to access the system, such as desktop computers, laptops, tablets, or mobile phones.
b. Server: This component represents the server that hosts the software components of the Library Management System, including the web server, application server, and database server.
c. Database: This component represents the database that stores the data related to the Library Management System, including the book catalog, user accounts, and loan records.

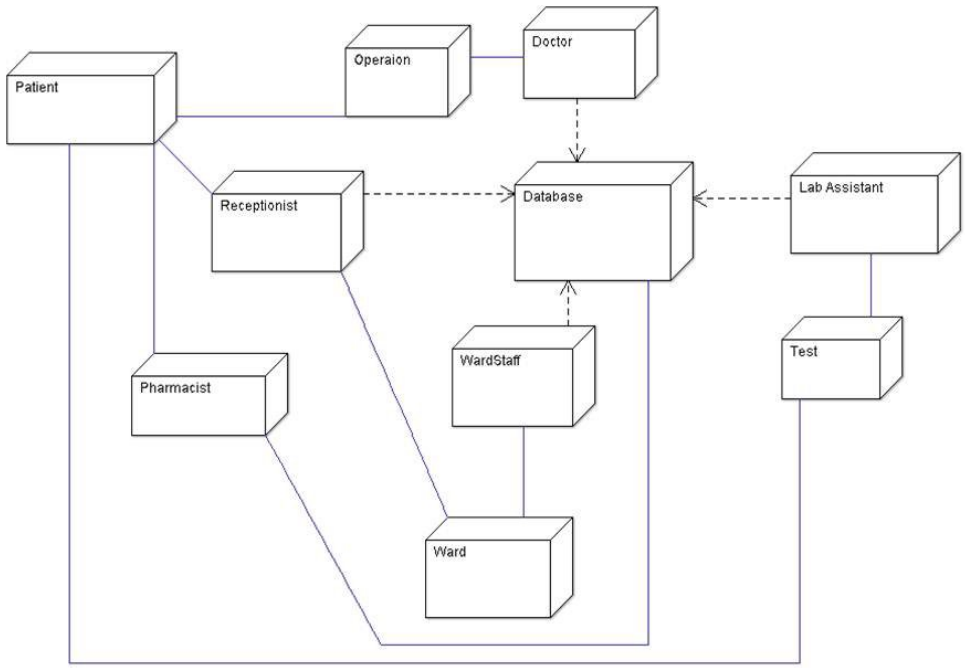
Purpose of a Deployment diagram:

The Deployment diagram can help the software development team to:

a. Understand the physical architecture of the system: The diagram can help to understand how the various software components of the system are deployed on hardware devices, and how they are connected and interact with each other.
b. Identify potential performance and scalability issues: The diagram can be used to identify potential performance and scalability issues, such as bottlenecks or overloaded servers, that may arise when the system is used by multiple users.
c. Plan system maintenance and upgrades: The diagram can be used to plan system maintenance and upgrades, as it shows the dependencies between components and the potential impact of changes on the system.

Deployment Diagram:





Internal Assessment (Mandatory Experiment) Sheet for Lab ExperimentDepartment of Computer Science & Engineering
Amity University, Noida (UP)

Programme	B. Tech CSE	Course Name	Software Engineering
Course Code	[IT-301]	Semester	6
Student Name	Suchinton Chakravarty	Enrollment No.	A2345920063
	Marking Criteria		
Criteria	Total Marks	Marks Obtained	Comments
Concept (A)	2		
Implementation (B)	2		
Performance (C)	2		
Total	6		

Internal Assessment (Viva Component) Sheet for Lab Experiment **Department of Computer Science & Engineering** **Amity University, Noida (UP)**			
Programme	B. Tech CSE	Course Name	Software Engineering
Course Code	[IT301]	Semester	6
Student Name	Suchinton Chakravarty	Enrollment No.	A2345920063
Marking Criteria			
Criteria	**Total Marks**	**Marks Obtained**	**Comments**
Clarity of the Subject (H)	2		
Quality of theoretical Discussion (I)	3		
Total	5		