

## OBJECT-ORIENTED MODELLING (OOM) - 32536

### MODULE 5

**Sequence & Collaboration Diagram;  
Interaction Overview Diagram;**  
(POOA- Chapter 7; POOD – Chapter 4)

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## Sequence diagram...

- A dynamic-behavioural diagram
- Dynamic interactions between collaborating objects in the system
- Represent a scenario in the system
- Show a set of collaborating objects, messages passing between them, and timing

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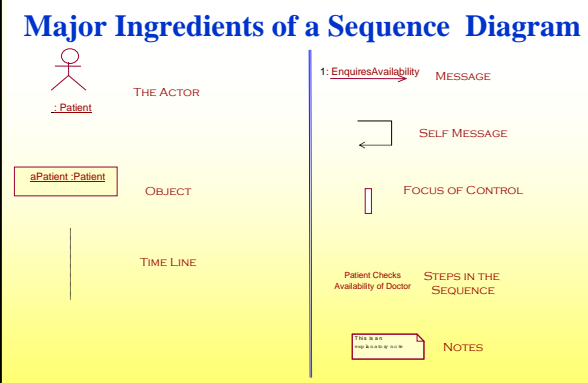
## Module Outline

- Major Ingredients of Sequence Diagram
- Importance and Relevance of Sequence Diagram in Practice
  - Separately used in Analysis and Design
- Discussion on Collaboration Diagrams
- Interaction Overview Diagrams

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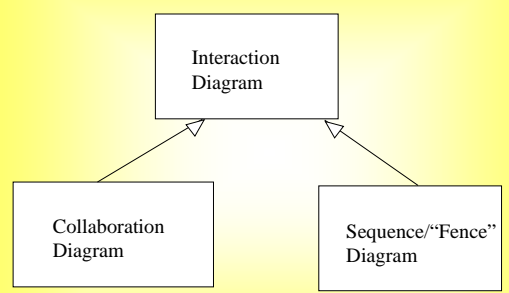
## Major Ingredients of a Sequence Diagram



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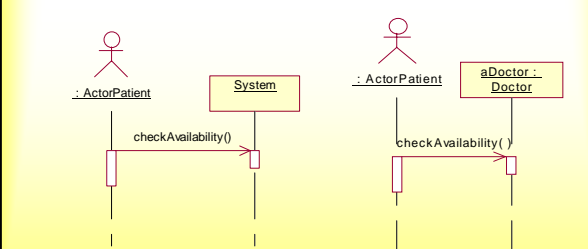
## Interaction diagrams



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## A Basic Sequence Diagram



**Sequence Diagrams show the instance level Sequence of Interactions between Objects, System and, occasionally, Actors**

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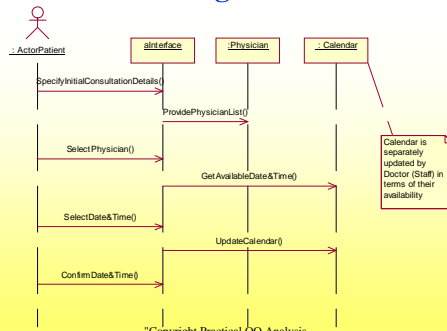
## Sub-module

### Sequence diagrams for hospital management system

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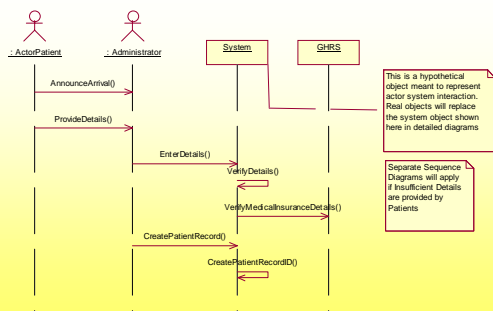
## “Booking a Consultation “ Sequence Diagram



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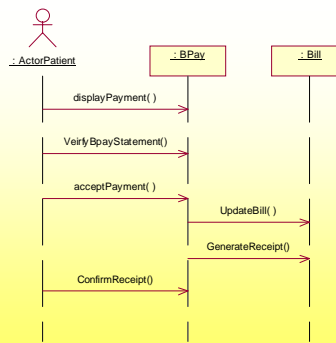
## “Registering a Patient “ Sequence Diagram



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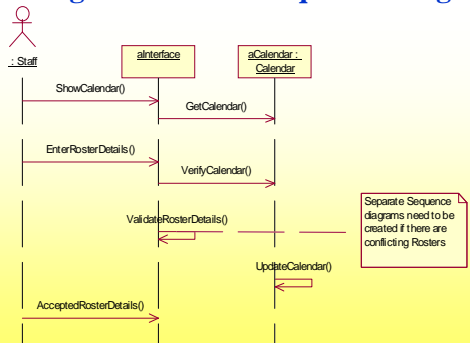
## “Paying a Bill “ Sequence Diagram



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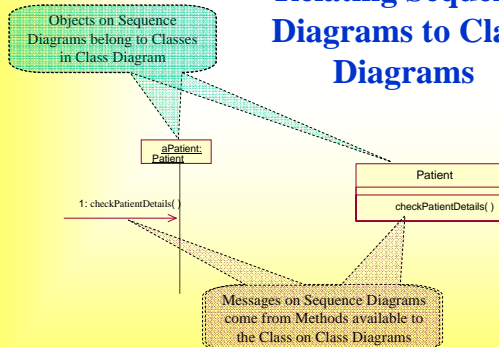
## “Updating a Calendar“ Sequence Diagram



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## Relating Sequence Diagrams to Class Diagrams



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## Collaboration diagrams

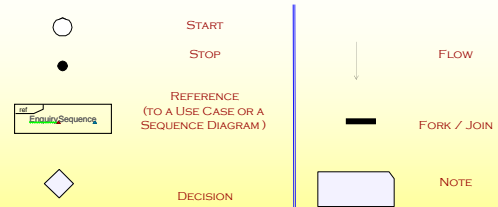
- documents main interactions and in particular their sequences where needed  
a.k.a. object diagram or Event Model

use primarily  
Sequential Messages

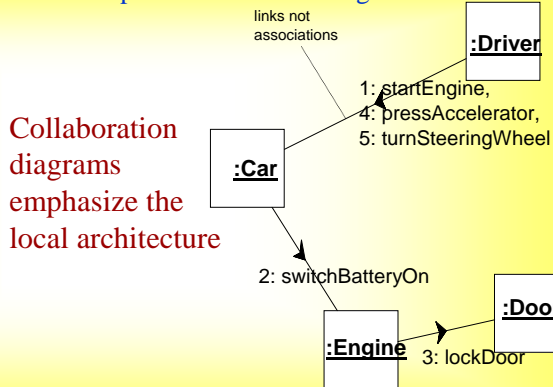
and possibly

Exception flows

## Ingredients of an Interaction Overview Diagram

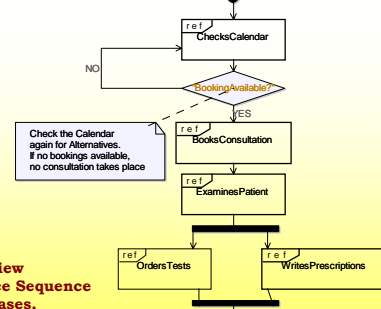


## Example Collaboration Diagram



Collaboration diagrams emphasize the local architecture

## “Consultation Details” Interaction Overview Diagram (V2)



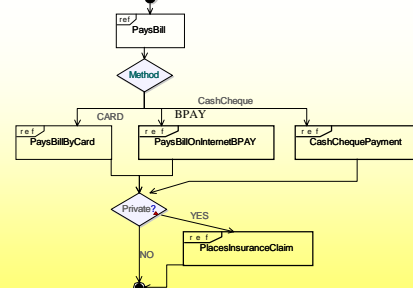
Interaction Overview Diagrams reference Sequence diagrams or Use cases, providing an overview of flow between them.

## Sub Module

## Interaction Overview Diagrams

Examples from Hospital Management System

## “Accounting” Interaction Overview Diagram



## Conclusions

- Sequence diagrams in
  - ✓Interaction between Collaborating Objects
  - ✓Interaction between Actors and System.
- Naming an interaction overview diagram

## Workbook Exercises

4. Observe if you are able to identify any new classes as a result of drawing the sequence diagrams.
5. Draw an Interaction Overview Diagram in any domain
6. Later, in Module 6 (use cases), you will be able to draw an Interaction Overview Diagram corresponding to that use case diagram.

## WORKBOOK



## EXERCISES

*For The Class Room!!*

## PROJECT WORK : (DURING TUTORIALS IN THE LAB);



Follow the Project Work Requirements given at the End of the Chapter;  
Discuss Project Work with Team Members and Tutor;  
Carry Out the Project Work

## Workbook Exercises

1. Draw a sequence diagram to show instance-level behaviour from one of your earlier use cases in chapter 4 (check the documentation of that use case to draw the sequence diagram)
2. Draw a sequence diagram to show dynamic behaviour from an activity diagram documented by you in Chapter 5
3. Identify a few operations from the above exercise in drawing sequence diagrams; that were not described in the corresponding classes. Update the classes with those operations.