

OBJECT-ORIENTED MODELLING (OOM) - 32536

MODULE 5

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

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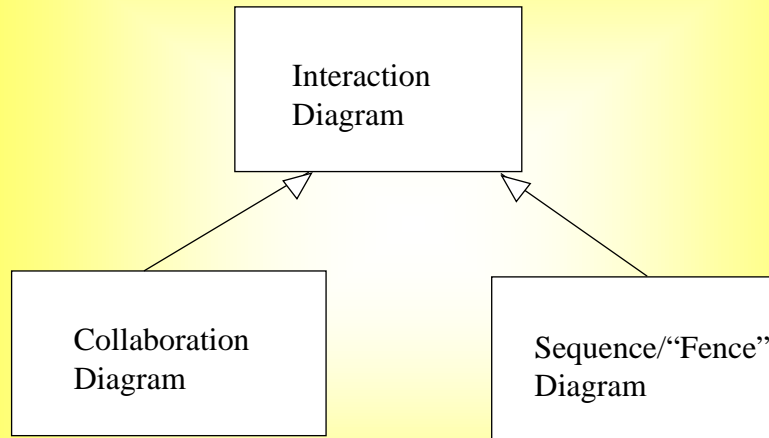
Module Outline

- 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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Interaction diagrams



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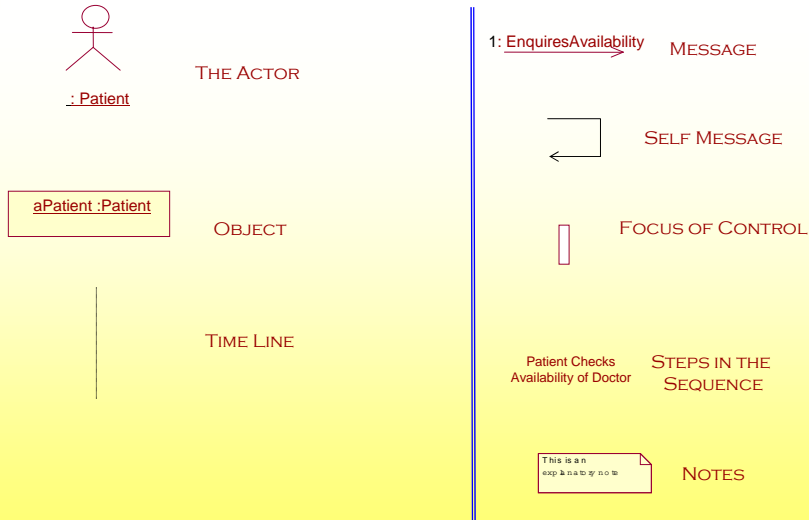
Sequence diagram...

- 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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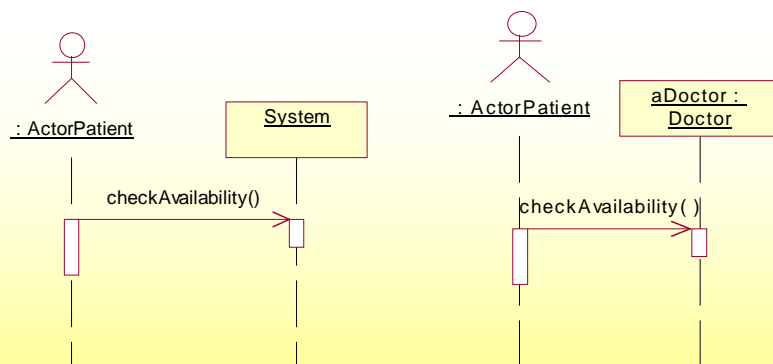
Major Ingredients of a Sequence Diagram



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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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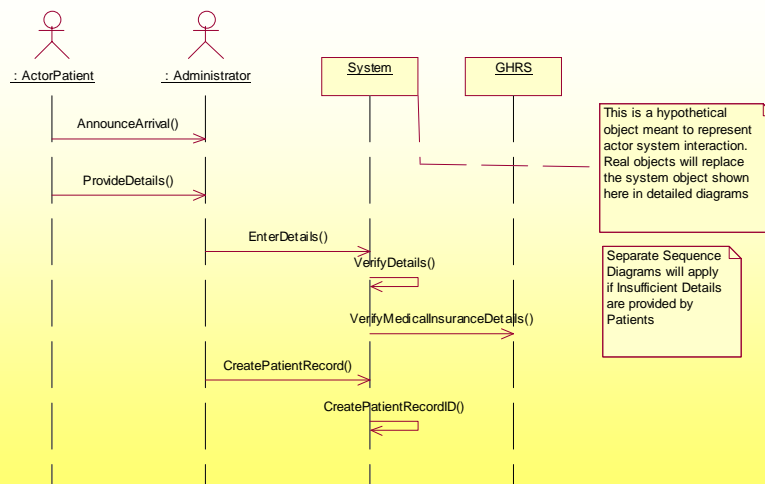
Sub-module

Sequence diagrams for hospital management system

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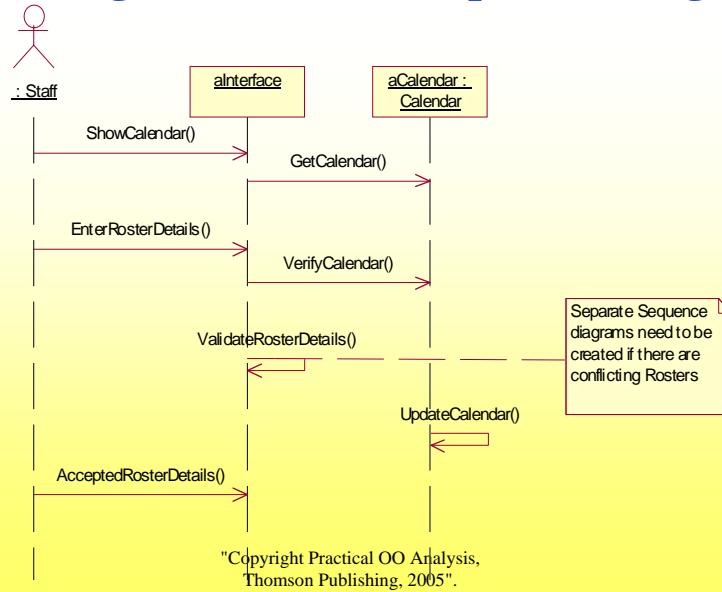
“Registering a Patient “ Sequence Diagram



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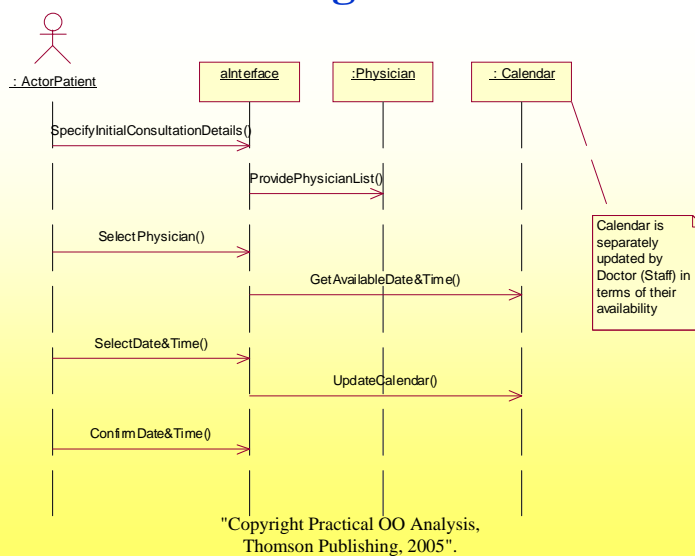
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“Updating a Calendar“ Sequence Diagram



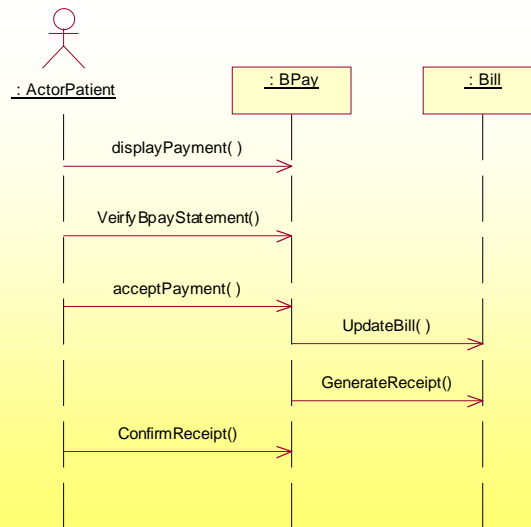
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“Booking a Consultation “ Sequence Diagram



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“Paying a Bill “ Sequence Diagram

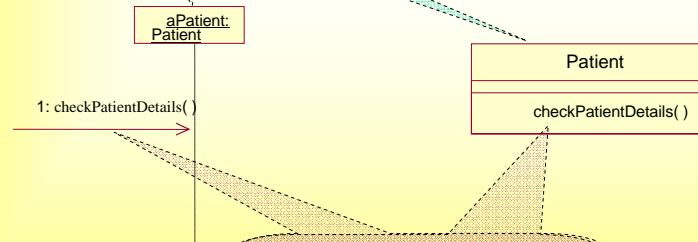


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Relating Sequence Diagrams to Class Diagrams

Objects on Sequence Diagrams belong to Classes in Class Diagram



Messages on Sequence Diagrams come from Methods available to the Class on 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

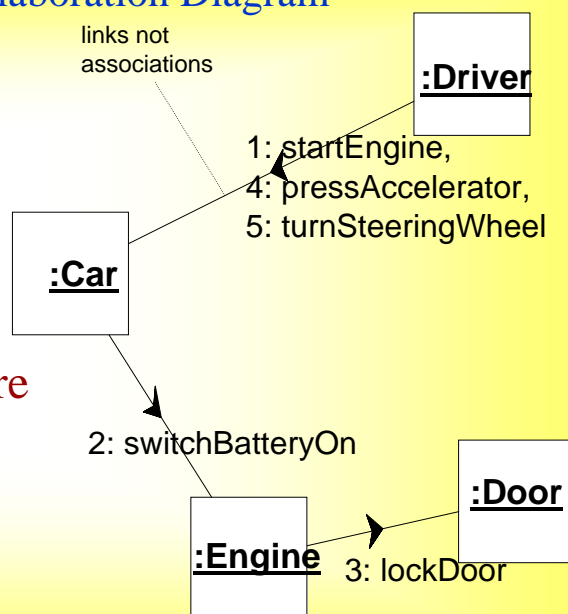
Exception flows

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Example Collaboration Diagram

Collaboration
diagrams
emphasize the
local architecture



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Sub Module

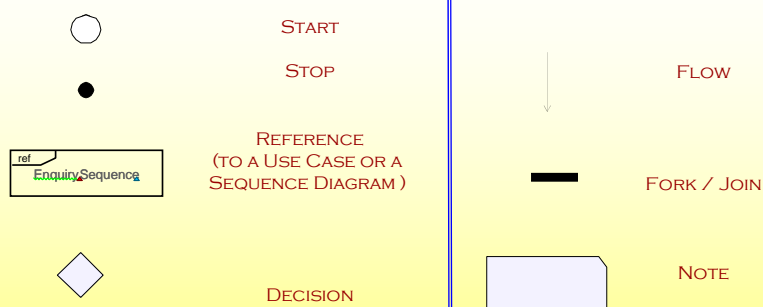
Interaction Overview Diagrams

Examples from Hospital Management System

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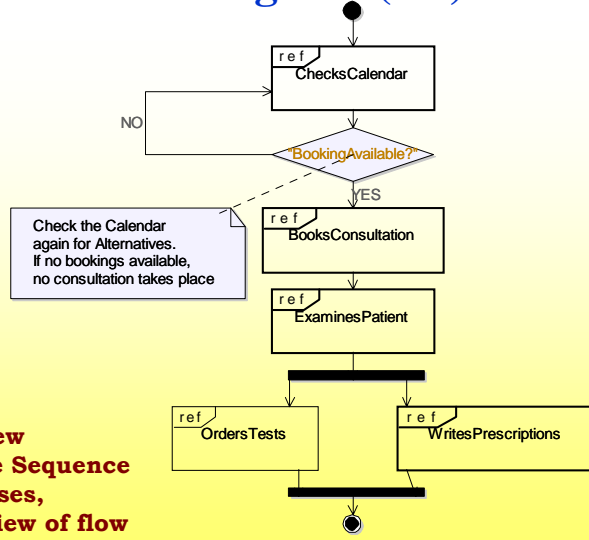
Ingredients of an Interaction Overview Diagram



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“Consultation Details “ Interaction Overview Diagram (V2)

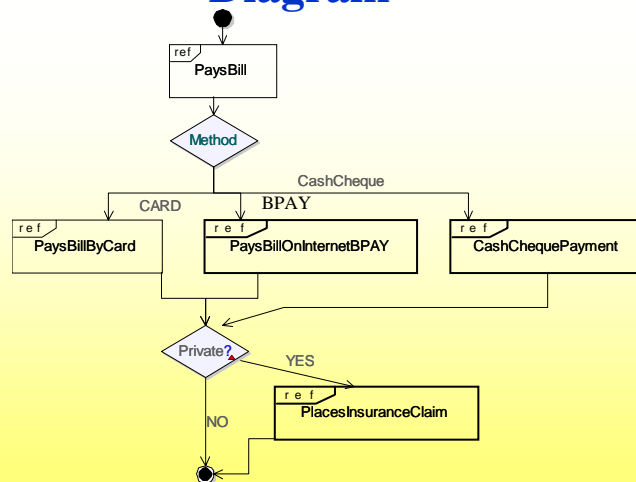


Interaction Overview Diagrams reference Sequence diagrams or Use cases, providing an overview of flow between them.

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“Accounting“ Interaction Overview Diagram



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Conclusions

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

WORKBOOK



EXERCISES

For The Class Room!!

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.

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.



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