

Chapter 8. UML-based Web Engineering (UWE)

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Outline

- 1 Introduction
- 2 Requirements Model
- 3 Content Model
- 4 Navigation Model
- 5 Presentation Model
- 6 Process Model

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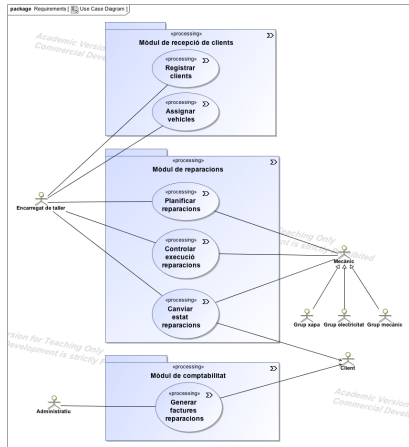
Main Features UWE

- Websites: <http://uwe.pst.ifi.lmu.de/index.html>
- Methodological approach for the development of Web applications based on the Unified Process
- Semi-formal graphical specification
- Uses extension mechanisms provided by the UML stereotypes
 - Navigation with use case
 - OCL constraints
- Method specification: MOF Metamodel
- Advantage: use of OMG standards (UML, MOF, OCL, etc.)
- Basis for Design: transformations to design models
- Tool: MagicUWE
(<http://uwe.pst.ifi.lmu.de/toolMagicUWE.html>)

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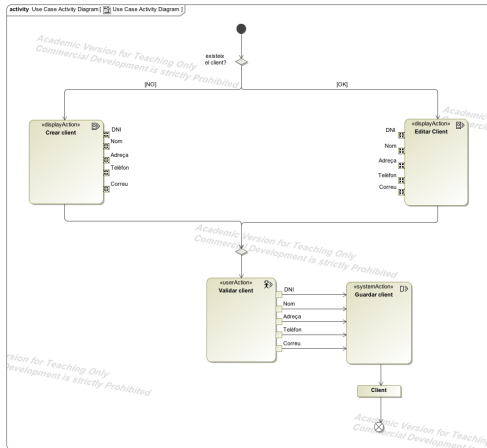
Use Case Diagram: Example



Use Case Diagram

- To stereotype Use Case Diagram
- Use Cases can be:
 - Browsing
 - Processing

Activity Diagram: Example



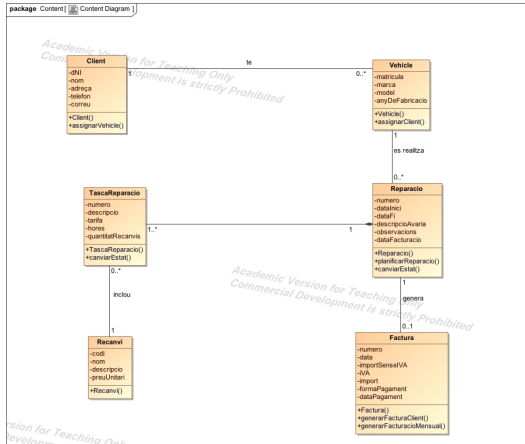
Activity Diagram

- To stereotype Activity Diagram
- Activities/actions can be:
 - UserAction
 - SystemAction
 - DisplayAction
 - NavigationAction
- InteractionPin
- DisplayPin

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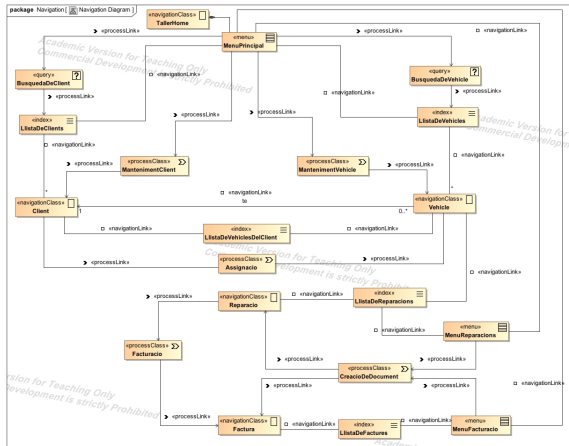
Content Diagram: Example



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Navigation Diagram: Example



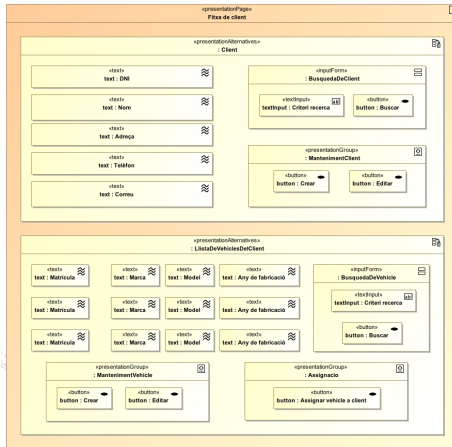
Navigation Diagram

- To stereotype Class Diagram
- Class can be:
 - Menu
 - Index
 - Query
 - NavigationClass (from ContentModel)
 - ProcessClass
- NavigationLink (to link one NavigationClass with other classes)
- ProcessLink

Outline













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Presentation Diagram: Example



Presentation Diagram: Example

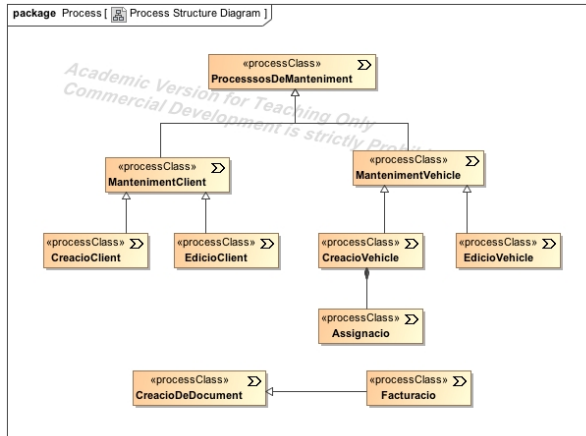
stereotype-names and their icons

 presentationGroup	 presentationPage
 text	 textInput
 anchor	 fileUpload
 button	 image
 inputForm	 customComponent
 presentationAlternatives	 selection

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Process Structure Diagram: Example



Process Structure Diagram

- To describe the relations between the different process classes
- To stereotype a Class Diagram

Flow Process Diagram

- To describe the behaviour of a ProcessClass
- To stereotype an Activity Diagram