Software Architecture

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Lecture 12: UML

UML

- What is UML? (me, 10 min)
- Use Case Diagram (me, 10 min)
- Use Case Diagram for your game (you, 5 min)
- Class Diagram (me, 20 min)
- BON vs. UML (me, 10 min)
- Course Evaluation (you, 10 min)
- Info about Final Presentation (me, 5 min)
- Exam Information (me, 10 min)
- ESDL Sound (me, 10 min)

Unified Modelling Language

- 9 different diagram types
  - Use case diagrams
  - Class diagrams
  - Object diagrams
  - Sequence diagrams
  - Collaboration diagrams
  - Statechart diagrams
  - Activity diagrams
  - Component diagrams
  - Deployment diagrams

Use Case Diagram

Class Diagram
From Scenario to Use Case

- Scenario:
  - "My grandmother orders a cup of tea. She is served a little later by a waitress"
  - Use Case is a summary of a couple of scenarios

Use Case Example

- Use Case Diagram
  - Remember:
    - Multiple Actors possible
    - Multiple Use Cases possible
    - Many Actors can exchange Communications with one Use Case
    - Use Case is a summary for a Task or a Goal of your Project
    - Actors can be People or Objects
When to use a Use Case Diagram
- When you want to determine the functionality of a System
- When you communicate with clients
- When you try to generate Test Suites for your System

Class Diagram

Associations

Aggregations

Generalization

Multiplicities
**BON vs. UML**

- **BON**
  - More natural
  - Immediately understandable
  - No need to learn a new language

- **UML**
  - More expressive
  - Standard

**Info about Final Presentation**

- Wednesday June 29th
  - Bring you friends, your Mom!
  - We will stay until 14.00
  - Bazar to see other projects
  - Games can be downloaded on our website

**Info about Exam**

- July 4th, 10.00-12.00
- Materials from Lecture Slides
- OOSC Chapters
  - 1-5 as overview
  - 6 ADT’s
  - 4-12 for the basic mechanisms
  - 14-16 for inheritance

End of lecture 12