

Object-Oriented Analysis with UML

- What is Analysis?
- UML Class Diagrams
 - Classes
 - Associations
- Example: Analysis model of a hotel
- Using Argo/UML for Analysis
- Your Homework Assignment

What is Requirements Analysis?

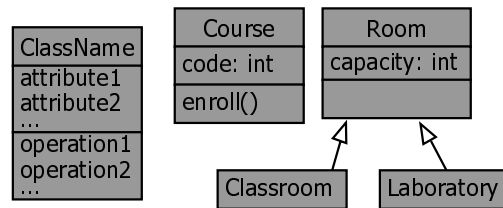
- Analysis: Investigate the problem statement and learn the problem domain to discover and understand system requirements.
- Discover:
 - terminology
 - objects of interest and their attributes and operations
 - key relationships
 - important processes
- Results:
 - info needed for requirements and design,
 - background for talking with users and customers,
 - or, decision to terminate the project

Object-oriented Analysis

- Focus on discovering objects of interest and relationships
- Sources:
 - things mentioned in problem statement
 - your knowledge of the problem domain
 - look at previous (computer or non-computer) systems
 - go read about the problem domain
 - talk to potential users
- SOME of these objects will be part of implementation, LATER

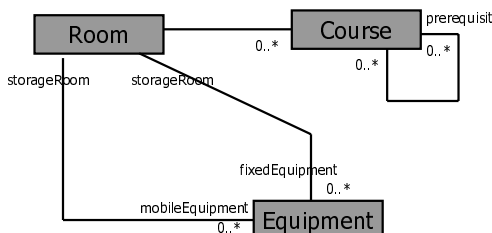
Classes

- A UML Class represents a kind of object in the problem domain
 - Name, Attributes, Operations
 - Generalization



Associations

- A UML Association represents a relationship between two kinds of objects in the problem domain
 - Role names, Multiplicity



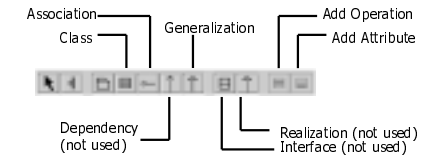
Example: Analysis model for a hotel



Using Argo/UML for Analysis

- Start Argo/UML
- Use "class diagram 1"
- Use toolbar buttons to create classes, associations, generalizations, attributes, operations.
- Set roles, multiplicity with the "Properties" tab.

Using Argo/UML for Analysis



Your Homework Assignment

- Build an OO analysis model of an email system
 - One diagram with at least 4 associations
 - Each association has at least one labeled role
 - Use these classes: Message; MessageFolder; Address; AddressBook; Date; AttachedFile
 - Add some attributes and operations to each class
 - All names have to be meaningful
- Hand in a printout of the diagram
- Due at start of class Tuesday, November 16