SED Lecture 3
Identifying Objects in O-O Requirements Analysis

Objectives
To be able to apply different methods for identifying objects given a definition of the system requirements.

Key Points
1. *Objects* are entities that encapsulate state and behaviour.
2. That is, an object has memory (its state) and it can perform operations which modify the state.
3. Identifying objects is a difficult part of analysis. There are no automatic recipes for doing it, but practitioners have identified some useful heuristics. Many different sources of knowledge have to be used to discover objects and object classes.
4. Objects may be identified by a grammatical analysis of a natural language description (objects and attributes are nouns, operations or services are verbs).
5. Beck and Cunningham’s CRC method (class name, responsibilities, and collaborators) is a method for scenario-based analysis.
6. Bruegge and Dutoit heuristics for identifying entity, boundary and control objects.
7. Studying examples of object models from implemented systems is a good way to learn how to identify objects for your own software problems.

Core reading
Bruegge & Dutoit (2nd ed), 5.4 from use cases to objects, 5.4.1 entity objects, 5.4.2 boundary objects, 5.4.3 control objects

Sommerville (7th ed) 14.2 An object-oriented design process, 14.2.3 object identification

Pressman (5th ed) 20.3.1 Identifying classes and objects, 21.4.2 Class-Responsibility-Collaborator modelling


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