Identifying Classes and Objects Classical and Modern Approaches

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Object Oriented Programming

Classical Categorization

- 2 Conceptual Clustering
- Prototype Theory

Classical Categorization

- 2 Conceptual Clustering
- **3** Prototype Theory

Defining Quotation

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Definition of useful categories (properties and effects) are subjective.

Classical Categorization

2 Conceptual Clustering

Prototype Theory

Conceptual Clustering

Approach

• Related to multivalue (fuzzy) set approach

Conceptual Clustering

Approach

- Related to multivalue (fuzzy) set approach
- Define conceptual descriptions

Conceptual Clustering

Approach

- Related to multivalue (fuzzy) set approach
- Define conceptual descriptions
- Assign classes (clusters of entities) to one or more conceptual descriptions

Example

Classify the following representations of a train.



Classical Categorization

2 Conceptual Clustering



Prototype Theory

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Class of objects represented by prototypical object

A Biological Example



A Social Example



A Social Example



emerald green, pea green, greeny green resemble prototypical object **green**.

Sec 4.2: Identifying Classes and Objects, *Object-Oriented Analysis and Design with Applications, Grady Booch, Robert A. Maksimchuk, Michael W. Engle, Bobbi J. Young, and Jim Conallen, Pearson Education, 3rd Edition, 2007.*