UML Object Diagram

Agenda

- What is a Object Diagram?
- Essential Elements of a UML Object Diagram
- Tips

What is a Object Diagram?

- An object diagram shows a set of objects and their relationships at a point in time.
- Object diagrams model the instances of things contained in class diagrams.
- object diagrams to model the static design view or static process view of a system.

Common Properties

- Objects
- Links
- Notes and constraints

- An *object diagram is a diagram that shows a set of objects and their relationships at a point in* time.
- Graphically, an object diagram is a collection of vertices and arcs

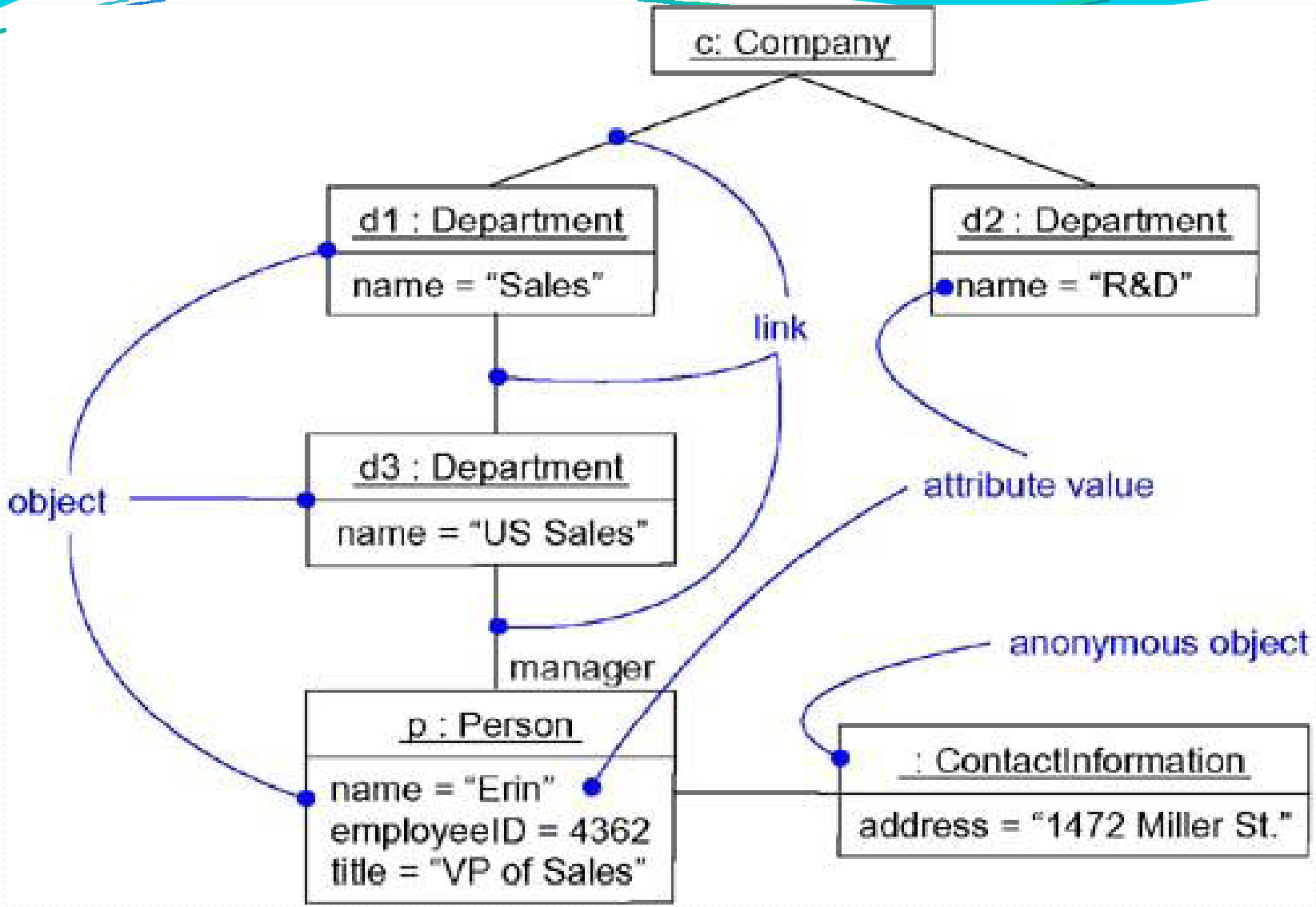
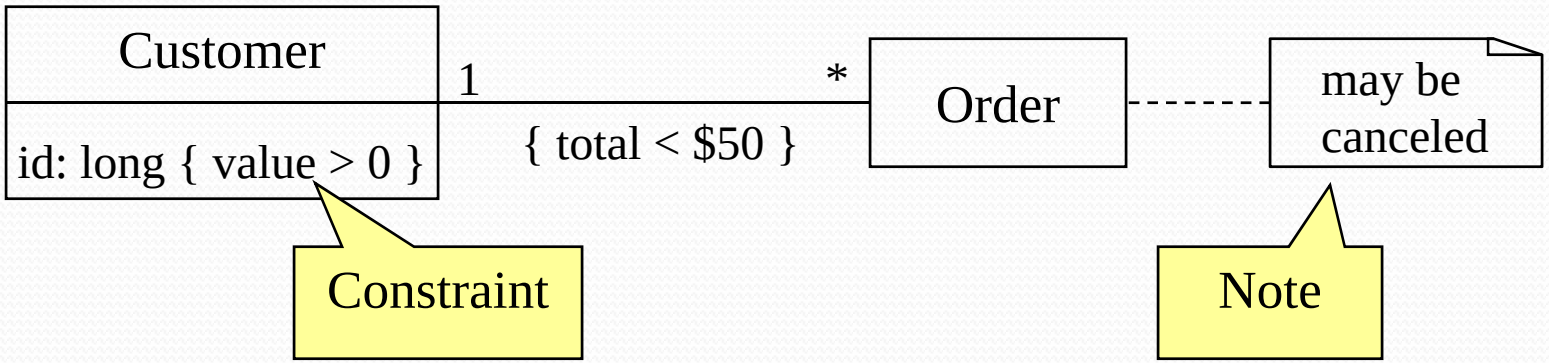


Fig: Object diagram

Constraint Rules and Notes

- **Constraints** and **notes** annotate among other things associations, attributes, operations and classes.
- Constraints are semantic restrictions noted as Boolean expressions.
  - UML offers many pre-defined constraints.



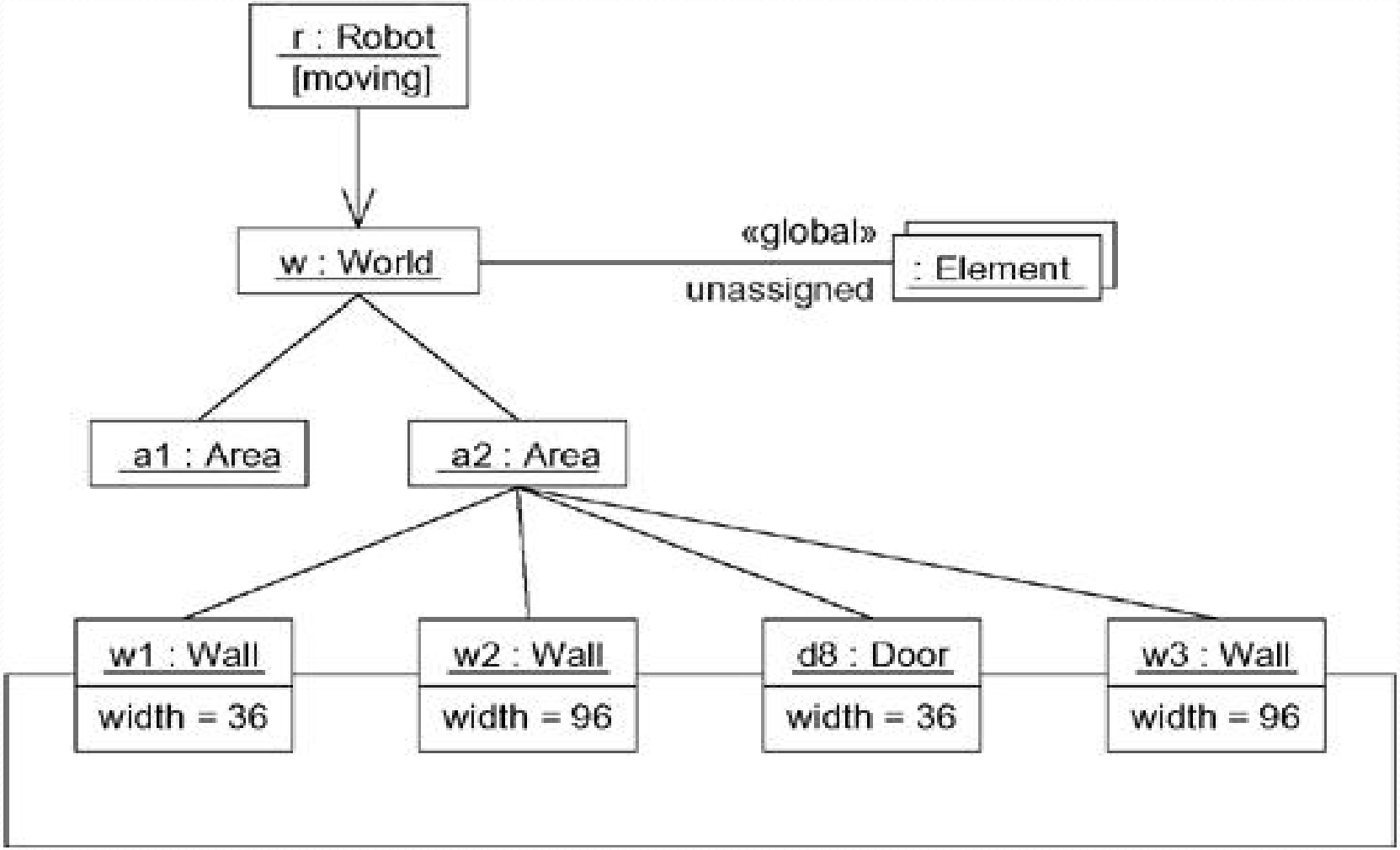
Common Modeling Techniques

To model object structures

- Identify the mechanism you'd like to model. A mechanism represents some function or behavior of the part of the system you are modeling that results from the interaction of a society of classes, interfaces, and other things.
- For each mechanism, identify the classes, interfaces, and other elements that participate in this collaboration; identify the relationships among these things, as well.

- Consider one scenario that walks through this mechanism. Freeze that scenario at a moment in time, and render each object that participates in the mechanism.
- Expose the state and attribute values of each such object, as necessary, to understand the scenario.
- Similarly, expose the links among these objects, representing instances of associations among them.

Example of Object Diagram



- One object represents the robot itself (r, instance of Robot).
- Element E, which represent entities that the robot has identified.

Tips

- Don’t try to use all the various notations.
- Don’t draw models for everything, concentrate on the key areas.