

# OBJECT DIAGRAMS

- An object diagram shows a set of objects and their relationships at a point in time.
- An object diagram consists of the objects that collaborate, but without any of the messages passed among them.
- An object diagram is essentially an instance of a class diagram or the static part of an interaction diagram.
- Used to model the static design view or static process view of a system
- Object diagrams helps in modeling static data structures.
- Object diagrams commonly contain – Objects & Links

An Object Diagram freezes a moment in time, as in Figure 1. When asked as an essay write the above points then explain each and every thing in this diagram(those given in blue ink) then explain the modeling.

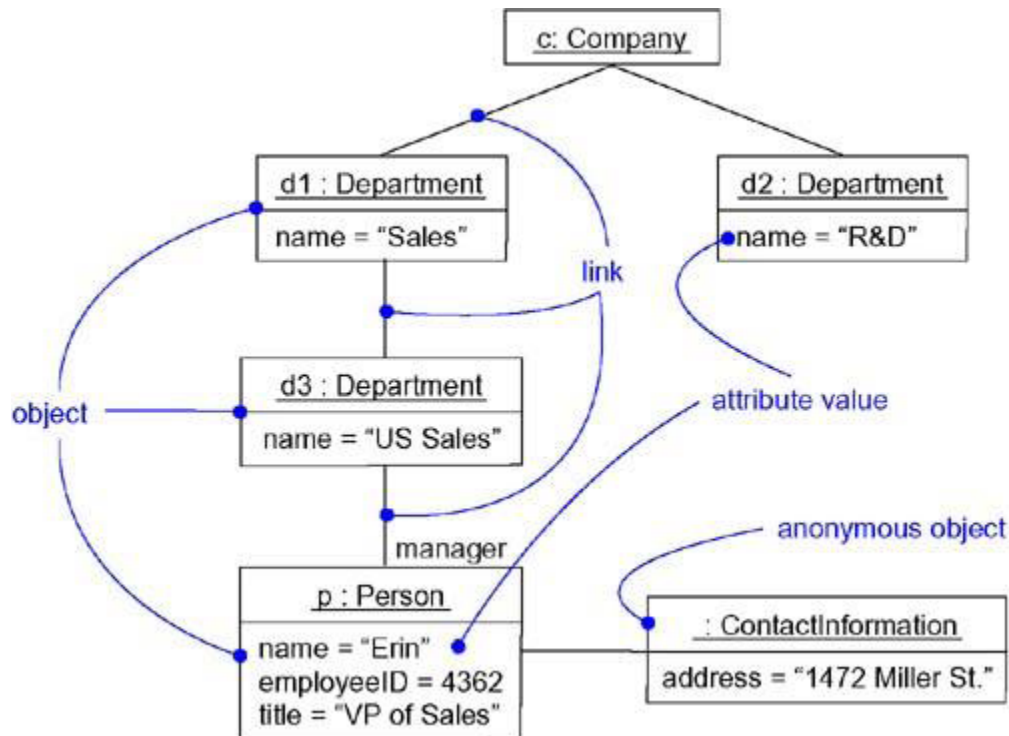


Figure 1 An Object Diagram

## Modeling Object Structures

To model an object structure,

- 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.

For example, Figure 2 shows a set of objects drawn from the implementation of an autonomous robot.

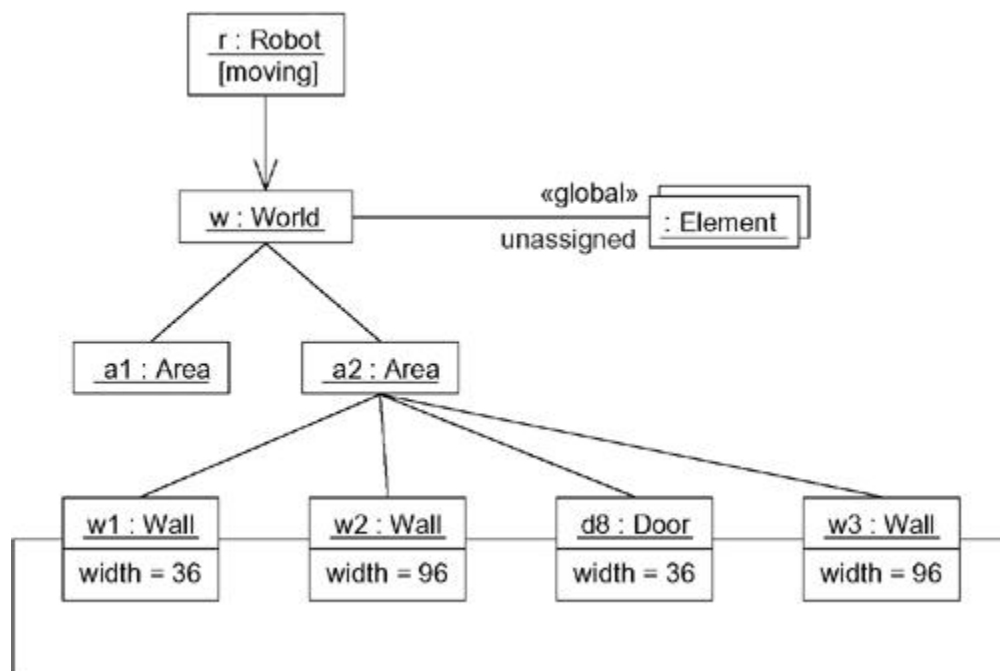


Figure 2 Modeling Object Structures

As this figure indicates, one object represents the robot itself (r, an instance of Robot), and r is currently in the state marked moving. This object has a link to w, an instance of

World, which represents an abstraction of the robot's world model. This object has a link to a multiobject that consists of instances of Element, which represent entities that the robot has identified but not yet assigned in its world view. These elements are marked as part of the robot's global state.

At this moment in time, w is linked to two instances of Area. One of them (a2) is shown with its own links to three Wall and one Door object. Each of these walls is marked with its current width, and each is shown linked to its neighboring walls. As this object diagram suggests, the robot has recognized this enclosed area, which has walls on three sides and a door on the fourth.

Source : <http://praveenthomasln.wordpress.com/2012/04/01/object-diagrams-s8-cs/>