**UML**

UML modeling: OO modeling: world in terms of objects and their relationship.

***Example:***

Problem. An used car dealership application's subsystem: information about cars and their manufacturer.

Specification: A car manufacturer ~~has~~ must have an unique id and name. A car maker may make many cars. For example, Honda, which may have an manufacturer id of 10001, makes Civic and Accord...

Analysis:

1. Manufacturer: class (a template that can be used to initiate many manufacturer (instance).
2. Honda: object of the class Manufacturer.
3. Ambiguous term: manufacturer, may refer to the manufacturer class or a particular manufacturer.
4. Synonym: manufacturer, car manufacturer, car maker. Different terms can refer to the same concept.
5. Unique id: attribute (name), a property of the manufacturer class.
6. Additional assumption: Every manufacturer object must have an unique id.
7. 10001: attribute (value) of a manufacturer object.
8. Name: a property of manufacturer.
9. Additional assumption: Every manufacturer object must have a name.
10. Car: a class as there may be many *brands* of cars.
11. Question: Do we need to introduce the concept *Model* (e.g. Coupe, Sedan, Si Coupe)?
12. Civic and Accord: object instance of Car.
13. Additional assumption: Every car must have a name as its attribute.
14. Make, or manufacture: a relationship between a manufacturer (object) and a car (object).

Class Diagram:



Object Diagram:



Astah/software tools:

1. Underlying concepts: OOM what? Transferrable knowledge
2. Graphical User Interface (GUI): less transferrable

Class diagram creation:

