

Project Development (IV_SYP_PRE)

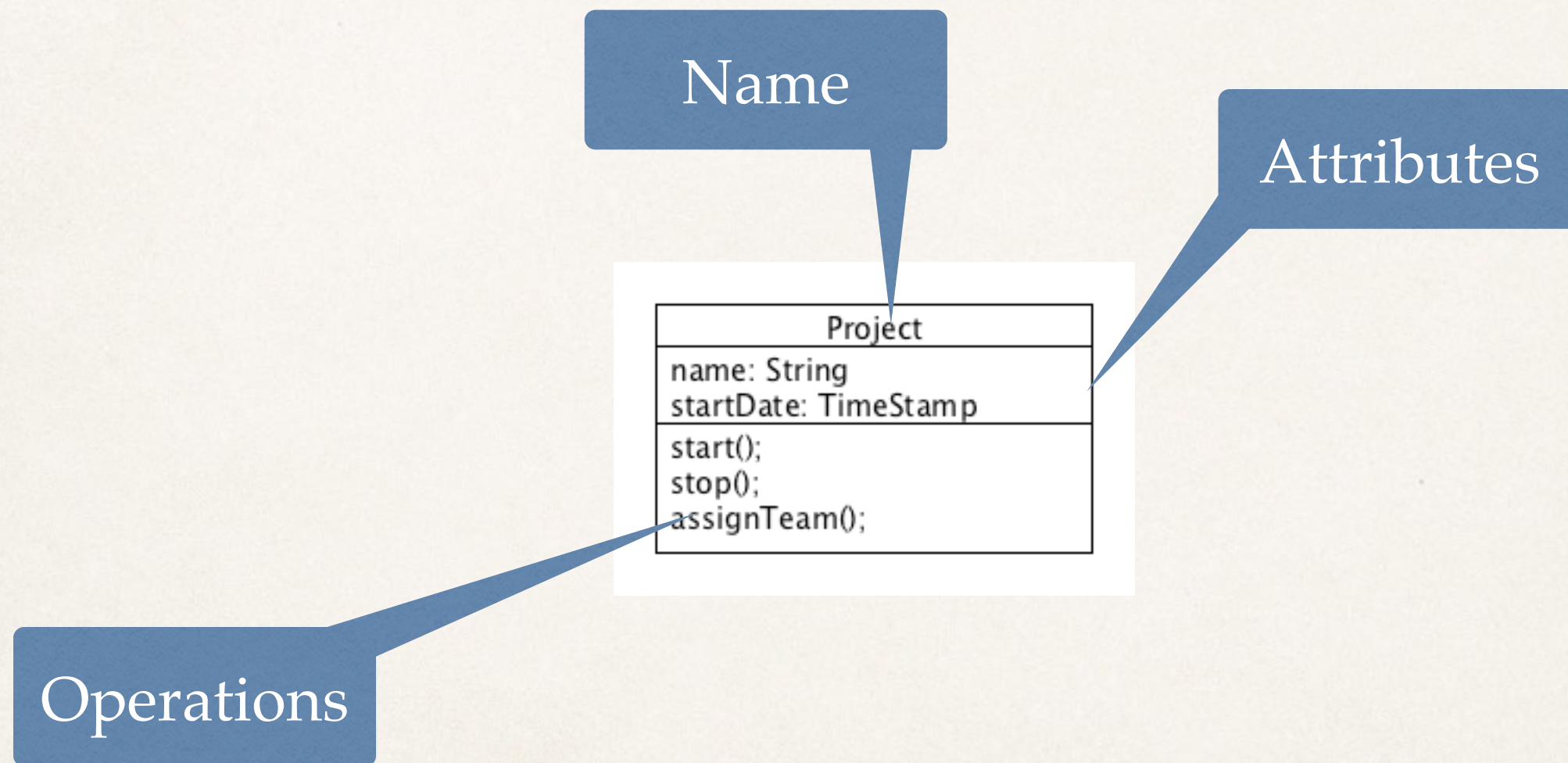
UML Class Diagrams

Unit 7

Purpose

- ❖ Helps to document software designs
- ❖ Describes *static* structure of software
- ❖ Graphical representation of designs
- ❖ Developer – developer communication

Classes



Different Levels of Detail

Name only

Project

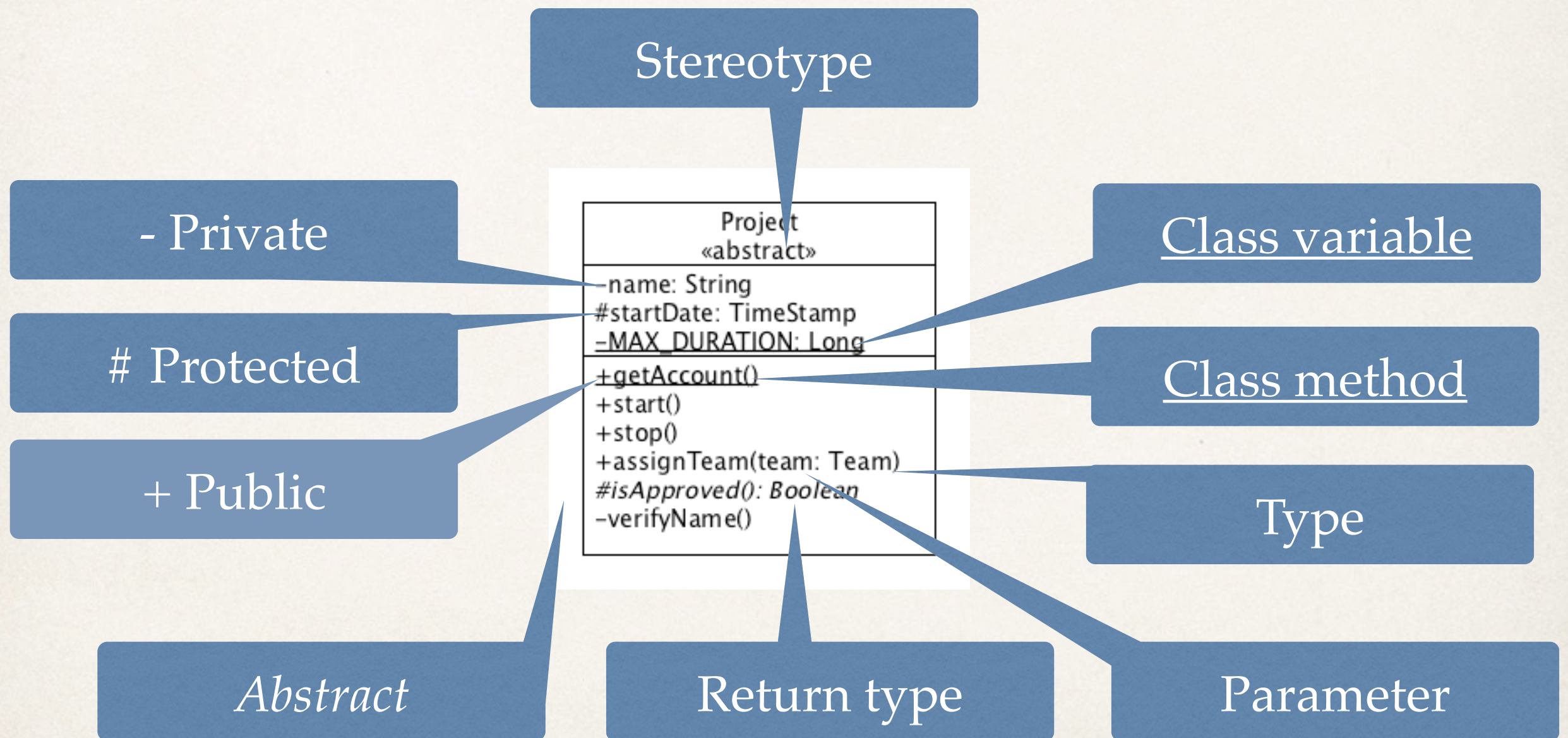
Design

Project
name: String startDate: TimeStamp
start(); stop(); assignTeam();

Implementation

Project
-name: String #startDate: TimeStamp
+start(); +stop(); +assignTeam(Team t); -verifyName()

Symbols and Meanings

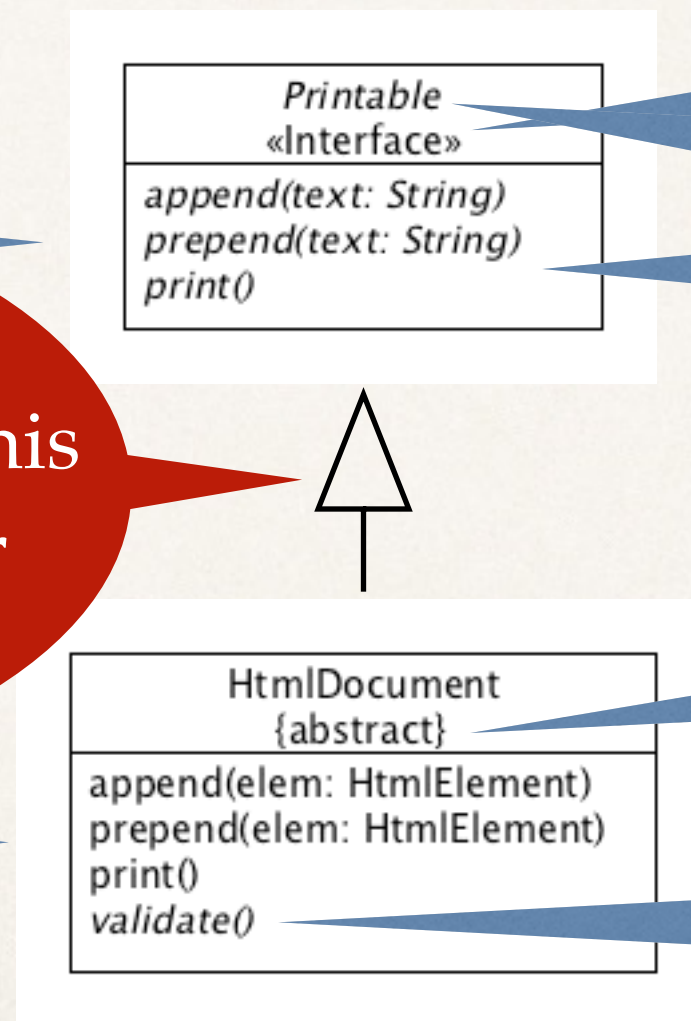


Abstract Classes and Interfaces

Interface

Oops, what's this?
Sorry, we came out with this
too early. Will disappear
immediately!

Abstract Class



Stereotype

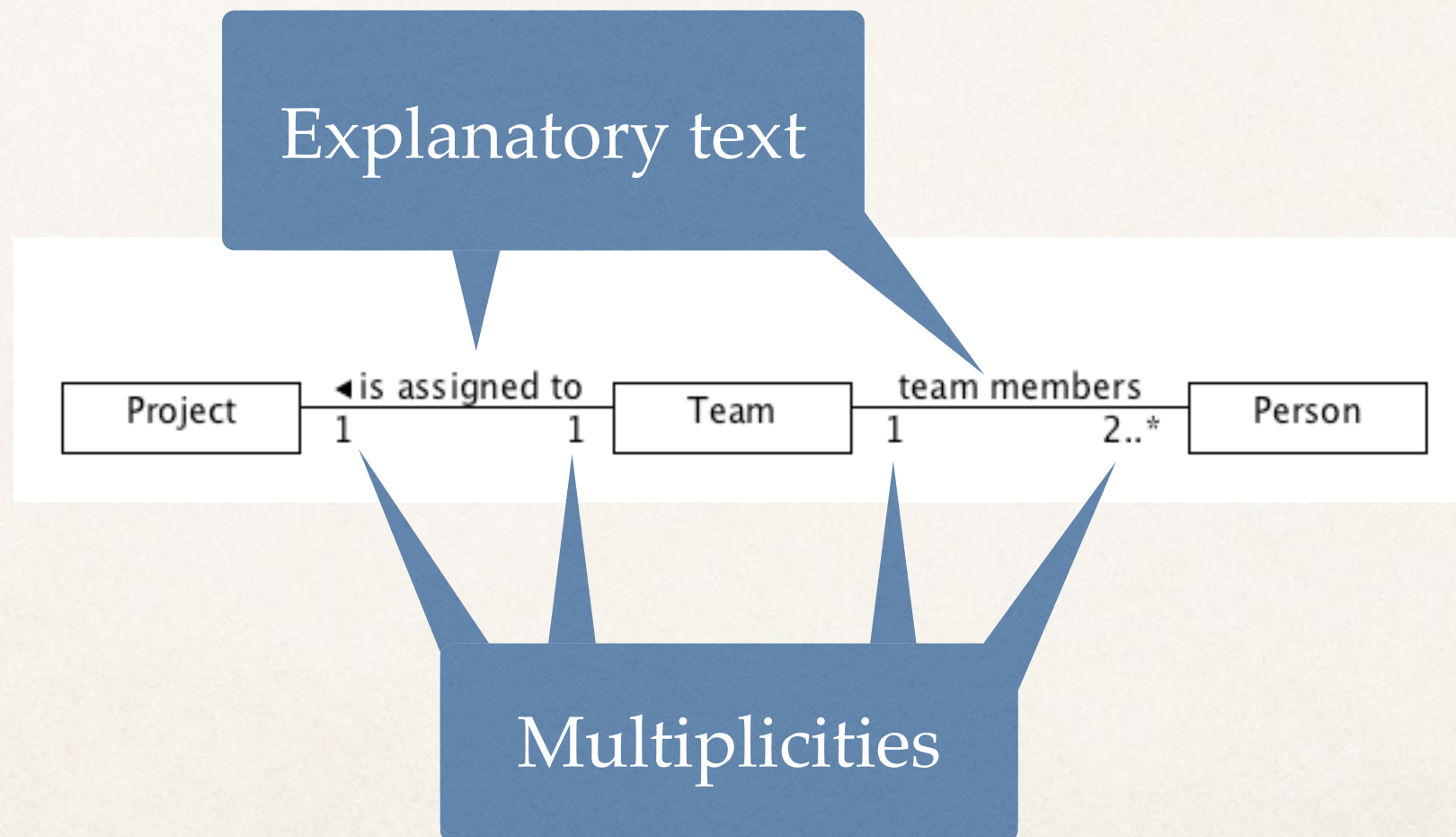
Everything is written
in *italic*

Optional

Abstract method is
written in *italic*

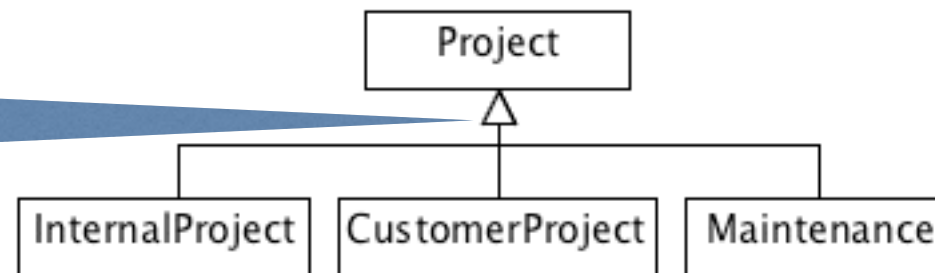
Associations

- ❖ Relate instances of classes



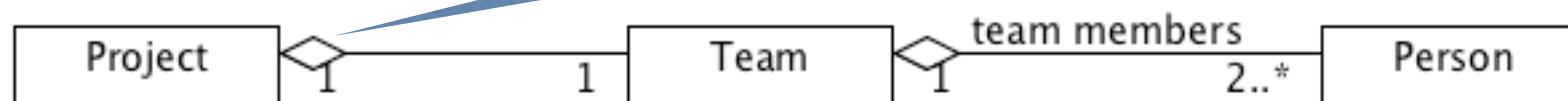
Inheritance

Big arrowhead



Aggregations

- ❖ “Is part of ...”-relation
- ❖ Team is part of a Project
- ❖ Person is part of a Team
- ❖ Specialization of a general association

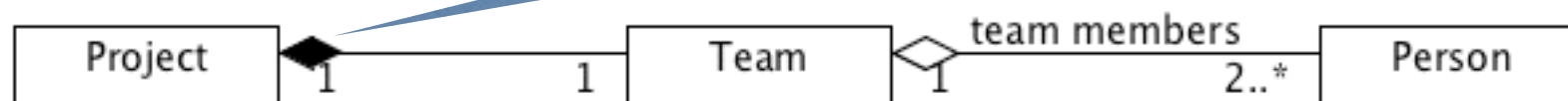


Empty diamond

Compositions

- ❖ “Is exclusive part of ...”-relation
- ❖ Team is exclusive part of a Project
 - ❖ Would imply that team will be canceled if project is canceled
- ❖ Specialization of a general association

Filled diamond



Give it a Try

- ❖ Model the application domain of your project
- ❖ How to approach?
 - ❖ Analyze when you talk
 - ❖ All nouns are candidates for classes
 - ❖ All verbs are candidates for methods
 - ❖ Then look how the classes are related to each other