

# Two ways to reuse logic

Inheritance

(IS-A)

[Kind-of relationship]



E.g → Class 1 → birds  
Class 2 → Sparrow

\* Sparrow is a kind-of bird

\* Sparrow "IS-A"

Association

(HAS-A)

[part.-hole relationship]



E.g → class 1 → Library  
Class 2 → Book

\* Library "has-a" book

⇒ Book and Library

! doesn't have anything  
! common

Bird

( $\Rightarrow$ ) But Book is  
an attribute of  
Library

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\* When an object is an attribute of another class, then aggregation is useful.

## Association



