CLASS DIAGRAM

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AGENDA

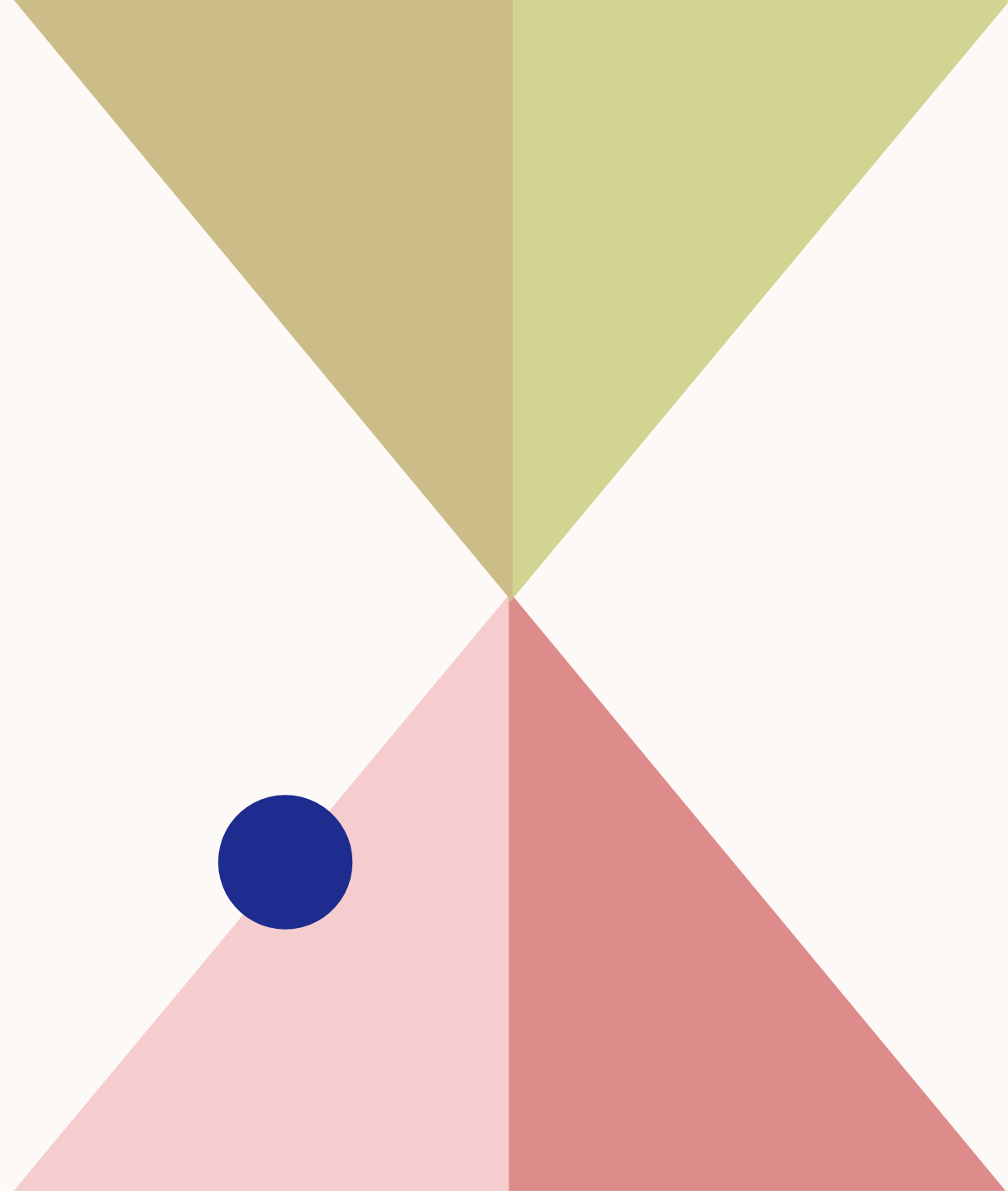
Introduction

Basics of class diagram

Visibility

relationships

Example



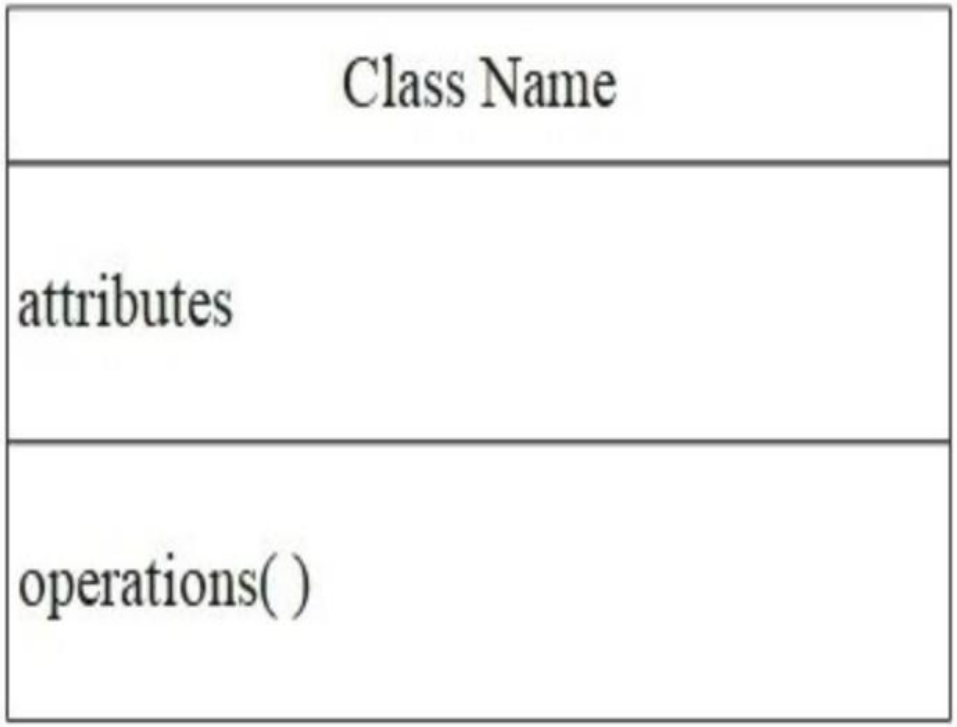
INTRODUCTION

class diagrams are typically used to map out what a system would conceptually look like in static form. However, there are also a couple more reasons why class diagrams might be used.

BASICS OF CLASS DIAGRAM

classes are represented by rectangular symbols, and different arrows are used to represent the relationship between classes. Note that class diag rams don't depict any interactions between classes.

The class name is always shown in the first section, the **attributes** in the second, and **operations** in thethird. **Attributes** are values that define a class. Classes can carry out processes known as **operations**.



VISIBILITY

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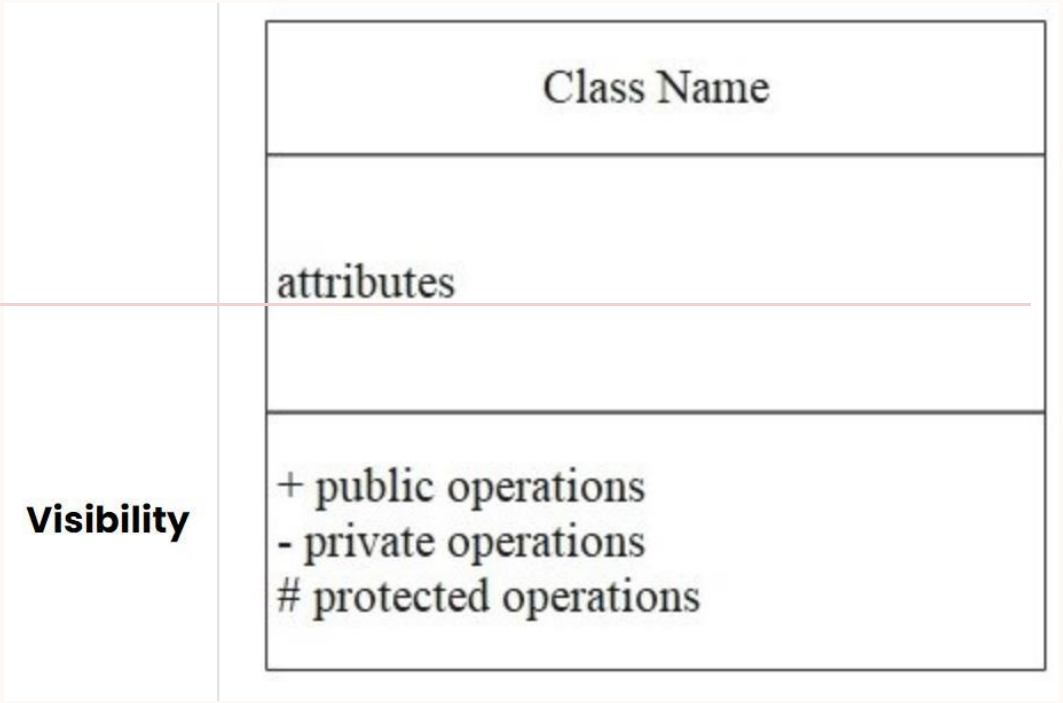
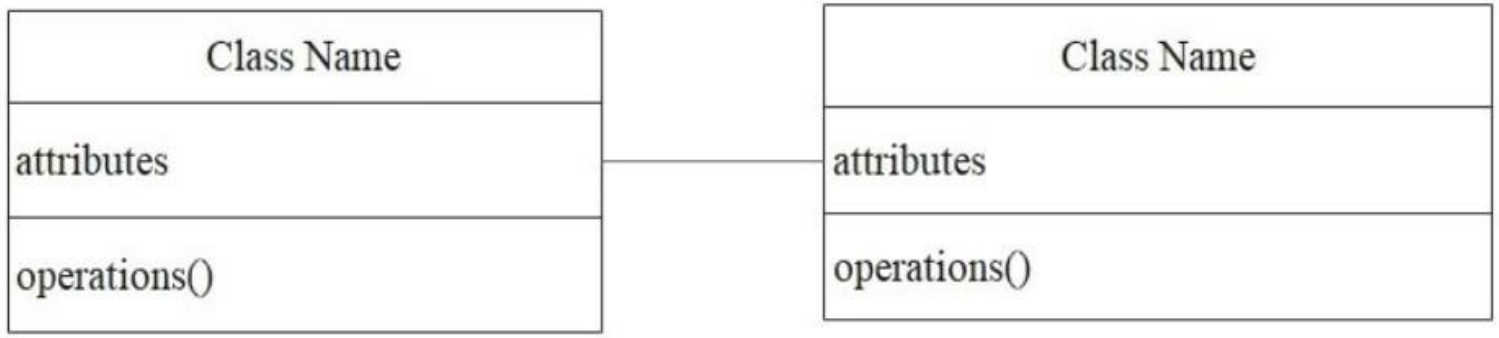


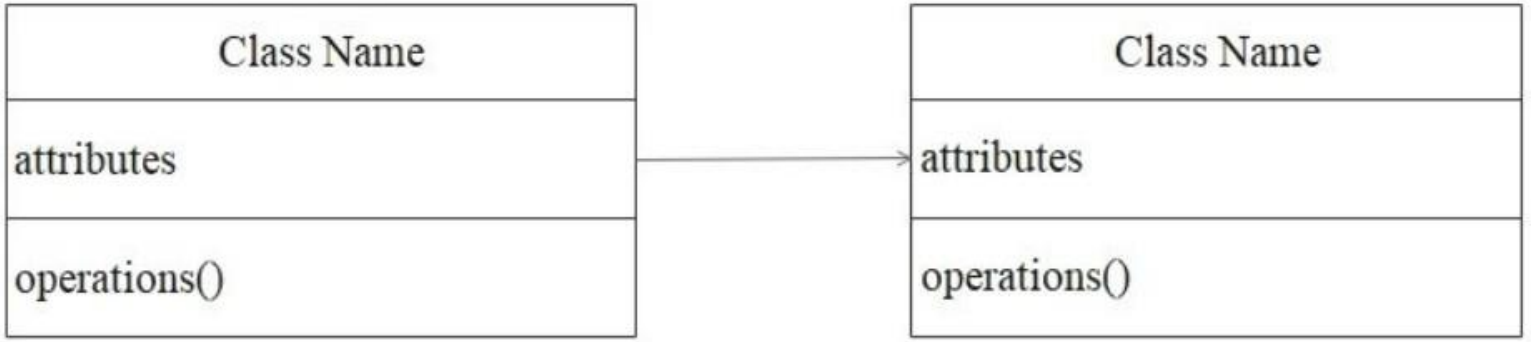
RELATIONSHIPS

Bidirectional Association



A bilateral association is represented by a straight line connecting two classes. It simply demonstrates that the classes are aware of their relationship with each other.

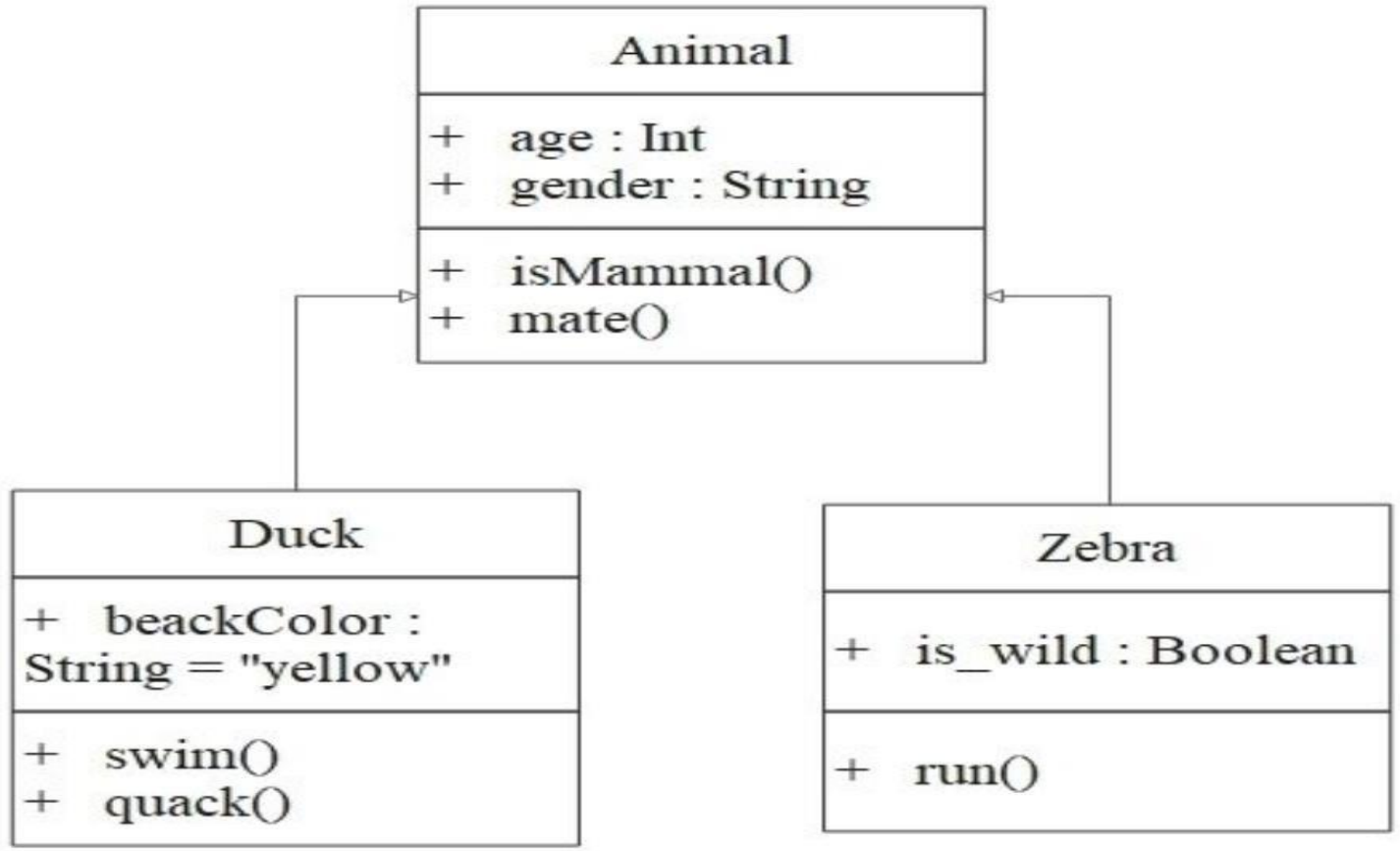
Unilateral Association



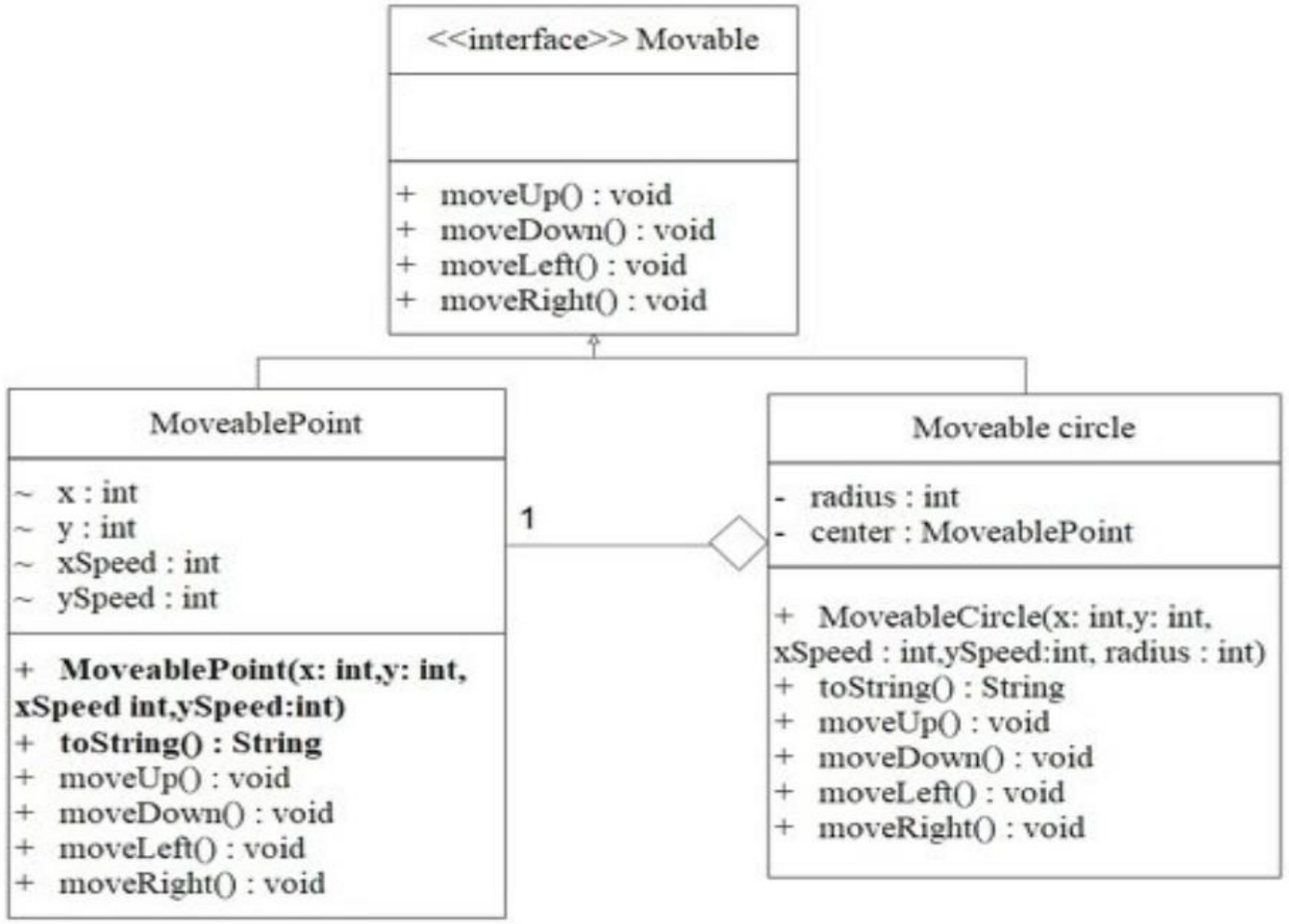
A unilateral association is represented by an open arrowhead connecting one class to another. It shows that one class is aware of its relationship with another class.

Indicate a “child-parent” relationship between classes. The child class is a specialized, sub-class of the parent.

Inheritance

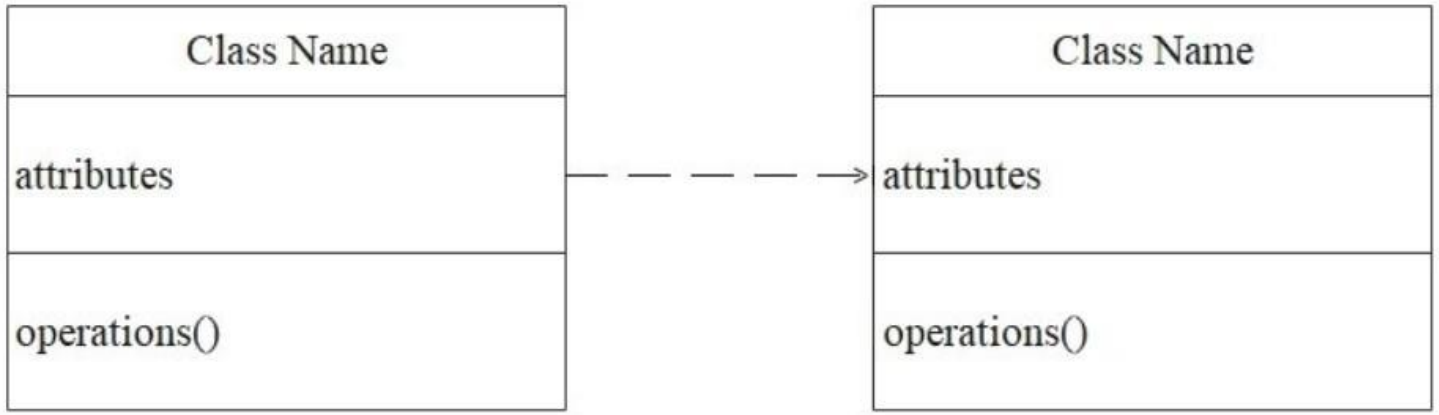


Realization/Implementation



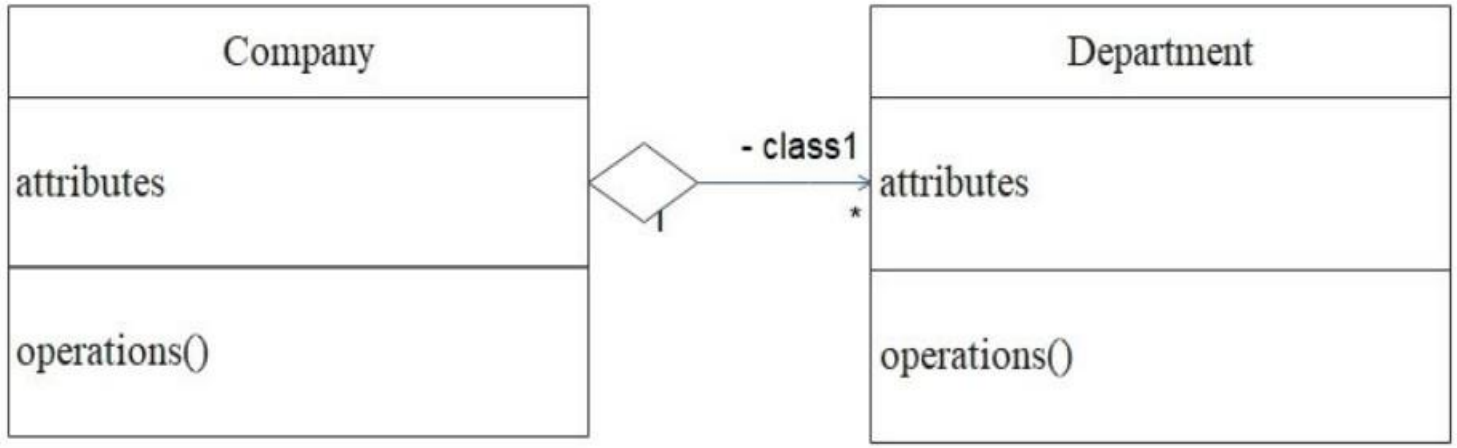
One class implements the behavior specified by another class.

Dependency



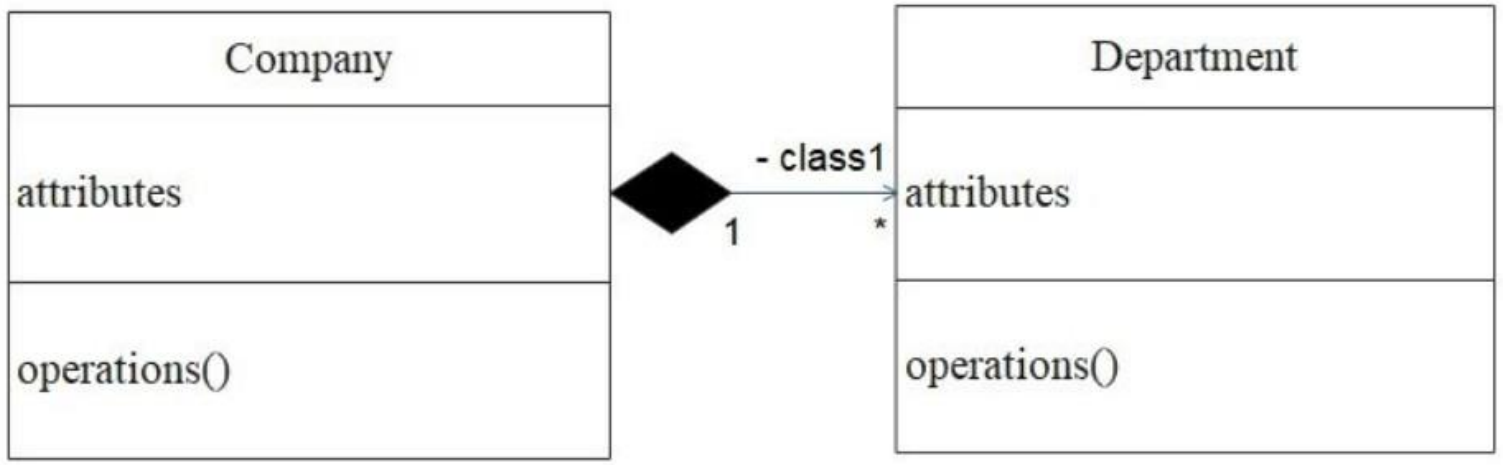
As the name suggests, one class depends on another. A dashed arrow shows this.

Aggregation



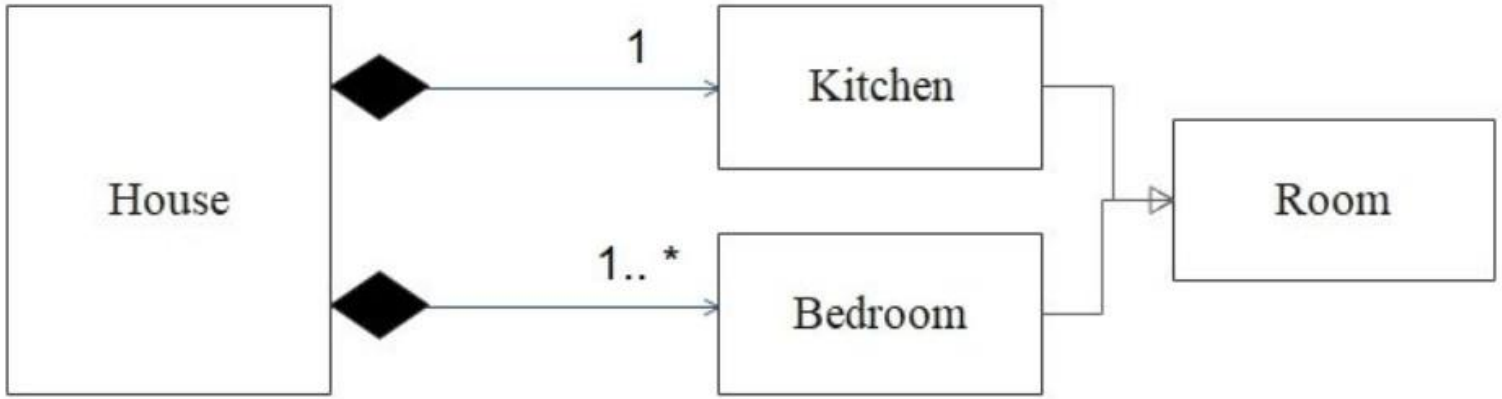
This represents a unilateral relationship between classes. One class is part of, or subordinate to, another. In this instance, the child and parent classes can exist independently.

Composition



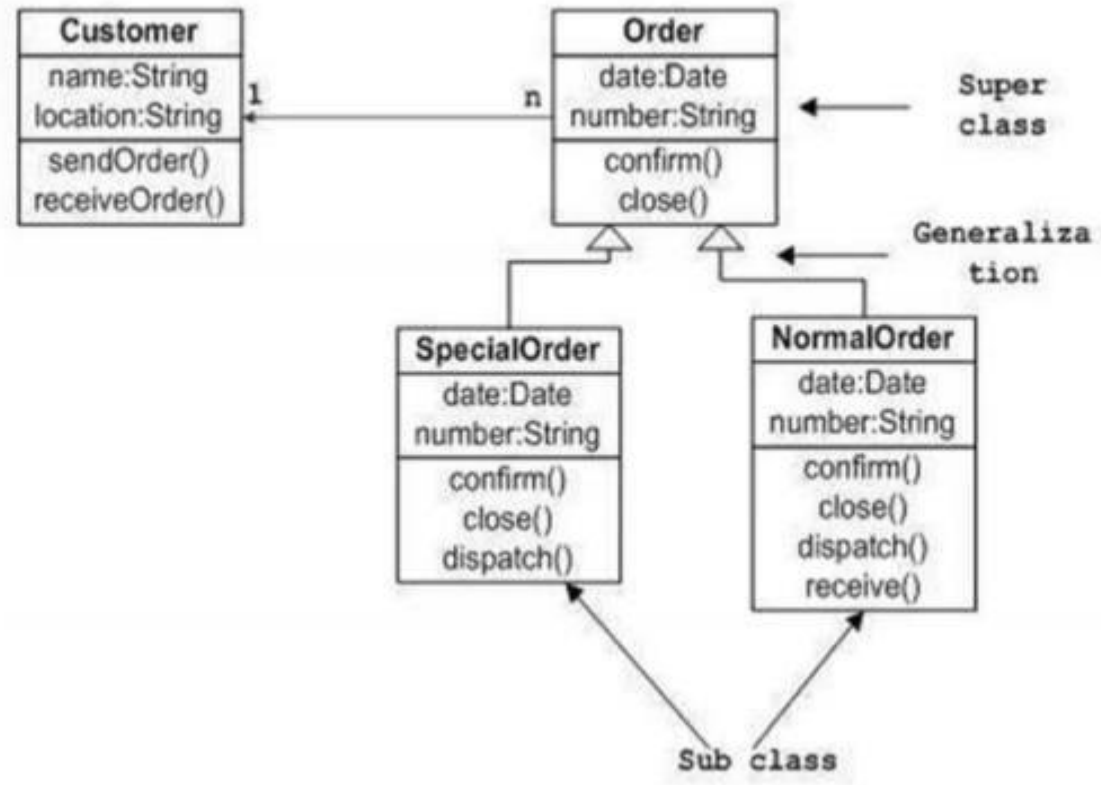
It is a form of aggregation where one class is dependent on another. One class is a part of the other. In this instance, the child classes and parent classes cannot exist independently.

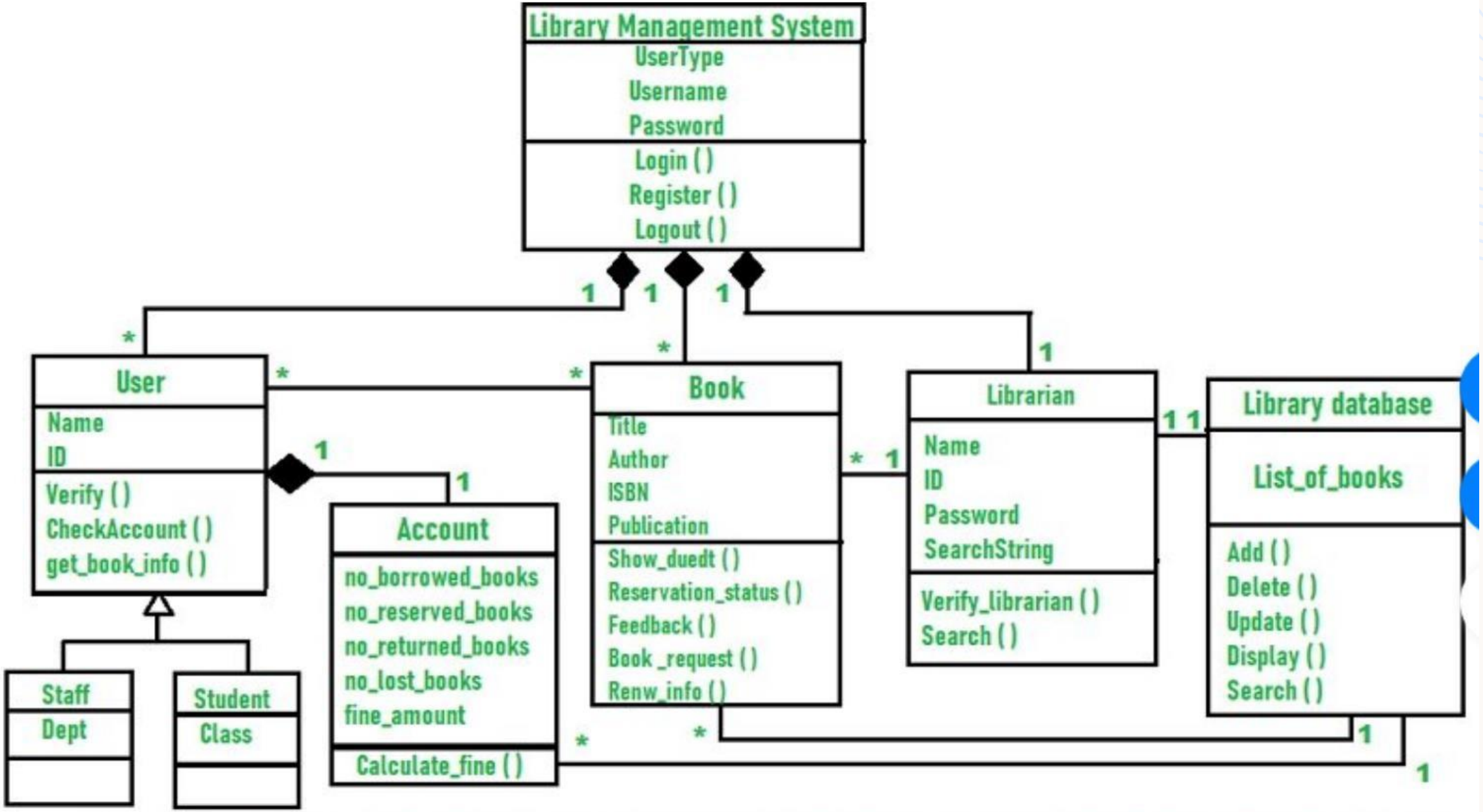
Multiplicity



Multiplicity is used to determine how many times an attribute occurs. In this example, this house has exactly one kitchen and at least one bedroom.

Sample Class Diagram





CLASS DIAGRAM FOR LIBRARY MANAGEMENT SYSTEM

THANK YOU