Mohawk College

Assignment 3-– Class

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1. A class is a set of objects that are similar in nature and have the same "classification".

A domain class is a class in the problem domain.

A class diagram has classes with attributes, associations, and multiplicity constraints.

1. An attribute is a descriptive piece of information about an object of things.

An identifier (or key) is used to uniquely determine an instance of an entity

A compound attribute is an attribute that consists of more than one atomic attribute through an object join or member terminals that use dot notation.

1. Relationships are usually shown through a series of lines and arrows and or diamonds and using cardinality to represent the number of possibilities available to both entities (cardinality)
2. Aggregation relationship

An aggregation relationship can be described in simple words as “**an object of one class can own or access the objects of another class**.” In an aggregation relationship, the dependent object remains in the scope of a relationship even when the source object is destroyed.

**Example**: Cars may have passengers but they come and go

1. Composition relationship

Composition is a **restricted form of Aggregation in which two entities are highly dependent on each other**. It represents part-of relationship. In composition, both entities are dependent on each other. When there is a composition between two entities, the composed object cannot exist without the other entity.

**Example**: A good example is that a room cannot exist without a house.

Student Payment System

Student

-name: string

-studentId: int

-numberCoursesEnrolled: int

+setPayment() (number of courses x 500$ per course)

Courses

-courseId: string

-courseDate: date

1…\*

Payment

-cardNumber: int

-expDate: date

-cvv: int

+getPayment() call out to card company to verify funds

1…\*