Class Diagram:

Representation of classes connection in a program.

How to represent a Class?

Class Name

Car

Class Behaviour/ methods

Class Characteristics/ variable

- StartEngine() : void

- StopEngine(): void

- Accelerate(): Void

- Break(): Void

+ Brand : String

+ Model: String

# EngineCC: Int

Access modifiers:

|  |  |  |  |
| --- | --- | --- | --- |
| Access Modifiers (Denote type in class diagram) | Within class | Child class | Outside the class |
| Public (+) | Yes | Yes | Yes |
| Protected (#) | Yes | Yes | No |
| Private (-) | Yes | No | No |

Abstract Class representation

<<abstract>>

Class Name

Car

Class Behaviour/ methods

Class Characteristics/ variable

- StartEngine() : void

- StopEngine(): void

- Accelerate(): Void

- Break(): Void

+ Brand : String

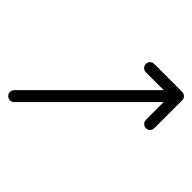
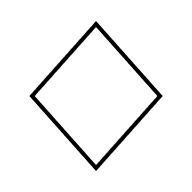
+ Model: String

# EngineCC: Int

How to represent class Associations:

Associations: Relation between classes

Types of associations:

* Class Association
  + Inharitance
    - It is kind of Is- a relationship.
    - Used to represent this relationship (from child to parent like from dog to Animal)
* Object Association
  + This is also known as composition
  + Composition is a Has a relationship
  + Types of it
    - Simple associations
      *  is used to represent this relationship
      * Simple has a relationship
    - Aggregation
      * Have multiple objects and work as a aggregator
      * Ex: a house object can have a room, bed, chair here house work as aggregator
      *  is used to represent this relationship (from child object to aggregator object like from sofa to house)
      * Here the objects in the Aggregator objects can exist independently
    - Composition
      * Have multiple objects and work as a aggregator
      * Here the objects in the Aggregator objects cannot exist independently
      * Ex: a chair object can have a arms, seat, wheels here chair work as aggregator but its object class cannot exist independently
      * is used to represent this relationship (from child object to aggregator object like from Arms to Chair)

