Constructors and Inheritance

Constructors and Inheritance

- An object of a derived class inherits attributes from the base class.
- A base class constructor is invoked when a derived class object is created.
  - ✦The base class constructor still handles initializations and other required items for the base class part of the object

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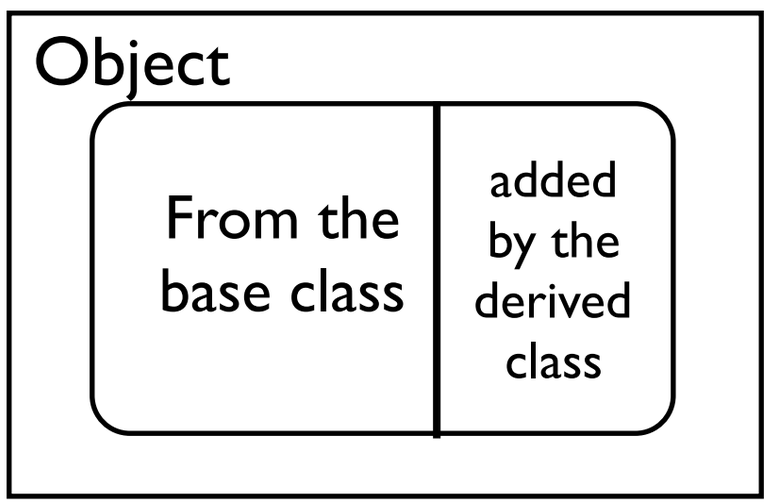
- If the derived class has a constructor of its own, this constructor takes care of the part of the object that is added by the derived class.



Rules for Constructors with Inheritance

- If the derived class has constructors but the base class has no constructors, then the appropriate derived class constructor is invoked whenever an object of that type is declared.

- If the derived class has no constructors but the base class has constructors, then the base class MUST have a default constructor. This default constructor executes whenever a derived class object is created.

More Rules for Constructors with Inheritance

- If the derived class has constructors and the base class has a default constructor, then the base class' default constructor is invoked whenever a derived class object is declared, unless the appropriate derived class constructor explicitly invokes some other base class constructor.

- There is little reason not to have a base class default constructor. It is strongly recommended that a base class constructor always be used (even if it is trivial).