Access Control in Inheritance

Access Control

Public Members and methods in the public section of a class are accessible to by internal methods, outside functions and methods, and child class methods. No control is provided.

Protected Members and methods in the protected section of a class are only accessible from internal class methods and child class methods. External functions and methods have no access to this section.

Private Members and methods in the private section of a class are only accessible by the implementing class' methods. Note; that means any inheriting classes will have no access to these members and methods.

Inheritance Types

Public Public inheritance implies that a child "is a" parent. All methods and members inherited from the parent maintain their access control level, i.e. public remains public, protected remains protected, private remains private.

Protected Protected inheritance hides the parent class from outside code, but enables access to descendents of the inheriting class. That means that public members and methods become protected, while protected and private members and methods remain at those respective levels of access.

Private Private inheritance is the most restrictive. In private inheritance, only the inheriting class has access to the members and methods of the parent class. That means that access control for all inherited members and methods gets changed to private.

Inheritance Table

Access\Inheritance	**public**	**protected**	**private**
public	public	protected	private
protected	protected	protected	private
private	private	private	private