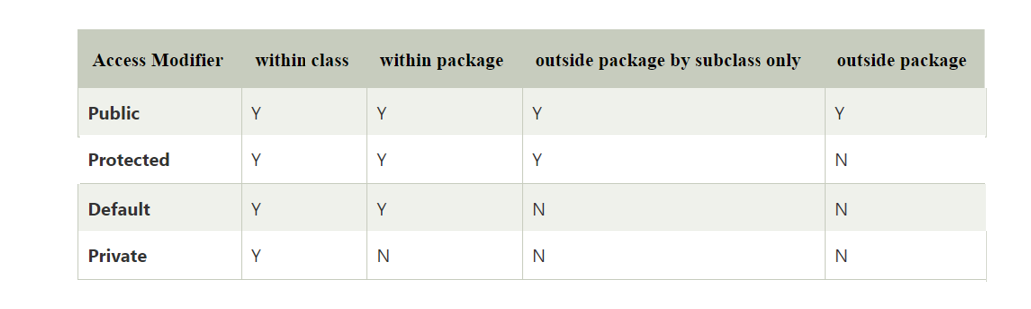
Access modifiers :

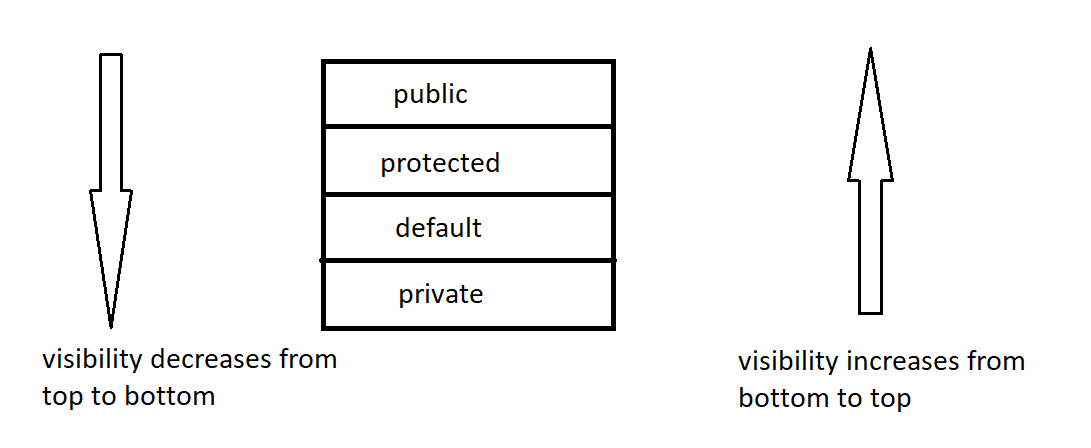
Access modifiers can be applied on class , variable ( can be used only on static variables , instance variables . Local variables cannot use access variables , since their scope only within their methods (or) block (or) loops (or) conditional statements ) constructor and method.

They cannot be applied on static block and java block.



Note : we cannot declare a top -level class as private (or ) protected .

// work on this after packages .



Note :

1. Methods which are inherited from parent , and child is using that methods without any change they are called as inherited methods.
2. Methods which are inherited from parent . and child is making some changes to that method they are called as overriding methods.
3. Methods which are present in the child class , but not present in parent class is called specialized methods.

Overloading : when two or more methods in same class having same name but different parameters is called overloading.

Overriding : when method signature (name and parameters) present in parent class and child class are same then it is called Overriding.

Note : overloading can be done in same class , it is achieved in inheritance also.

Overriding cannot be done in same class , it throws compile time error. It is achieved only during inheritance.

Eg: Inheritance\_Method\_Types

// go through the code

// practice uml for better understanding . draw diagram parent Object class and other child predefined classes .

// make a mini project on loan

Note : All the inbuilt classes have methods they have access specifiers public .

Rules to override method :

1. We cannot decrease the visibility of overridden method. But we can increase the visibility of overridden method.

Note : overriding method is present in parent class.

Overridden method is present in child class.

1. Return type of overriding method and overridden method must be same.

Note : For methods the return types can be class type also. if return type of method is class ,the method should return object of that return type class .

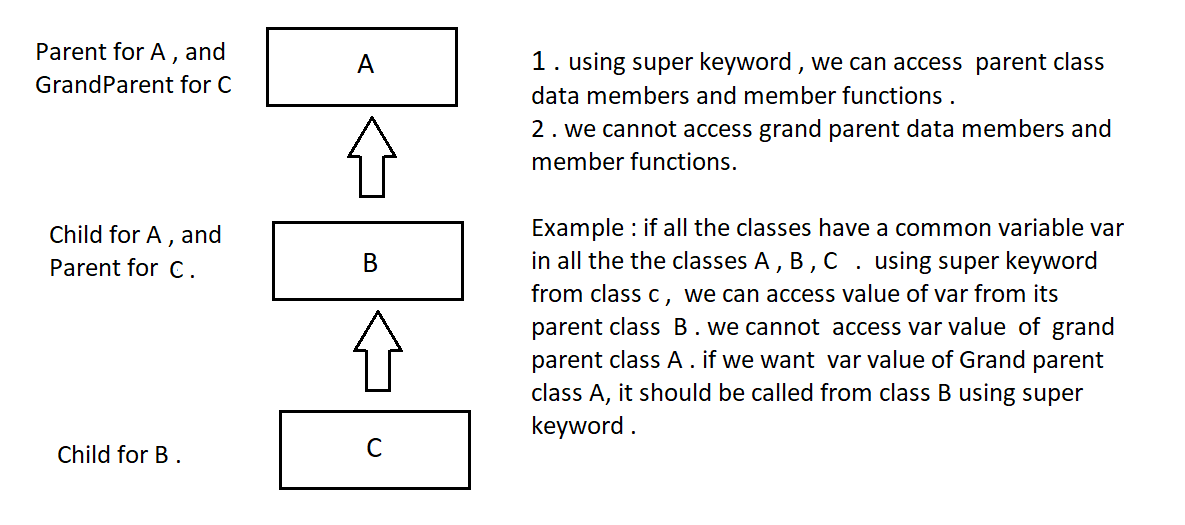
1. If there exist is-a relationship between returns types of overriding method and overridden method , then return types of overriding method and overridden method can be different. This is called co-variant return type.

Eg: Co\_Variant

1. Parameters of overridden method must be same as that of overriding method ,else it will treat as specialized method (considered as overloading ) .

Eg: Override\_Rule\_4

Note : super keyword is used to call parent class instance variable, if name of both variables is same.



Eg: Super\_Keyword\_Inheritance

Note: this keyword is used to access current class data members and member functions . while super keyword is used to access parent class data members and member functions .

final keyword

1. It can be applied to class , variable , method .
2. If a class is made inherited it cannot be inherited.
3. If a method is made final it can be inherited , but we cannot override it.
4. Final variable acts as constant we cannot change that value. it participates in inheritance ,but value can’t be changed.