

A property member in a derived class is said to override a property member in a base class when the derived class property member has the same name and kind (instance or static) as the base class property member. The type of an overriding property member must be a subtype (section 3.8.3) of the type of the overridden property member, or otherwise a compile-time error occurs.

Base class instance member functions can be overridden by derived class instance member functions, but not by other kinds of members.

Base class instance member variables and accessors can be overridden by derived class instance member variables and accessors, but not by other kinds of members.

Base class static property members can be overridden by derived class static property members of any kind as long as the types are compatible, as described above.

An index member in a derived class is said to override an index member in a base class when the derived class index member is of the same index kind (string or numeric) as the base class index member. The type of an overriding index member must be a subtype (section 3.8.3) of the type of the overridden index member, or otherwise a compile-time error occurs.

8.2.4 Class Types

A class declaration declares a new named type (section 3.5) called a class type. Within the constructor and member functions of a class, the type of `this` is the instance type (section 3.5.1) of this class type. The class type has the following members:

- A property for each instance member variable declaration in the class body.
- A property of a function type for each instance member function declaration in the class body.
- A property for each uniquely named instance member accessor declaration in the class body.
- A property for each constructor parameter declared with a `public` or `private` modifier.
- An index signature for each instance index member declaration in the class body.
- All base class instance type property or index members that are not overridden in the class.

All instance property members (including those that are private) of a class must satisfy the constraints implied by the index members of the class as specified in section 3.7.4.

In the example

```
class A {  
    public x: number;  
    public f() { }  
    public g(a: any) { return undefined; }  
    static s: string;  
}
```