**Interface** : looks like a class but it is not a class. An interface can have **methods and variables** just like a class, but the methods declared in interface are by default **abstract** (only method signature, no body i.e. without code). Also, the variables declared in an interface are **public, static & final** by default. So, in general words, Interface is collection of declarations (only constants and abstract methods)

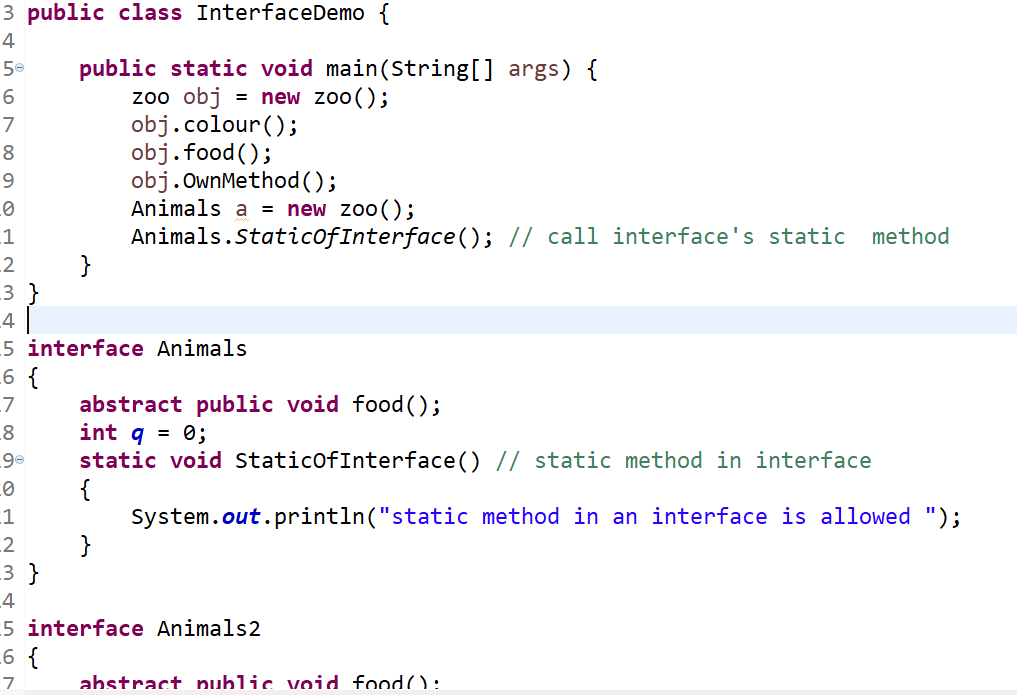
It is compulsory for a non abstract class to implement **all** methods of an interface that it is implementing.

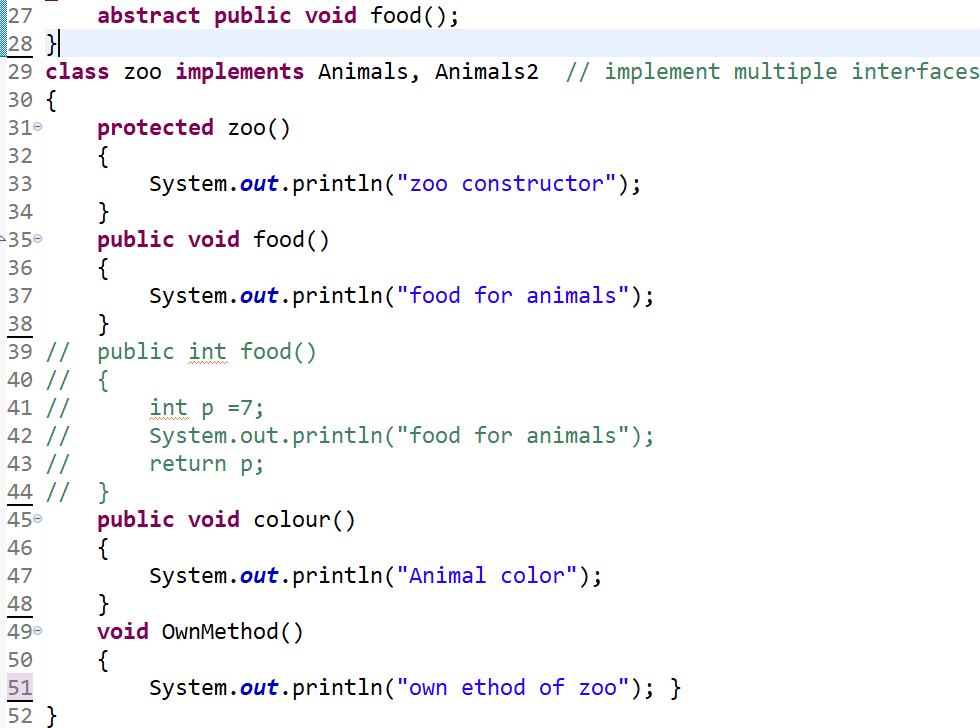
If a class partially implement interface needs to be declared as **abstract**.

* You **cannot** **instantiate** an interface.
* An interface **does not** contain any **constructors** because interface is not a class.
* **All** of the methods in an interface are abstract.
* the **variables** declared in an interface are **public, static & final** by default
* Interface **methods** are by default **abstract** and **public**
* From **Java 8** you can define **static** methods in interfaces in addition to default methods.
* An interface can extend **multiple** interfaces. Also, a class can implement multiple interfaces. (Java does not support multiple inheritance, but we can achieve it with multiple interfaces.)
* A class can implement **more than one** interface **at a time**. (in this way we can achieve multiple inheritance in java). But, a class can extend **only one** class.
* An interface is not extended by a class; it is **implemented** by a class.
* An interface can extend another interface, in a similar way as a class can extend another class.
* IMP : Parent child references : if parent’s reference and child’s object created, then parent’s reference cannot access child's local methods.
* **Static** : **An abstract method cannot be static**. If you declare a method in a class abstract to use it, you must override this method in the subclass. But, overriding is not possible with static methods. So, interface can’t contain abstract static method.
* **Final** : Interface can’t be final, because an interface needs to be implemented by the other class and if it is final, it can't be implemented by any class.
* **Private & Protected** : We do not declare interface members protected or private, they are implicitly abstract and public.

**Static method in interface :** It should be fully implemented method only.Since it is static, we call it as **: interfacename.methodname**

**Functional interfaces :** A functional interface is an interface that contains only one abstract method. It can have any number of default, static methods but can contain only one abstract method.





What is a marker interface?

* A Marker interface can be defined as the interface which has no data member and member functions. For example, Serializable, Cloneable are marker interfaces. Example:

**public** **interface** Serializable{

}

### Can we define private and protected modifiers for the members in interfaces?

### No, they are implicitly public.