

What is the difference between an abstract class and an interface? When is it appropriate to use an abstract class or an interface?

Both abstract classes and interfaces are templates which cannot be instantiated. However, interfaces can have only abstract methods, while abstract classes can have both abstract and non-abstract methods. Furthermore, variables in interfaces are final, static, and public by default, while abstract classes can also have non-final, non-static, and non-public variables. Interfaces specify methods to be included by classes, while abstract classes dictate both extendable non-abstract methods and abstract methods to be implemented. It is appropriate to use an abstract class when methods or fields must be shared or implemented by subclasses of a parent class with no necessary instantiations. An interface is appropriate to specify when methods or variables must be included by child classes for functionality.