LAB07 – ABSTRACT CLASSES AND INTERFACES

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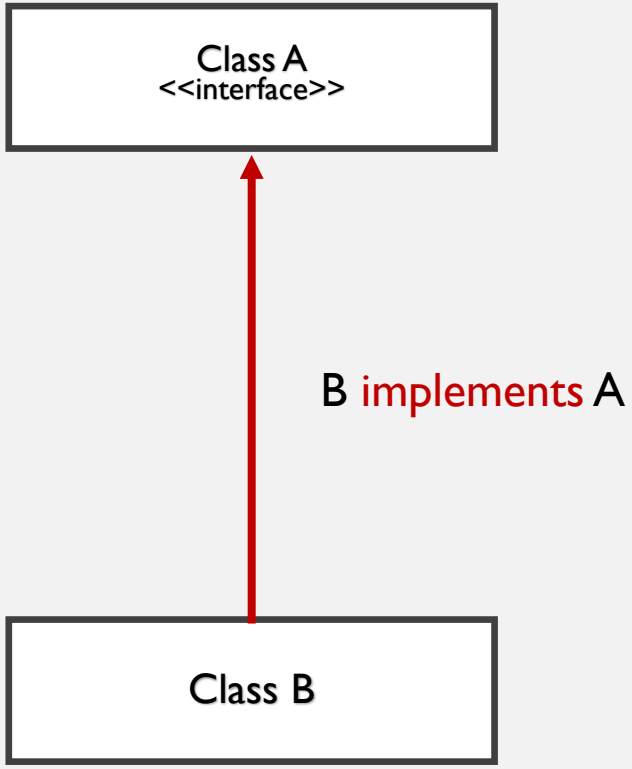
INTERFACES

- Definition
- An interface is a **contract** that specifies the methods which needs to be implemented by the class implementing the interface.
- Interface is like a **template**.
- The interface in Java is a mechanism to achieve **abstraction**.
- How to use interfaces in Java?
- The keyword in Java is **implements**.

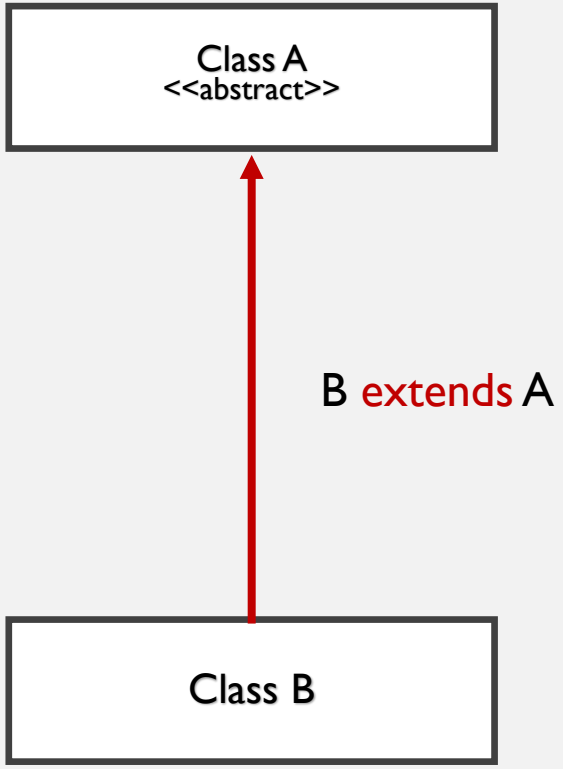


INTERFACES

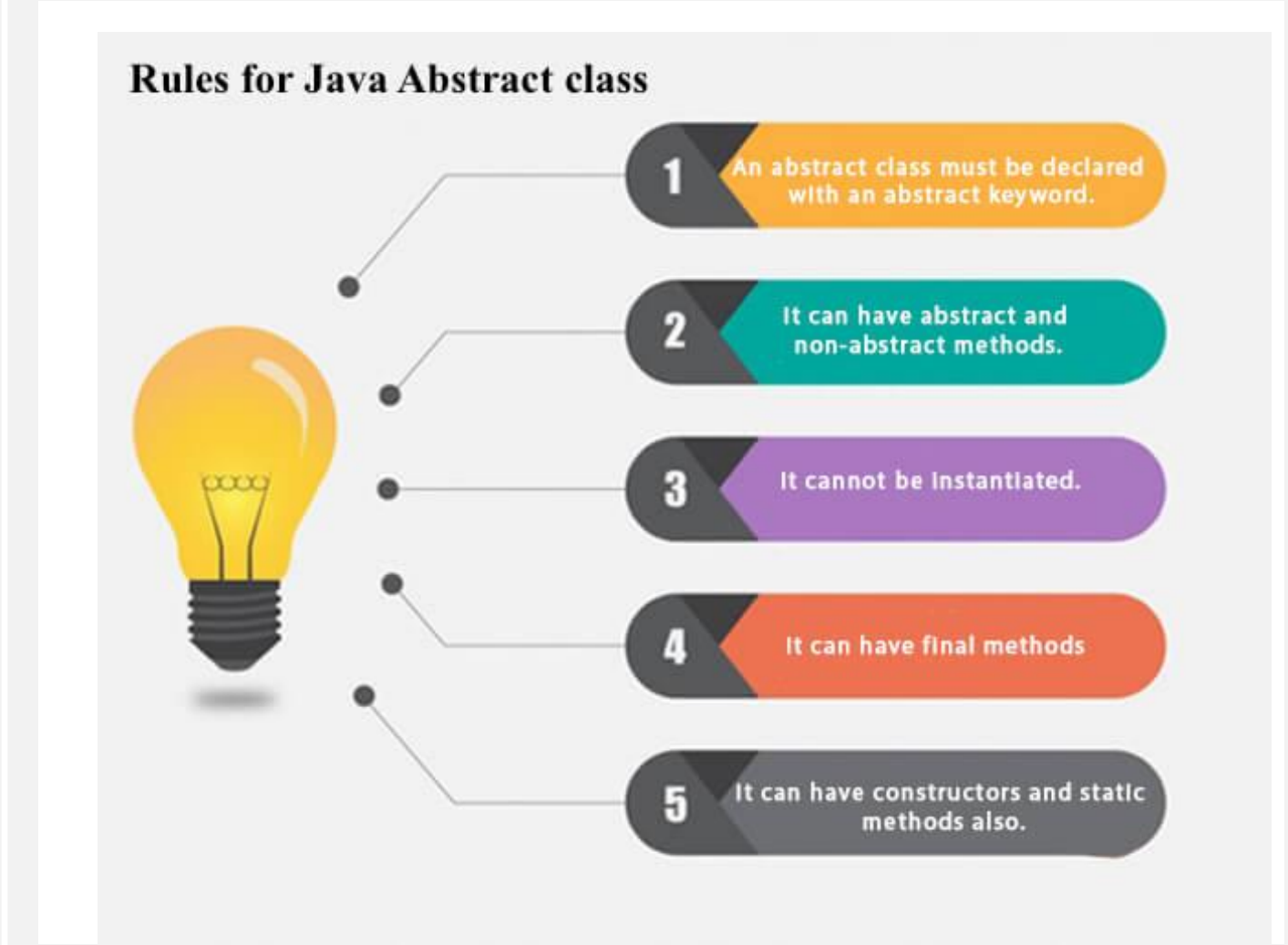
- It **cannot be instantiated** by itself.
- Has only **constant** fields
- **Declare methods**, not implement them
- Since **Java 8**, we can have default and static methods in an interface.
- Since **Java 9**, we can have private methods in an interface.

ABSTRACT CLASS

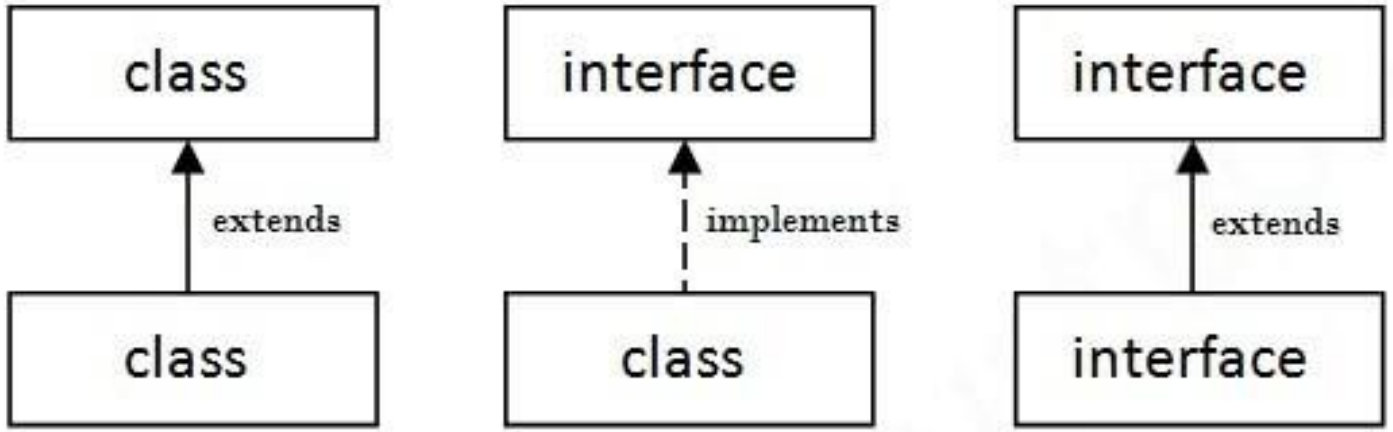
- Definition
- An abstract class is a generic class.
- Abstract classes are similar with both a **normal class** and an **interface**.
- It must have at least an **abstract method**.
- How to use abstract in Java?
- The keyword in Java is **extends**.



ABSTRACT CLASS



INHERITANCE



INHERITANCE VS ABSTRACT

	Interface	Abstract Class
Constructors	✗	✓
Static Fields	✓	✓
Non-static Fields	✗	✓
Final Fields	✓	✓
Non-final Fields	✗	✓
Private Fields & Methods	✗	✓
Protected Fields & Methods	✗	✓
Public Fields & Methods	✓	✓
Abstract methods	✓	✓
Static Methods	✓	✓
Final Methods	✗	✓
Non-final Methods	✓	✓
Default Methods	✓	✗

QUESTIONS