**Java Interface Interview Questions and Programming with Answers**

**1. What is an interface in Java?**

Ans: An interface in Java is a mechanism that is used to achieve complete abstraction. It is basically a kind of class that contains only constants and abstract methods.

**2. Can we define private and protected modifiers for data members (fields) in interfaces?**

Ans: No, we cannot define private and protected modifiers for variables in interface because the fields (data members) declared in an interface are by default public, static, and final.

**3. Which modifiers are allowed for methods in an Interface?**

Ans: Only abstract and public modifiers are allowed for methods in interfaces.

**4. Suppose A is an interface. Can we create an object using new A()?**

Ans: No, we cannot create an object of interface using new operator. But we can create a reference of interface type and interface reference refers to objects of its implementation classes.

**5. Can we define an interface with a static modifier?**

Ans: Yes, from Java 8 onwards, we can define static and default methods in an interface. Prior to Java 8, it was not allowed.

**6. Suppose A is an interface. Can we declare a reference variable a with type A like this: A a;**

Ans: Yes.

**7. Can an interface extends another interface in Java?**

Ans: Yes, an interface can extend another interface.

**8. Can an interface implement another interface?**

Ans: No, an interface cannot implement another interface.

**9. Is it possible to define a class inside an interface?**

Ans: Yes, we can define a class inside an interface.

**10. Can an interface extend multiple interfaces?**

Ans: Yes, an interface can extend multiple interfaces.

**11. Can an interface has instance and static blocks?**

Ans: No.

**12. What happens if a class has implemented an interface but has not provided implementation for that method defined in Interface?**

Ans: The class has to be declared with an abstract modifier. This will be enforced by the Java compiler.

**13. Why an Interface method cannot be declared as final in Java?**  
Or, Can a method within an interface be marked as final?

Ans: Not possible. Doing so will result the compilation error problem. This is because a final method cannot be overridden in java. But an interface method should be implemented by another class.

So, the interface method cannot be declared as final. The modifiers such as public and abstract are only applicable for method declaration in an interface.

**14. Can an interface be final?**

Ans: No. Doing so will result compilation error problem.

**15. Why an interface cannot have a constructor?**

Ans: Inside an interface, a constructor cannot be called using super keyword with hierarchy.

**16. Why an Interface can extend more than one Interface but a Class can’t extend more than one Class?**

Ans: We know that Java doesn’t allow multiple inheritance because a class extends only one class. But an Interface is a pure abstraction model. It does not have inheritance hierarchy like classes.

Therefore, an interface allows to extend more than one Interface.

**17. What is the use of interface in Java?**  
Or, why do we use an interface in Java?

Ans: There are many reasons to use interface in java. They are as follows:

a. An interface is used to achieve fully abstraction.  
b. Using interfaces is the best way to expose our project’s API to some other project.  
c. Programmers use interface to customize features of software differently for different objects.  
d. By using interface, we can achieve the functionality of multiple inheritance.

**18. Is it necessary to implement all abstract methods of an interface?**

Ans: Yes, all the abstract methods defined in interface must be implemented.

**19. Can we define a variable in an interface? What type it should be?**

Ans: Yes, we can define variable in an interface that must be implicitly static and final.

**20. Can we re-assign a value to a variable of interface?**

Ans: No, variables defined inside the interface are static and final by default. They are just like constants. We can’t change their value once they got.

**21. What is the difference between abstract class and interface in Java?**

Ans: Refer to this tutorial: [12 Difference between Abstract class and Interface in Java](https://www.scientecheasy.com/2020/07/difference-between-abstract-class-interface.html/)

**22. What is the difference between class and interface in Java?**

Ans: Refer to this tutorial: [Difference between Class and Interface in Java](https://www.scientecheasy.com/2020/07/difference-between-class-interface.html/)

**23. What is a Marker Interface in Java?**

Ans: An Interface that doesn’t have any data members or methods is called marker interface in java. For example, Serializable, Cloneable, Remote, etc.

**24. What is a Nested interface?**

Ans: An interface declared inside another interface is called nested interface. By default, it is static in nature. It is also known as static interface.

**25. Can we reduce the visibility of interface method while overriding?**

Ans: No, while overriding any interface methods, we must use public only. This is because all interface methods are public by default. We cannot reduce the visibility while overriding them.

**26. Can we define an interface inside a method as local member?**

Ans: No, we can’t define an interface as local member of a method like local inner class.