What is Interface?

\*Technical:\*

- only contain method signatures and fields.

- cannot contain an implementation; so, there can be no constructor.

- cannot create object for interface

\*Selenium:\*

Some examples here:

- WebDriver, WebElement, Alert, TargetLocator

\*Project:\*

In our customized selenium automation framework, we implemented interface with:

- WdMethods (abstract methods for Selenium)

12. what is Inheritance?

\*Technical:\*

- ability in Java for one class/interface to inherit from another class/interface

- keyword: extends.

- primary use: reusability.

Types - Multi level & Multiple (not allowed due to ambiguity)

\*Selenium:\*

Some examples here:

- ChromeDriver(C) extends RemoteWebDriver(C)

- NoSuchElementException(C) extends NotFoundException(C) extends WebDriverException(C)

- WebDriver(I) extends SearchContext(I)

\*Project:\*

In our customized selenium automation framework, we implemented inheritance by:

- Testcases(C) extends ProjectMethods(C) extends SeMethods(C) extends Reporter(A)

Why java will not support multiple Inheritance?

The problem with multiple inheritance is that two classes may define different ways of doing the same thing, and the subclass can't choose which one to pick.

**Java supports multiple inheritance** through interfaces only. A class **can** implement any number of interfaces but **can** extend only one class. **Multiple inheritance is not supported** because it leads to deadly diamond problem.

What is interface in  java?

An interface in java is a blueprint of a class that have static constants and abstract method by default.

Why we use interface in java?

In java we use interface so that we can achieve fully abstraction because through abstract class we can't achieve full abstraction.

Can we create instance of interface?

No, We cannot create object of both an interface and abstract class.

Can we declare abstract method as static?

No, We can't use static keyword with abstract method.

Can we declare abstract method as final?

No, We cannot use final keyword with abstract class.

Can we declare abstract method as private?

No, We cannot declare abstract method as private.

Can we use public, protected and default modifiers with abstract method?

Yes, We can use public, protected and default modifiers with abstract method.

Can we declare local inner class as abstract?

Yes, We can declare local inner class as abstract.

Is Method in interface by default public and abstract?

Yes, It is true.

Data member in interface are by default public, static, and final.

Yes, It is true.

Can abstract method declaration include throws clause?

Yes.

What will happen if we do not override all the abstract methods in sub-class?

It will throw compile-time error. We have to override all the abstract method in sub-class. If you do not want to override all the abstract method in sub-class then you have to make your sub-class as abstract class.