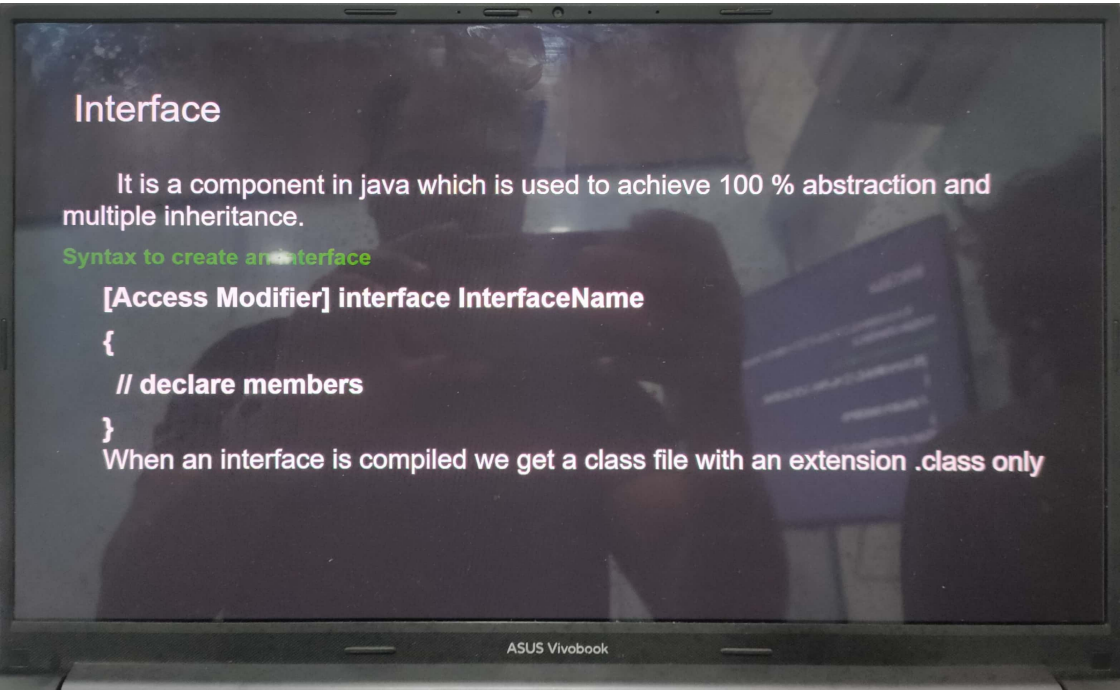
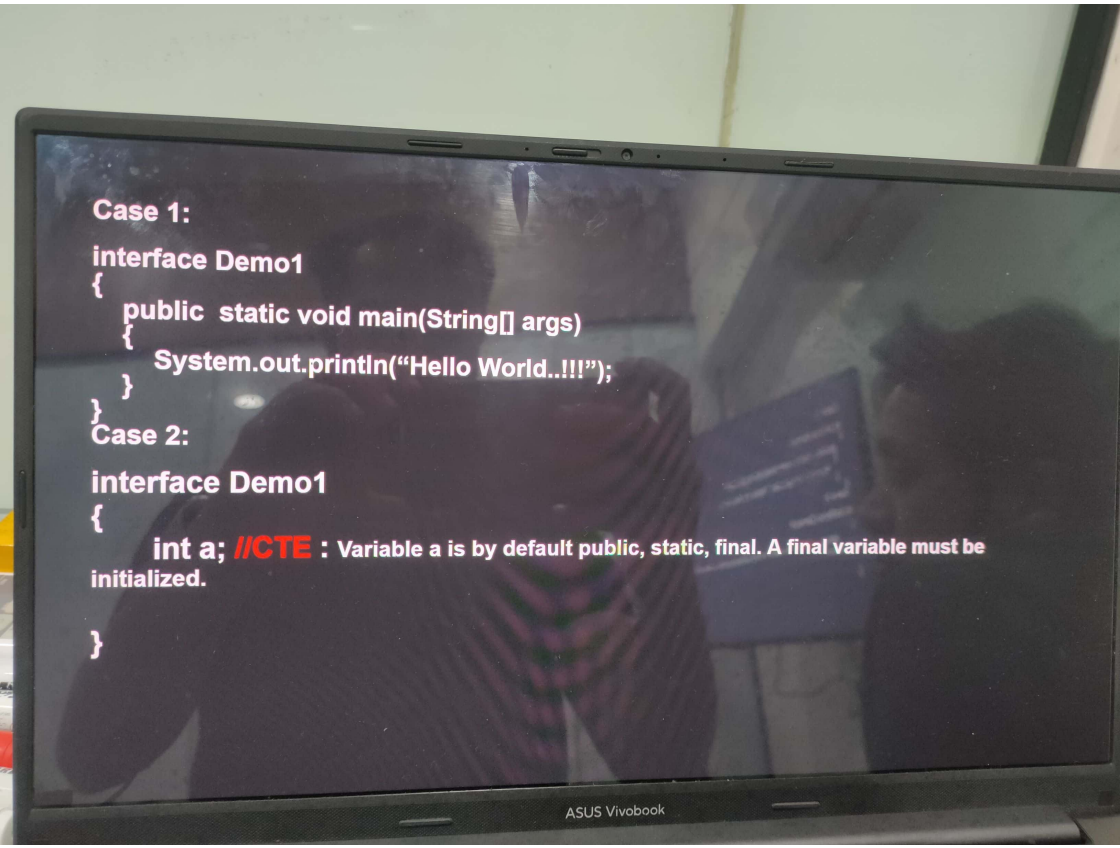
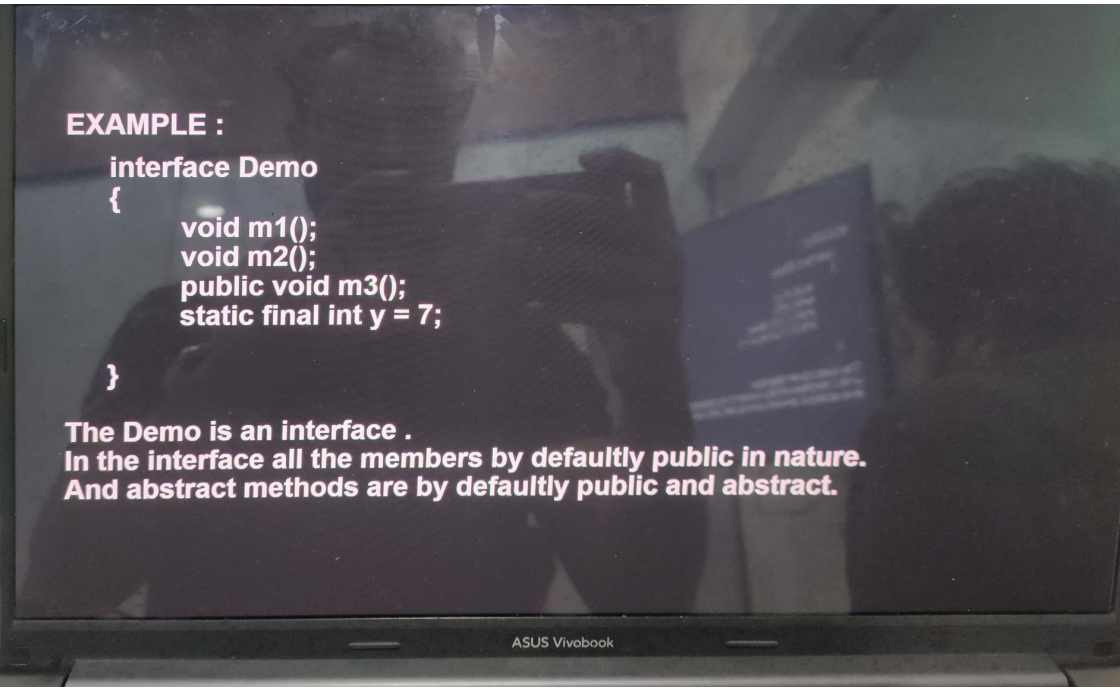




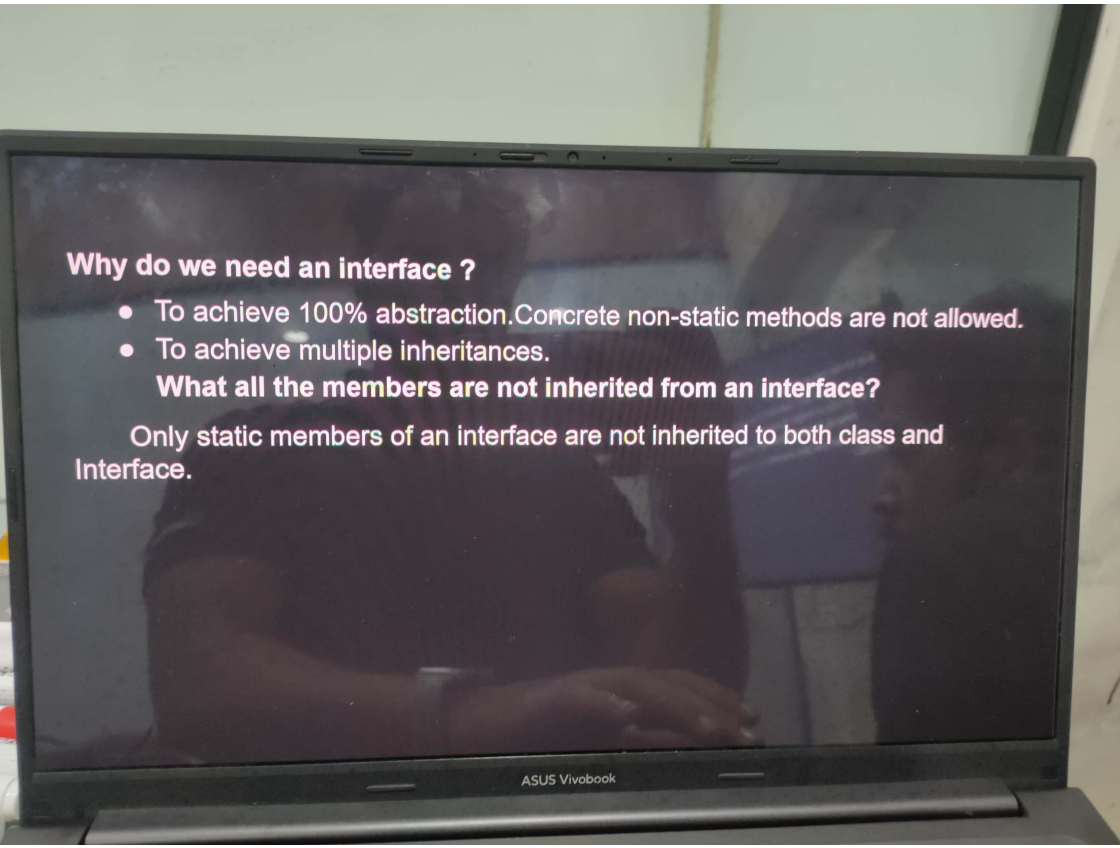


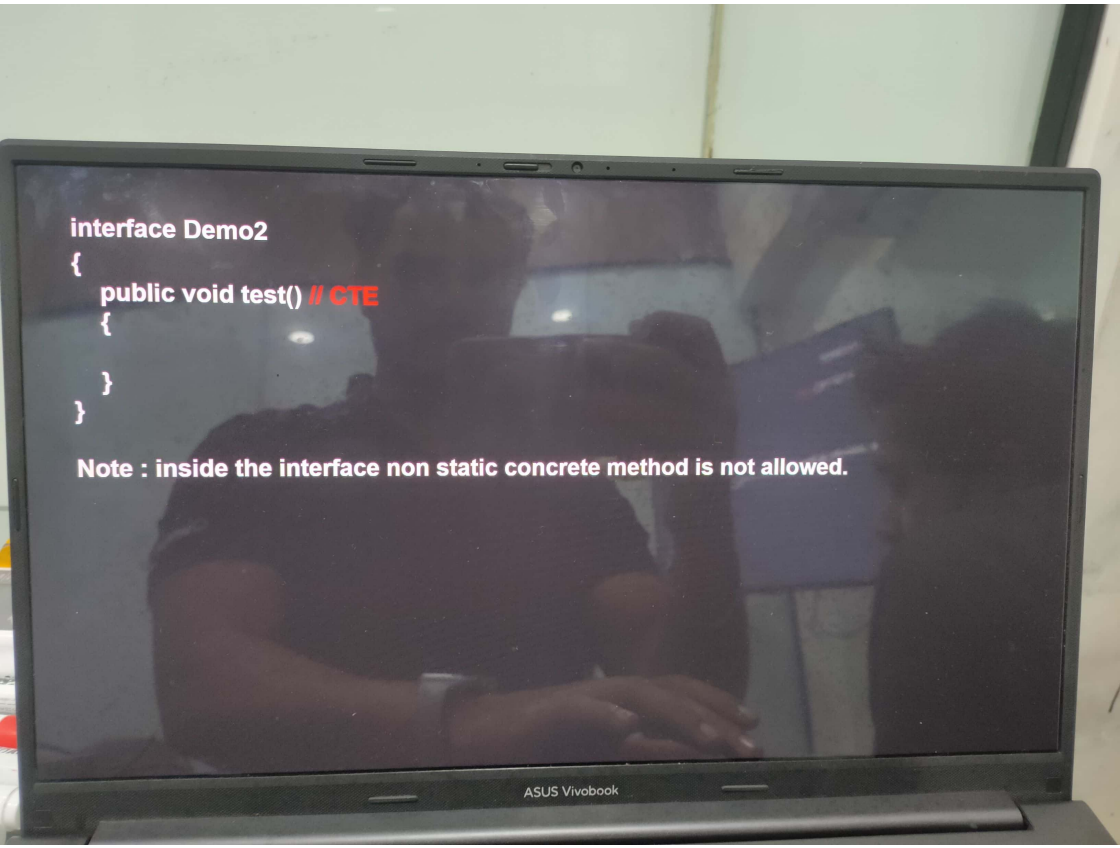
What all are the members the can be declared in an interface?

MEMBERS	CLASS	INTERFACE
Static variables	Yes	Yes, but only final static variables
Non-static variables	Yes	No
Static methods	Yes	Yes, From JDK 1.8 v. NOTE: They are by default public in nature
Non-static methods	Yes	Yes but we can have only abstract non-static methods NOTE : Non-static methods are by default • public • abstract
Constructors	Yes	No
Initializers (Static & non-static block)	Yes	No

NOTE:

In interface, all the members are by default have public access modifier.





INHERITANCE WITH RESPECT TO INTERFACE:

An Interface can inherit any number of interfaces with the help of an extends keyword.

EXAMPLE: Single level inheritance

```
interface I1
{
}
interface I2 extends I1
{
}
```

NOTE :

The interface which is inheriting an interface should not give implementation to the abstract methods.It should be given by any of the child class.

Note : we can't create the object for the interface , but we can create the reference variable of the interface and store the child type object reference.

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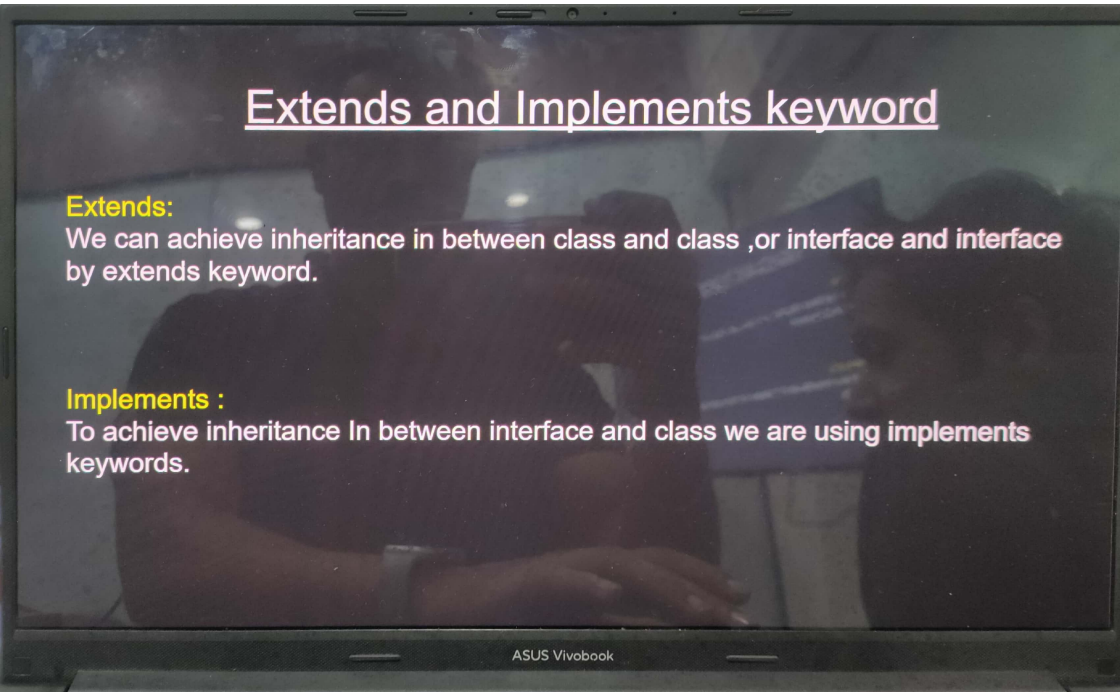

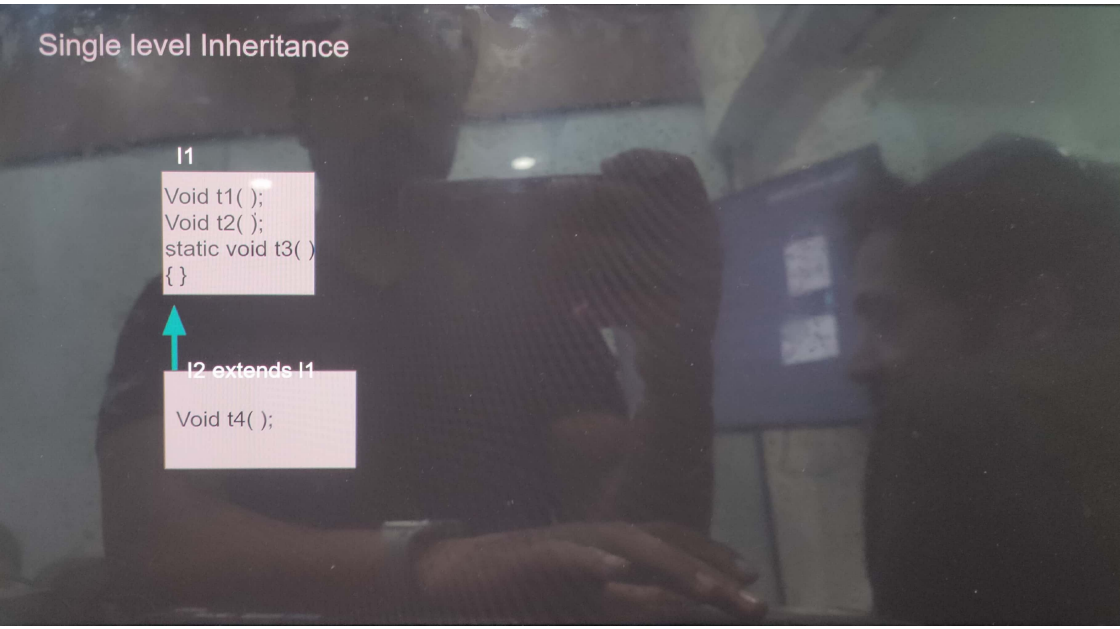

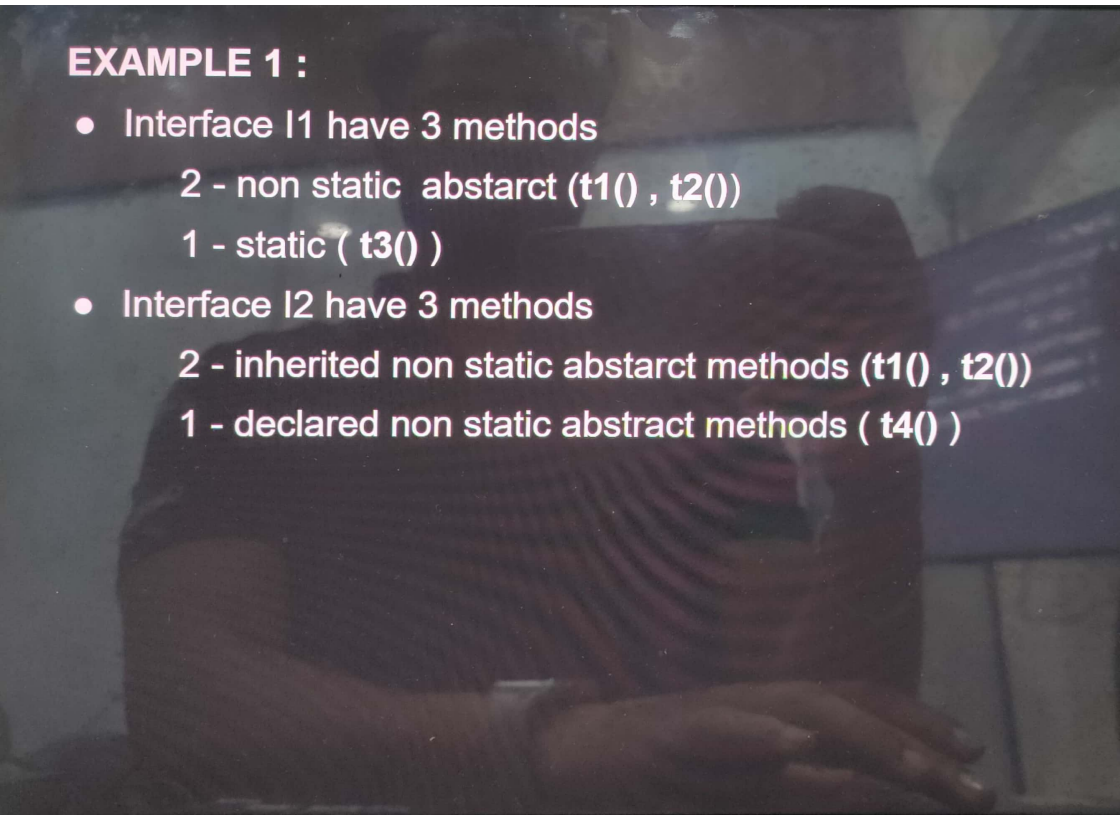

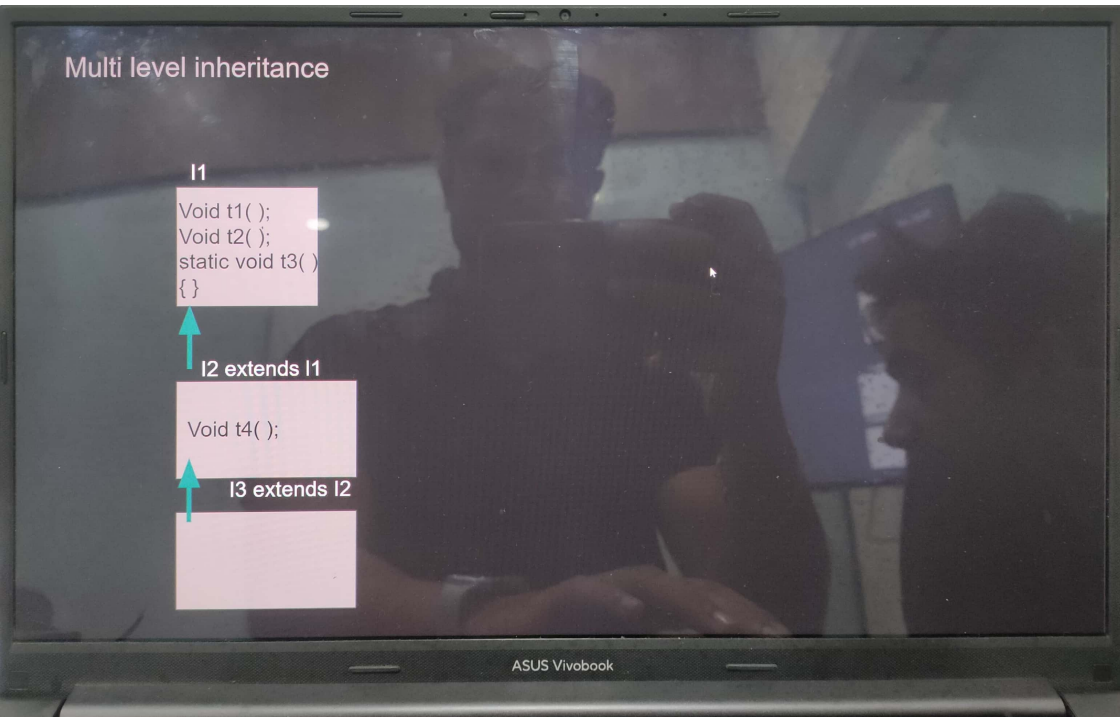

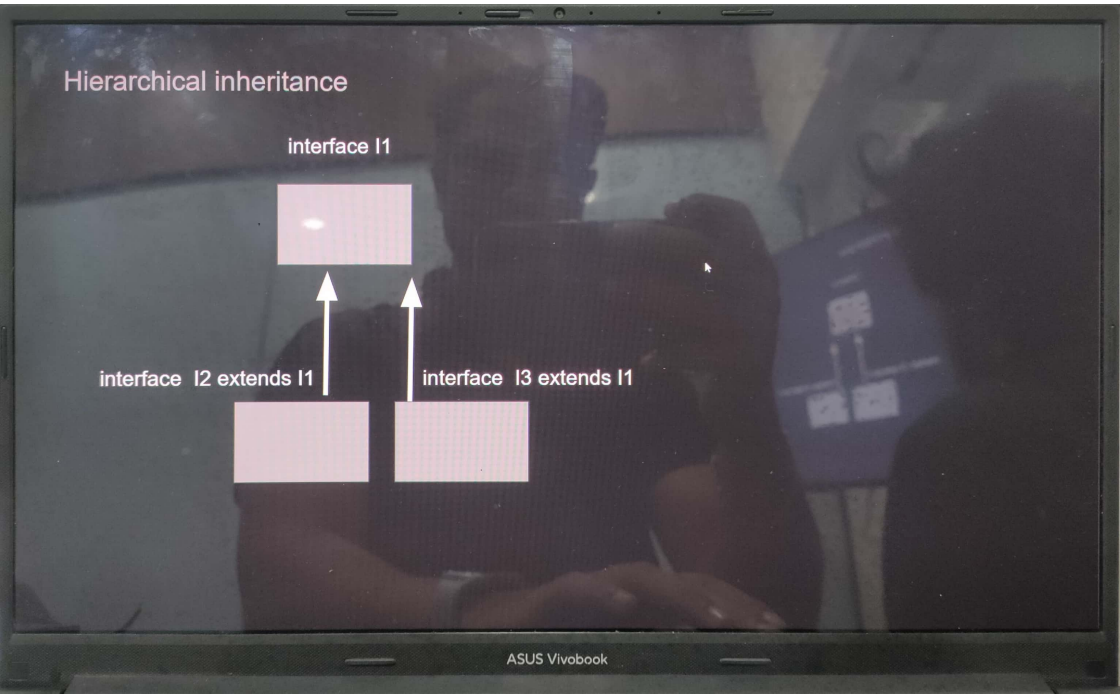

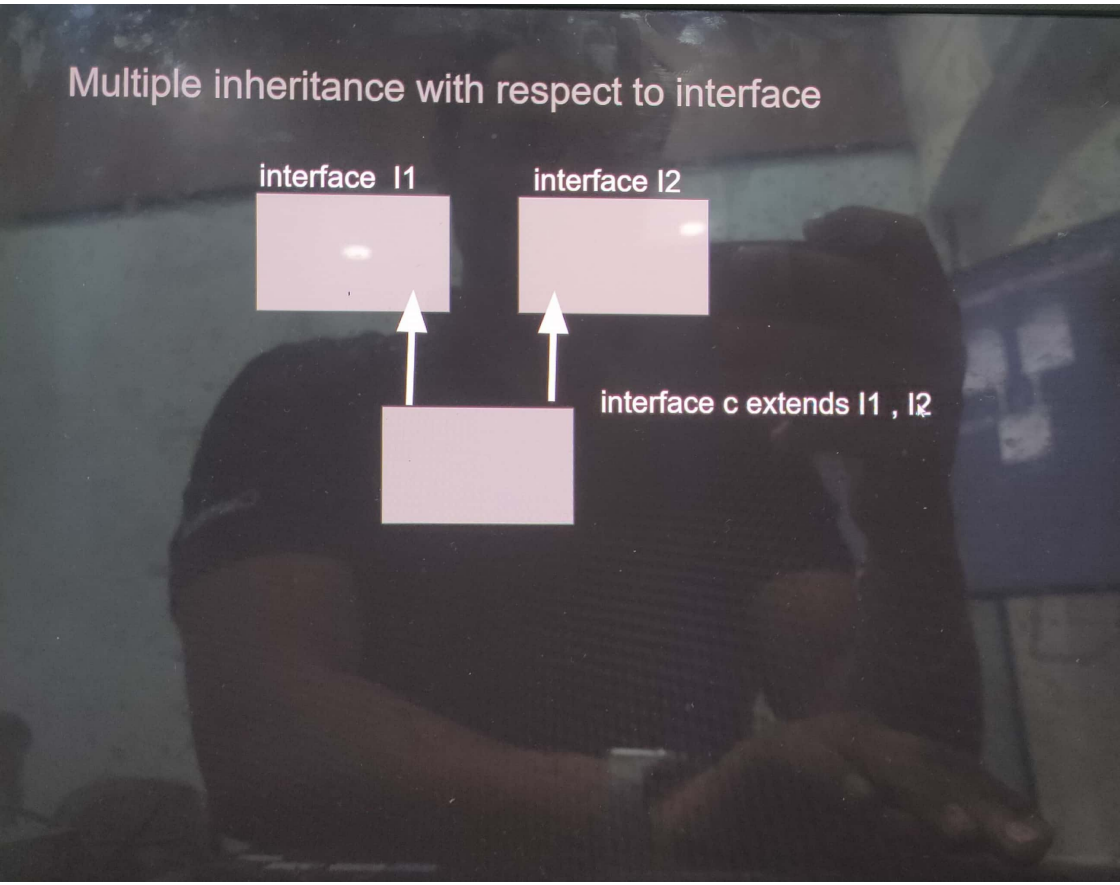

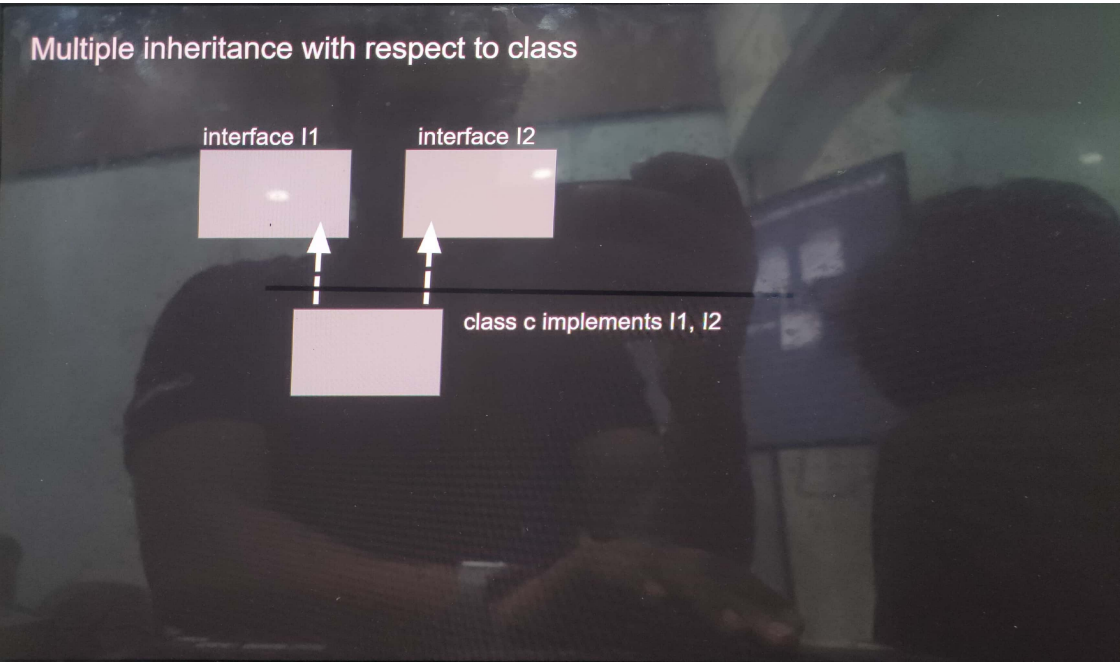

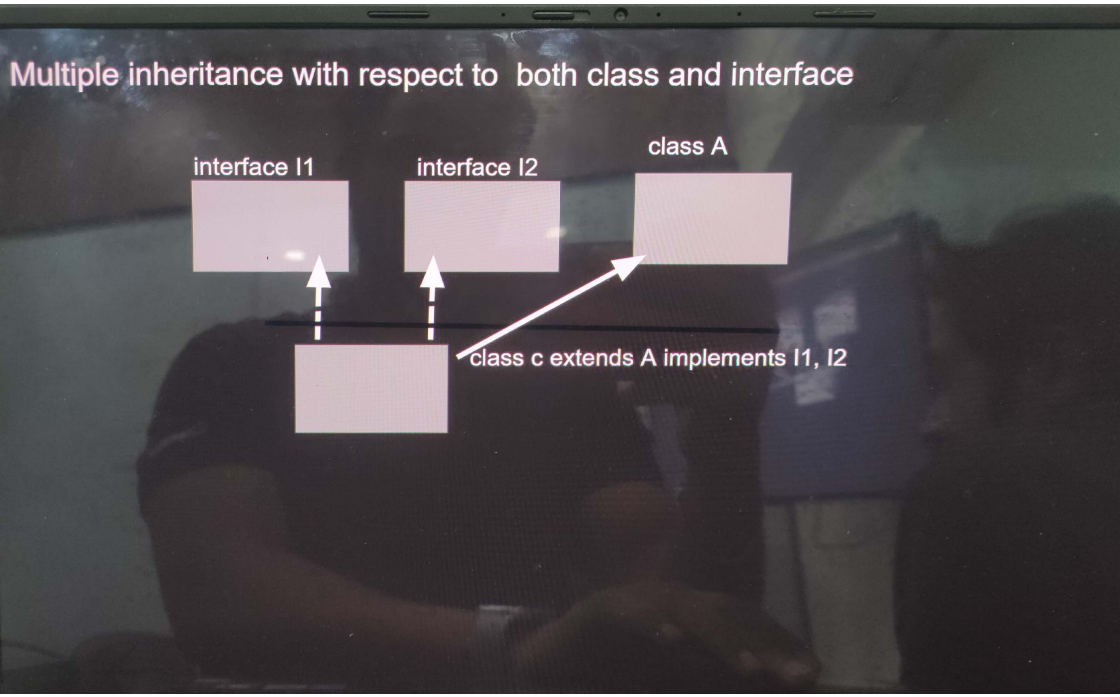

NOTE:

With respect to interface there is no diamond problem.

The reason,

- They don't have constructors.
- Non-static methods are abstract (do not have implementation)
- Static methods are not inherited.

INHERITANCE OF AN INTERFACE BY THE CLASS :

- Class can inherit an interface with the help of implements keywords.(class can be child of interface)
- Class can inherit more than one interface.(One class can have more than one interface as parent)
- Class can inherit a class and an interface at a time.

Note : A class can't be a Parent of interface.

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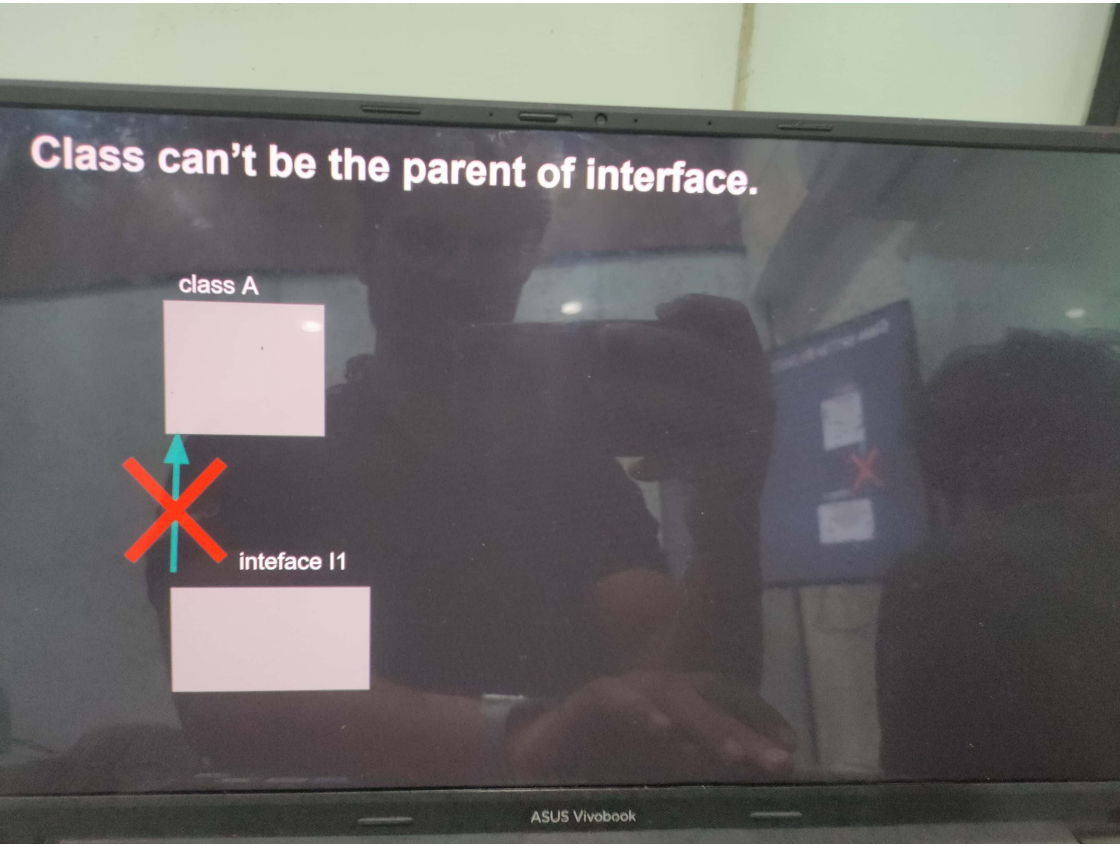


Class can't be the parent of the interface because in every class by defaultly 11 non static concrete methods of object class are there. If we make class will be parent , then all methods will be inherited to the child but inside the interface concrete non static methods are not allowed.

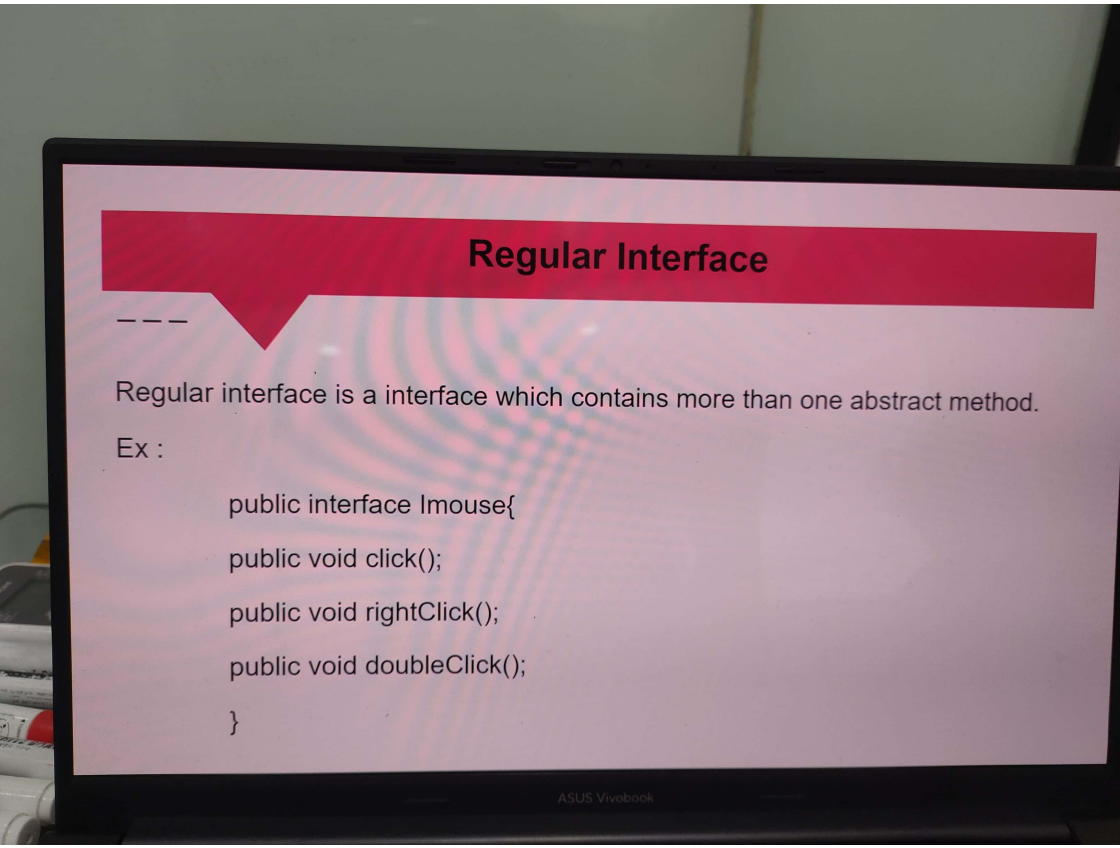
NOTE:

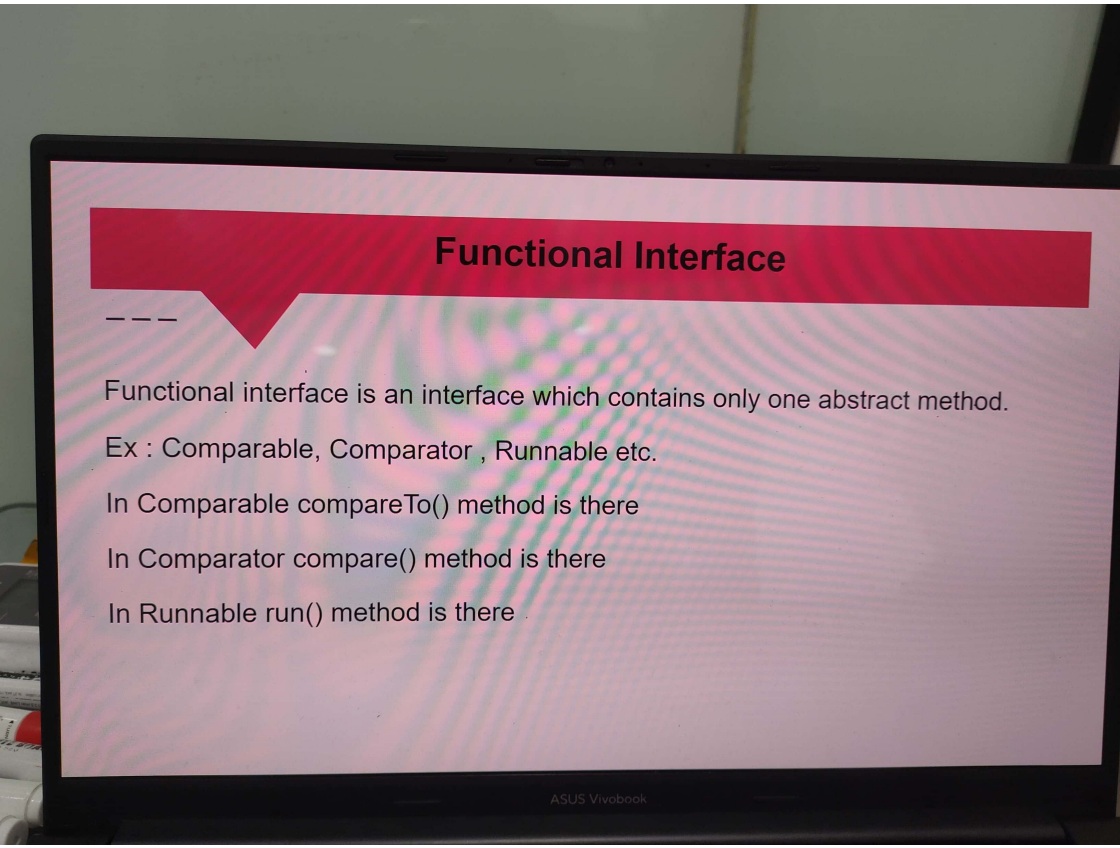
- If a class inherits an interface then it should give implementation to the abstract non-static methods of an interface.
- If the class is not ready to give implementation to the abstract methods of an interface then it is mandatory to make that class an abstract class.
- The next level of child class is responsible for giving implementation to the rest of the abstract methods of an interface.

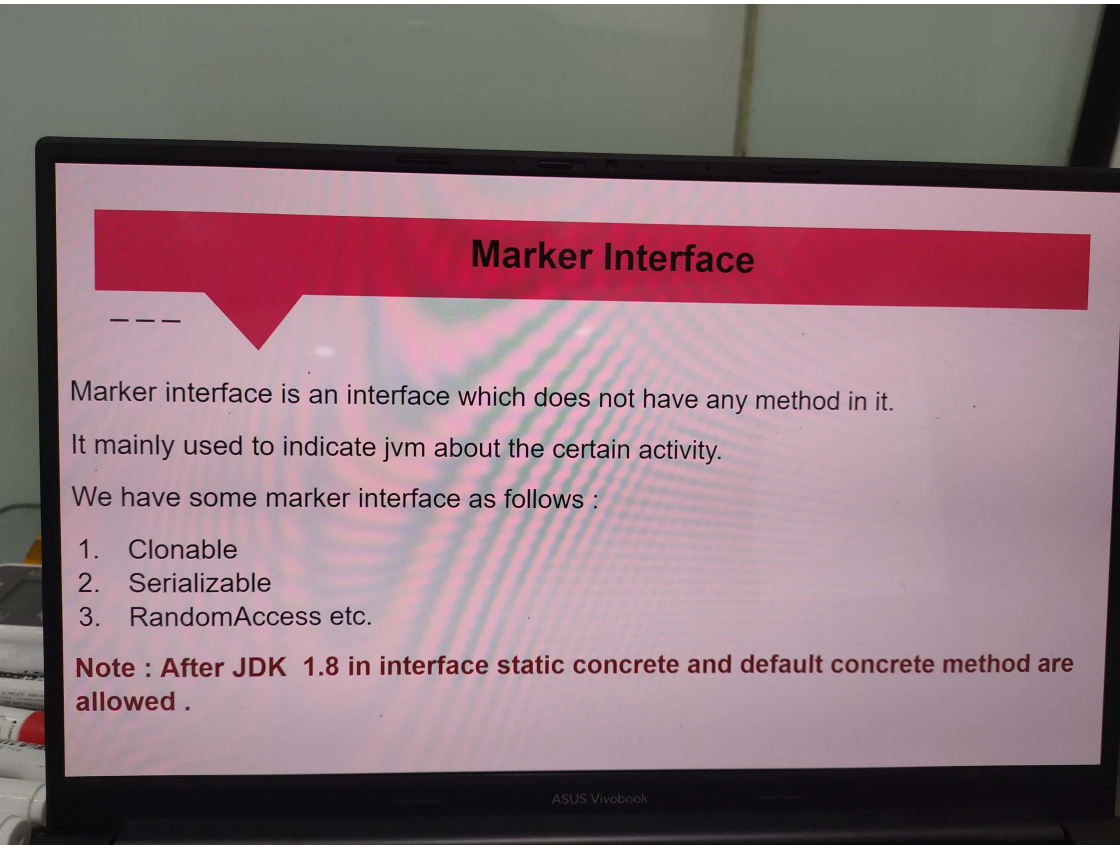
Type of Interface

There are 3 types of interface.

1. Regular Interface
2. Functional Interface
3. Marker Interface







The Exception is an unexpected problem which occurs during the execution of the program (i. E nothing but RunTime). When an exception occurs , the program execution stops unexpectedly(this is known abrupt Stop of the program).

Note:

1. Every Exceptions in java is one one of the child of Throwable class , that's why we can say that every exceptions in java 'Throwable Type' .
2. Every Exceptions occur because of one Statement.
3. A statement will throw an exception during unexpected problem (i.e nothing but abnormal situation).
4. All the exception in java, is one one Class .(can be predefined or user defined).