

• Interface in JAVA :-

- In JAVA interface is a group of related methods with empty bodies.
- There is no need to write abstract keyword before declaring method in an interface because an interface is implicitly abstract.
- way to achieve abstraction in JAVA.
- we use interface keyword to declare an interface.
- we use implement keyword in order to implement interface.
- object cannot be created hence no constructor.

eg - interface Bicycle {

 void apply-brake(int decrement);

 void speed-up(int increment);

}

Class Avon implements Bicycle {

 int speed = 7;

 public void apply-brake(int decrement) {

 speed = speed - decrement;

}

 public void speed-up(int increment) {

 speed = speed + increment;

}

}

Abstract

vs

Interface

i) Contain abstract
 & non - abstract methods

ii) Class in JAVA may have
 private & protected method

m) doesn't support multiple inheritance

i) Contain only abstract
 method.

ii) Java interface are
 public by default.

iii) Does support multiple inh.

Is multiple inheritance allowed in JAVA?

Multiple inheritance face problems when there exist methods with same signature in both the super classes.

→ Due to such problems, JAVA doesn't support multiple inheritance directly but similar concept can be achieved using interface.

* We can create a reference of interface but not the object.

Default methods in JAVA Interface -

- An interface can have static and default methods.
- A class implementing the interface need not to include the default methods.
- declare using default keyword.

Syntax - default return type A() {
 sout();
 }

Inheritance in Interface :-

- Interface can extend another interface.
- Remember that interface cannot implement another interface, only classes do that.

eg -

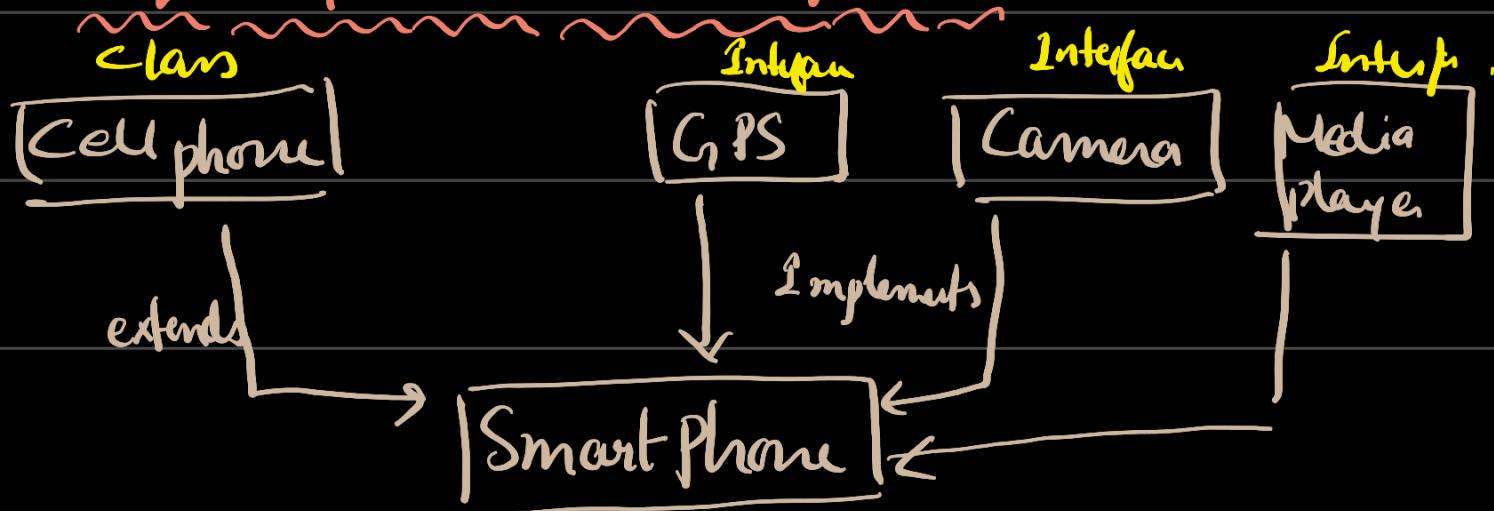
```
interface Interface1{  
    void method1();  
}
```

```
interface Interface2 extends Interface1{
```

```
    void method2();
```

```
}
```

Polymorphism in Interfaces :-



```
Camera Cam = new SmartPhone();
```

// Cam only use
for camera.

* No other feature except camera he can
invoke.