

## Q1. Explain interface in java programming?

Ans: if we want to achieve 100% abstraction then we should go for interface

Interface is the collection of method declaration and prototype

By default methods of interface is public or abstract.

Interface keyword is used to declare an interface

A class can implements an interface

An Interface does not have any constructor

In java 8 we also define static method inside interface

A class can implements more than one interface at a time

If any class implements an interface then must override all interface methods

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**IA (Interface)**

**void a();**

**implements**

**Test**

**void hello();**

**Syntax:**

```
interface IA{
    void a();
}

class Test implements IA{
    void a(){
        sop("This is IA interface method");
    }
    public void hello(){
        sop("This is Test class hello method");
    }
}
```

**Note: We cannot create an instance/object of interface but it can store reference of its implemented class**

**IA obj=new IA();** ❌ | **Test t=new IA();** ❌ | **IA obj=new Test();** | **Test t=new Test();**

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**IA (Interface)**

**Test**

**Syntax:**

```
interface IA{
    void a();
}

class Test implements IA{
    void a(){
        sop("This is IA interface method");
    }
    public void hello(){
        sop("This is Test class hello method");
    }
}
```

**void a();**

**implements**

**void hello();**

**Note: We cannot create an instance/object of interface but it can store reference of its implemented class**

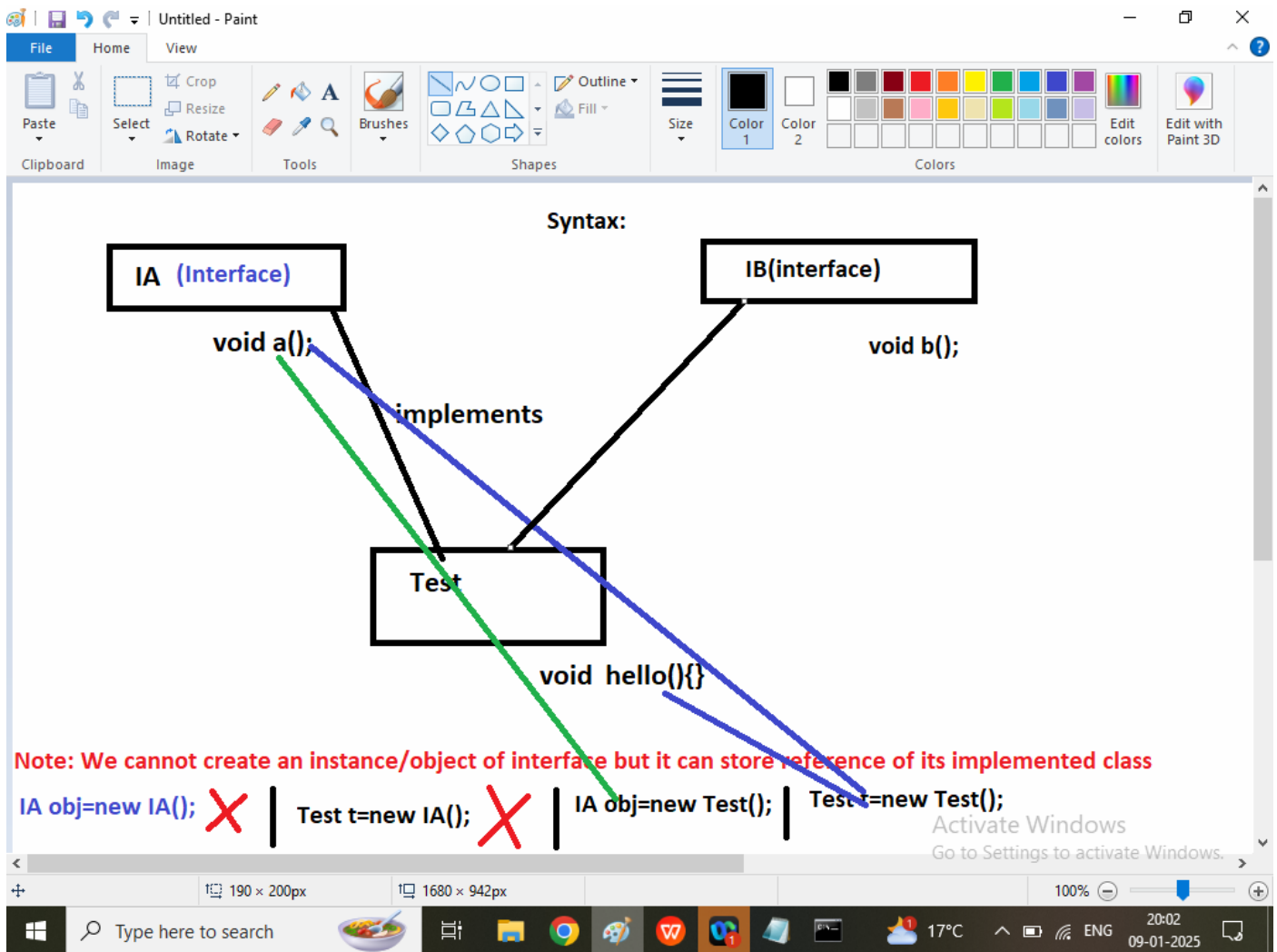
**IA obj=new IA();** ✗ | **Test t=new IA();** ✗ | **IA obj=new Test();** | **Test t=new Test();**

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Example:

A class Implements Multiple Interface



```

interface IA{
    void a();
}
interface IB{
    void b();
}

class Test implements IA,IB{
    public void a(){
        System.out.println("This is IA Interface a method");
    }
    public void b(){
        System.out.println("This is IB Interface b method");
    }
    public void hello(){
        System.out.println("This is Test class hello method");
    }
    public static void main(String args[]){
        //IA obj=new IA();
        //Test obj=new IA();
        IA obj=new Test();
        obj.a();
        //obj.hello();
        Test t=new Test();
        t.a();
        t.b();
        t.hello();
    }
}
  
```

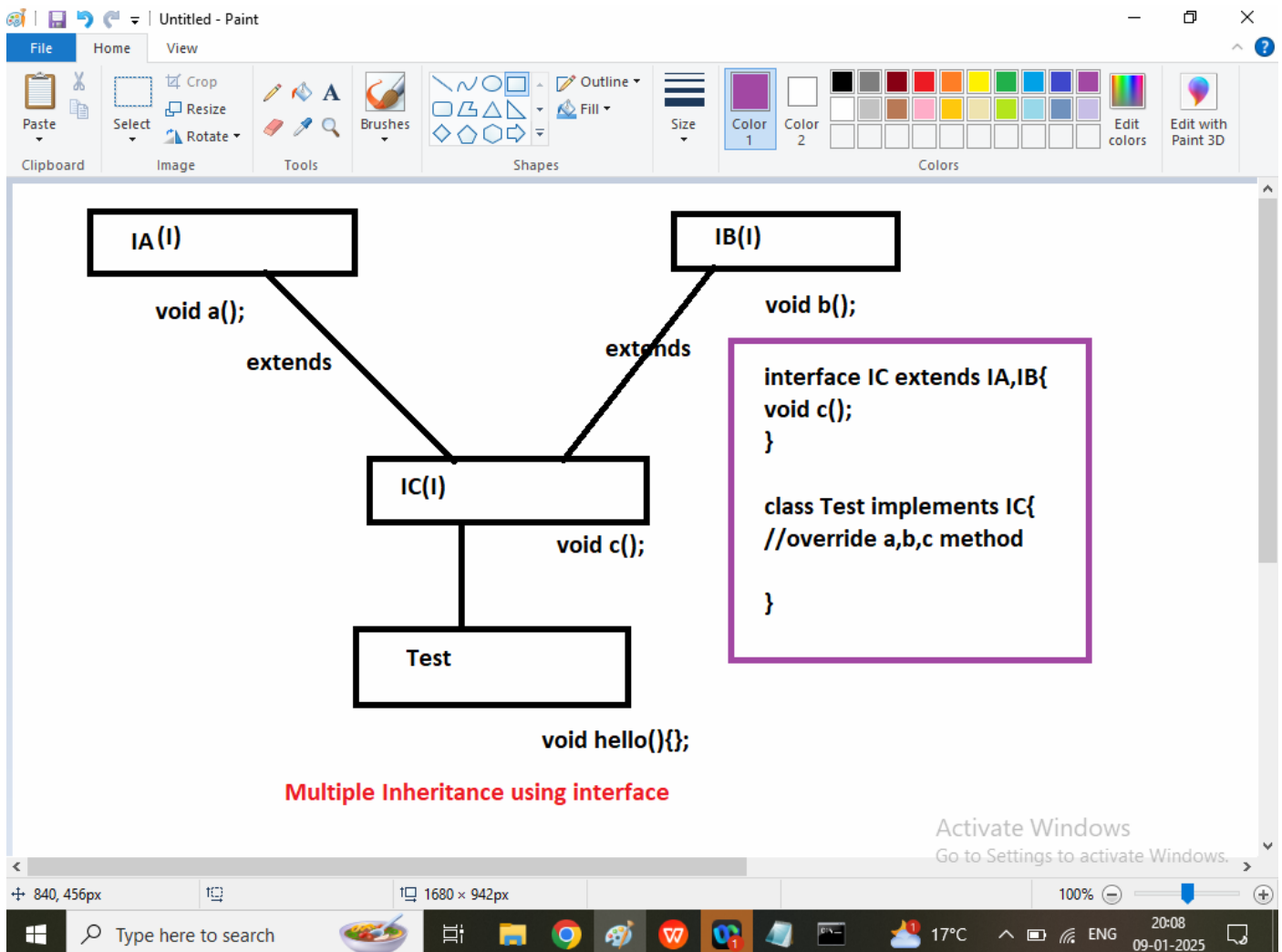
### Q3. Multiple Inheritance in java programming?

Ans: There are no way to achieve Multiple Inheritance Through the class but it can be achieve using interface.

One Interface can extends More than one Interface in java Programming

Syntax:

```
interface IA{  
Void a();  
}  
interface IB{  
Void b();  
}
```



```
interface IA{
    void a();
}
interface IB{
    void b();
}
interface IC extends IA,IB{
    void c();
}

class Test implements IC{
    public void a(){
        System.out.println("This is IA Interface a method");
    }
    public void b(){
        System.out.println("This is IB Interface b method");
    }
    public void c(){
        System.out.println("This is IC Interface c method");
    }
    public void hello(){
        System.out.println("This is Test class hello method");
    }
    public static void main(String args[]){
        //IA obj=new IA();
        //Test obj=new IA();
        IA obj=new Test();
        obj.a();
        //obj.hello();
        Test t=new Test();
        t.a();
        t.b();
        t.c();
        t.hello();
    }
}
```

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