

Interface in Java

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What is Interface?

An interface in Java is a blueprint for classes that defines a set of abstract methods that the implementing class must provide. It represents what a class should do, but not how it should do it.

Example of an interface in Java

```
interface Animal {  
    void sound();  
}  
  
class Dog implements Animal {  
    public void sound() {  
        System.out.println("The dog barks.");  
    }  
}
```

```
public class Main {  
    public static void main(String[] args) {  
        Animal animal = new Dog();  
        animal.sound();  
    }  
}
```

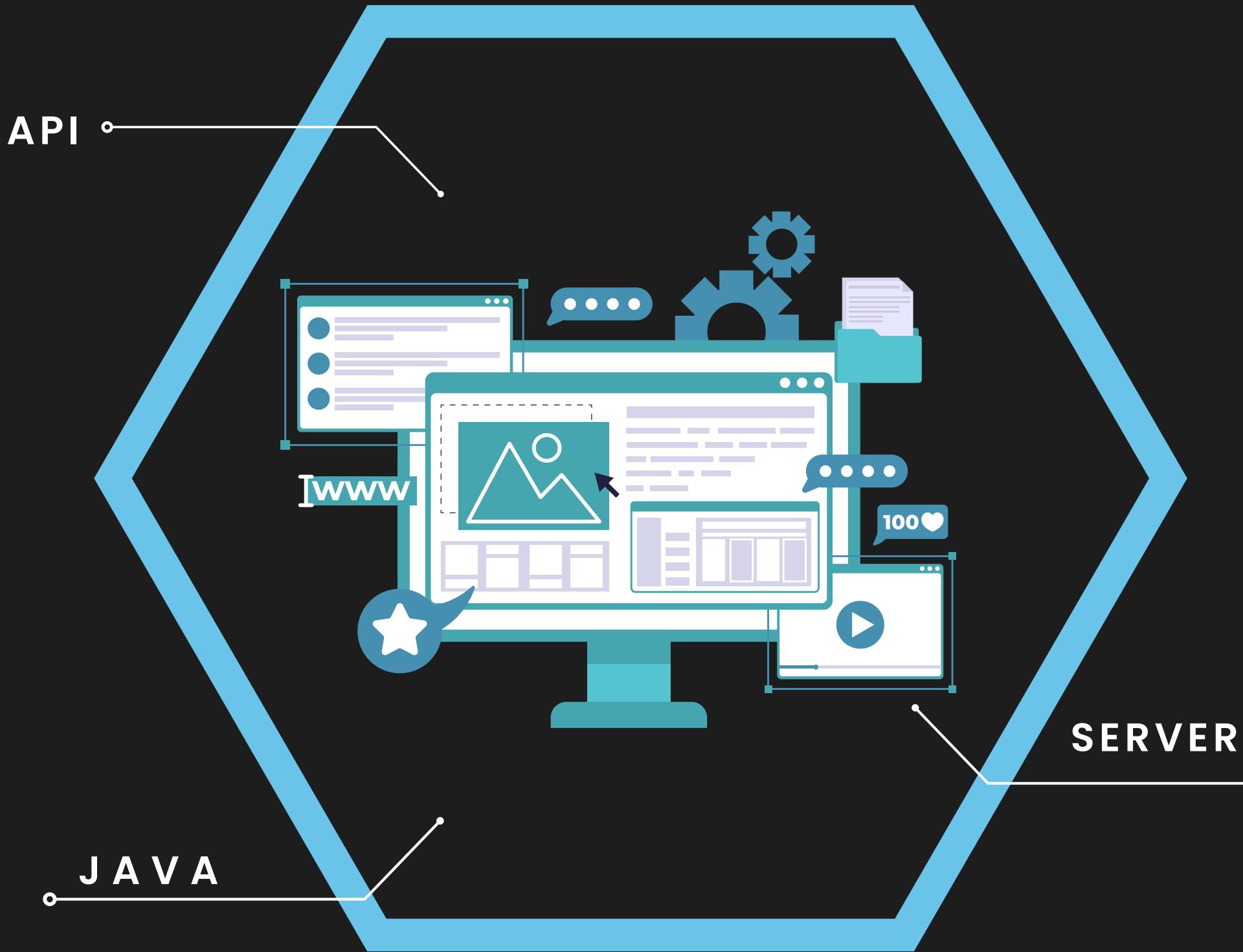
Why Are Interfaces Necessary in Java?

- ✓ Achieving Abstraction
- ✓ Polymorphism
- ✓ Multiple Inheritance of Behavior
- ✓ Design Flexibility



Best Practices for Using Interfaces

- ✓ APIs Defining
- ✓ Code Reusability
- ✓ Simple and Focused



Credit Card Payment Gateway

Payment Details

CARD NUMBER

EXPIRATION DATE CV CODE

MM / YY CVC

CARD OWNER

Card Owner Name

Confirm Payment

Real-World Use

```
interface PaymentProcessor {
```

```
void processPayment(double amount);
```

```
}
```



Thank you