

# Interface in Java

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# What is Interface?

An interface in Java is an abstract type that defines a contract consisting of method signatures (without implementations) that any implementing class must provide concrete implementations for. I

# 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();  
    }  
}
```

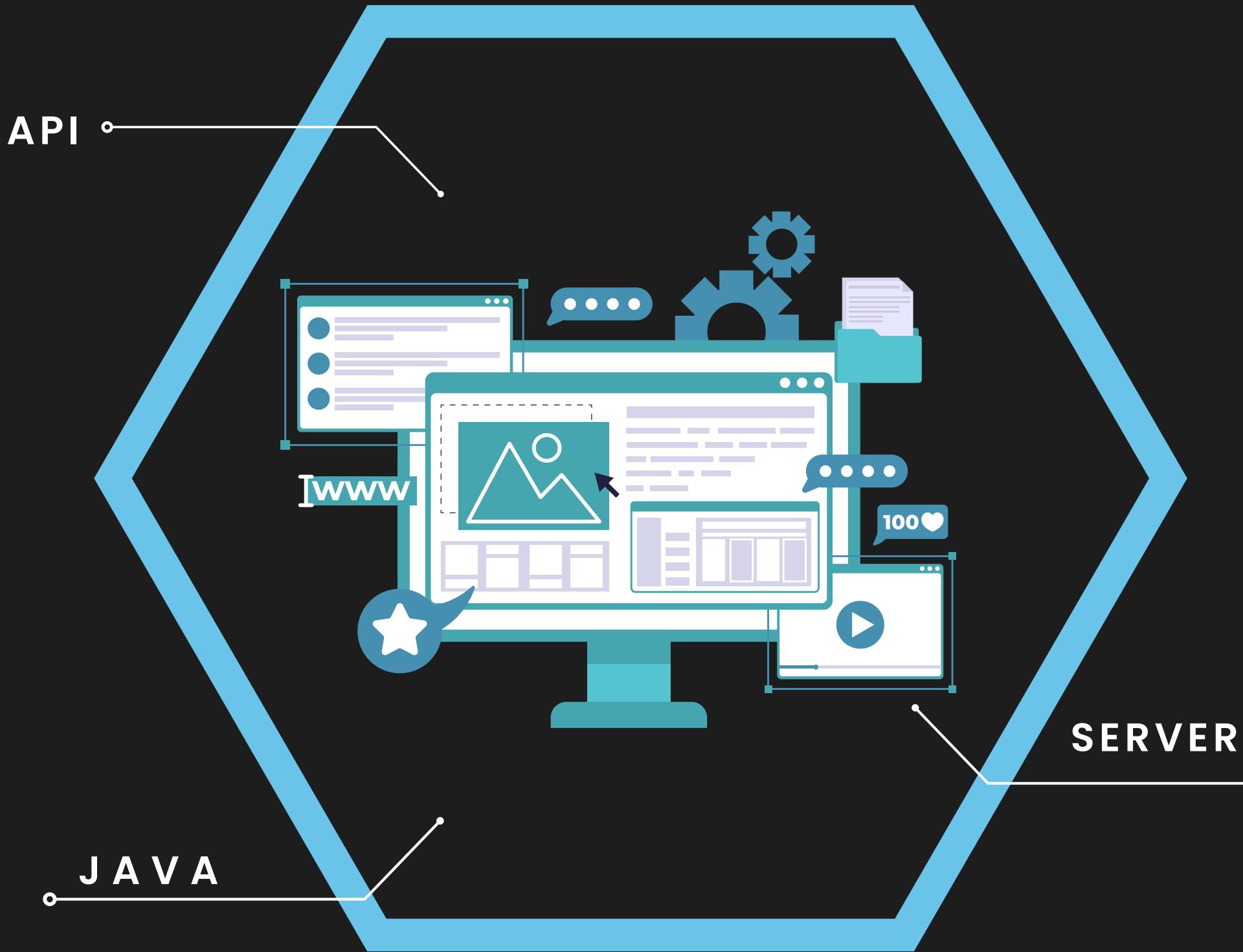
# Why Are Interfaces Necessary in Java?

- ✓ 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