

## Assignment-2 → IT-22051

\* In Java, both interface and abstract method are typically using dynamic programming.

Explanation: In Java, both interface and abstract class method are typically invoked dynamically dispatcher.

Which means the JVM looks up the actual method implementation at runtime based on the object type. Whether the method is declared in an interface or an abstract class, the JVM uses

similar mechanism (like virtual method tables or interface method box dispatch

No, invoking interface method is not necessarily slower than invoking method from abstract class.



Code:

```
interface Animal {  
    void sound();  
}
```

```
class Dog implements Animal {
```

```
    public void makeSound() {
```

```
        System.out.println("Dog says: woof");  
    }
```

```
abstract class Vehicle {
```

```
    abstract void startEngine();
```

```
class car extends Vehicle {
```

```
    void startEngine() {
```

```
        System.out.println("Car engine started");  
    }
```

```
class Car extends Vehicle {  
    public class main() {  
        public static void main (String[] args) {  
            Animal myDog = new Dog();  
            myDog.makeSound();  
            Vehicle Vehicle myCar = new Car();  
            myCar.startEngine();  
        }  
    }  
}
```