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# Java Sealed Classes

Controlling Inheritance with Precision

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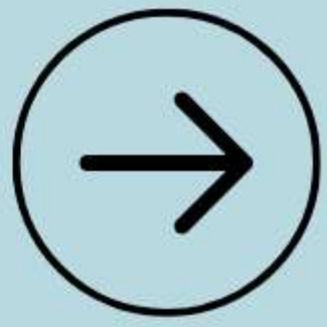

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# Too Many Extensions! 😕

Traditional classes can be extended by anyone (unless marked final).

This can lead to:

- Unwanted hierarchies
- Fragile designs
- Security concerns

01

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# Enter Sealed Classes (Java 17) ✨

```
public sealed class Shape
    permits Circle, Rectangle {}
```

Only the permitted classes can extend Shape.

02

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# Sealed Class Example 📦

```
sealed class Vehicle
    permits Car, Bike {}

final class Car extends Vehicle {}
final class Bike extends Vehicle {}
```

👉 No other class can extend Vehicle

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# Why Use Sealed Classes? ⭐

- Restrict inheritance to known types
- Improve API safety
- Enhance domain modeling
- Works great with pattern matching

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# Final vs Abstract vs Sealed ⚖️

- final: No one can extend
- abstract: Anyone can extend
- sealed: Only specific classes can extend

# ✓ Quick Recap

- Sealed = controlled inheritance
- Improves design & security
- Best for domain-driven models

💬 Have you tried Sealed Classes in your projects yet?

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