

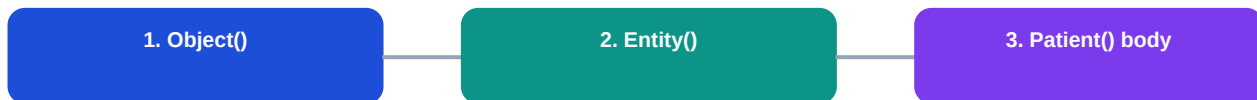
Java Constructor Defect Triage Checklist

Diagnose null-field defects, Jackson deserialization failures, and Page Object bugs tied to constructors.

1. Constructor Types at a Glance

Type	Description	Example
Default	Auto-supplied when no constructor is written	<code>new Patient()</code>
No-argument	Explicitly written, no parameters	<code>public Patient() {}</code>
Parameterized	Takes arguments to set fields at creation	<code>public Patient(String id)</code>

2. Constructor Execution Order



Parent constructors finish before the child body runs.

Calling an overridable method from a parent constructor is a documented anti-pattern.

3. Jackson Deserialization Fix

Before (fails)	After (fixed)
<pre>public Transaction(String id, double amt) { this.id = id; this.amount = amt; }</pre>	<pre>@JsonCreator public Transaction(@JsonProperty("id") String id, @JsonProperty("amount") double amt) {...}</pre>

Error: "no Creators, like default constructor, exist" — Jackson needs a no-arg constructor or an `@JsonCreator`-annotated one.

4. Triage Checklist

■ Null field only on framework/ORM-loaded objects, never on directly-created ones? Suspect the constructor isn't running — check if the ORM bypasses it via reflection.

■ Deserialization test failing with "no Creators exist"? Add a no-arg constructor or annotate a parameterized one with `@JsonCreator` / `@JsonProperty`.

■ Page Object throwing element-not-found on every test? Confirm the constructor calls `super(driver)` and `PageFactory.initElements()` actually ran.

■ Compile error after a base-class change? Check whether the parent lost its no-arg constructor — every subclass now needs an explicit `super(...)` call.

■ Class has 4+ optional fields and overloaded constructors are getting unreadable? Switch to the Builder pattern for test data setup.

■ Validation logic only in the constructor body? Move it to a separate method so ORMs and deserializers that skip the constructor still run it.

Rule of thumb: if an object has a field that's null when it "shouldn't be," ask whether your constructor actually ran — ORMs, deserializers, and reflection-based frameworks don't always call it.