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Avoid NullPointerException with

Java Optional



Write cleaner, safer code using
Java 8's Optional class

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The Problem

NullPointerException 😬

It's the most common exception in Java — and the hardest to debug in large codebases.

```
if(user != null && user.getEmail() != null) { ... }
```

Messy, right?

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The Solution

Meet Optional<T>

Optional is a container object that may or may not hold a non-null value.

```
Optional<String> email = Optional.of("abc@example.com");
```

No more manual null checks!

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Creating Optional

How to Create Optional

```
Optional<String> name = Optional.of("Vamsi");
```

```
Optional<String> empty = Optional.empty();
```

```
Optional<String> nullable = Optional.ofNullable(null);
```

- ✓ Safe
- ✓ Clear intent





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Accessing Values

Accessing Optional Values

```
optional.ifPresent(value -> System.out.println(value));  
optional.orElse("Default");  
optional.orElseThrow(() -> new RuntimeException("Missing!"));
```

No null checks needed!

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Best Practices

Best Practices with Optional

- ✓ Use in return types (not method arguments)
- ✓ Use map, filter, flatMap to transform safely
- ✗ Don't overuse it — avoid nested Optionals

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Summary

Wrap Up

- Avoids null and improves readability
- Makes APIs more expressive
- Encourages functional style in Java

Have you used Optional in your code yet?

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