Using Partial Application and Lambdas to Build Validators

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Agenda

There is no Validator pattern in the GoF

But so many applications need one...

A Validator is an object

To perform validation in a certain way

Let us make it dynamic with lambdas!

How Does a Validator Work?

Suppose you need to validate a form

A Validator validates all the fields

And then produce a set of exceptions

With a message for each faulty field

Then throws a single exception

Wrapping all the others

Validating a Person Bean

```
public class Person {

    private String name;
    private int age;

    // Getters and setters
}
```

1) The name should not be null

Validating a Person Bean

```
public class Person {

    private String name;
    private int age;

    // Getters and setters
}
```

2) The age should be > 0
3) The age should be < 150

Demo

Let us create this Validator as a function

Using lambdas

Factory methods and default methods

The validator itself

Can be modeled with a functional interface

And implemented with lambdas

Leading to very easy to read code

Module Wrap Up

What did you learn?

Once a problem has a model

It can be implemented as a function

That can be created using:

- factory methods

- default methods

Handling exceptions is tricky though...

Course Wrap Up

What did you learn?

How to model a problem with a function

And then use a top down approach:

1) Write the pattern in the way you want to use it

2) Understand the underlying function

Use factory and default methods to implement it

Course Wrap Up

Thank you!

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