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Vavr #1

Introducing functional programming

Jakub Madej · Dev.Java.Wro #3 · 29.11.2018

Agenda

What is Vavr?

Vavr goodies

Cons and pros

What is Vavr?

“turns java™ upside down

”

Author Name

VΛVΓ (Vavr, formerly called Javaslang) is a non-commercial, non-profit object-functional library that runs with Java 8+. It aims to reduce the lines of code and increase code quality.

Vavr goodies

Vavr goodies

- Touples
- Functions
- Values
- Collections

Vavr goodies - values

- Option *container*
- Try *container*
- Lazy *container*
- **Either** *value of two possible types*
- Future *computation result*
- Validation facilitates accumulating errors

Vavr goodies - Either

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Vavr goodies - Either

- Either represents a value of two possible types.
- An Either is either a Left or a Right
- By convention the success case is Right and the failure is Left.

Example

```
public <T> T mapToObject(
    T object,
    Map<String, Object> map);
```

```
public <T> T mapToObject(T object, Map<String, Object>
map) {

    Set<ConstraintViolation<Object>> errors =
Sets.newHashSet();

    T mappedObject = mapToObjectInternal(object, map,
errors);

    if (!errors.isEmpty()) {
      throw new ConstraintViolationException(errors);
    }

    return mappedObject;
  }
```

```
public <T>
Either<Set<ConstraintViolation<Object>>, T>
mapToObjectOrFail(T object, Map<String, Object> map) {

     Set<ConstraintViolation<Object>> errors =
Sets.newHashSet();

     T mappedObject = mapToObjectInternal(object, map,
errors);
     if (!errors.isEmpty()) {
-     throw new ConstraintViolationException(errors);
+     return Either.left(errors);
     }
-    return mappedObject;
+    return Either.right(mappedObject);
   }
```

```
return
 mapToObjectOrFail(object, map)
.getOrElseThrow(ConstraintViolationException::new);
```

Cons and pros?

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Thank you!

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