



fantezi kod
common algebraic
structures



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An algebra is a set of values, a set of operators that it is closed under and some laws it must obey.



780 - 8. century
Al-Khwārizmī's al-Kitāb
al-muḥtasar fī ḥisāb
al-ğabr wa-l-muqābala

An algebra is a set of values, a set of operators that it is closed under and some laws it must obey.

it's written in one of the old Persian language that I'm not able to understand it but it's about this guy

https://en.wikipedia.org/wiki/Muhammad_ibn_Musa_al-Khwarizmi

and language is probably is this

https://en.wikipedia.org/wiki/Khwarezmian_language

people are not speaking this language anymore

Each Fantasy Land algebra is a separate specification. An algebra may have dependencies on other algebras which must be implemented.

github.com/fantasyland

some notations

`::` is a member of
`→` function type
`⇒` method type constructor

examples

<code>true</code>	<code>::</code>	<code>Boolean</code>
<code>fatih</code>	<code>::</code>	<code>Person</code>
<code>42</code>	<code>::</code>	<code>Integer</code>
<code>string</code>	<code>→</code>	<code>boolean</code>
<code>boolean</code>	<code>→</code>	<code>boolean</code>

algebras

Setoid

A value has a steroid must provide an equals method.

reflexivity

$a.equals(a) \equiv true$

symmetry

$a.equals(b) \equiv b.equals(a)$

transitivity

if $a.equals(b)$ and $b.equals(c)$
then $a.equals(c)$

Semigroup

A value which has a Semigroup must provide a concat method.

```
a.concat(b)
```

Monoid

A value which has a Monoid must implement a Semigroup and also include an empty method.

```
a.empty().concat(b)
```

Filterable

A value which has a `Filterable` must provide a `filter` method.

```
a.filter(x  $\Rightarrow$  true)
```

Filterable

A value which has a `Filterable` must provide a `filter` method.

```
a.filter(x  $\Rightarrow$  true)
```

Functor

A value which has a Functor must provide a map method.

```
[].map(x ⇒ x * 2)
```

Apply

A value that implements the Apply specification must also implement the Functor specification.

A value which has an Apply must provide an ap method. The ap method takes one argument.

```
[].ap(func)
```

Chain & Monad

chain

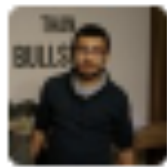
$$m.chain(f).chain(g) \equiv m.chain(x \Rightarrow f(x).chain(g))$$

monad

$$M.of(a).chain(f) \equiv m.chain(M.of)$$

Implementations

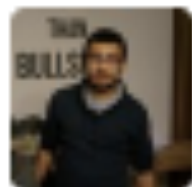
- Promises
- Folktable
- jQuery



Burak Can 🍷 1:05 PM

fantasyland spec iste. ramda da fantasyland implemente ediyor(buyuk oranda). fantasyland implemente eden libraryler de birbirleriyle uyumlu calisabiliyorlar

sunumunu 2 cumlede ozetledim [@fatiherikli](#) kusra bakma 😊



Burak Can 🍷 1:20 PM

biz de ramda (fantasy ramda) ve monet kullaniyoruz



Burak Can 🍷 1:23 PM

[@fatiherikli](#) fantasyland speci algebraic abstractionlari da temel olarak ogrenmek icin guzel, ondan da bahset bence (edited)

?

fatihherikli.github.io