

servant

Webservice framework in Haskell

Архитектура REST

REpresentational State Transfer — «передача состояния представления»

- клиент-серверная архитектура
- отсутствие состояния
- кэширование
- единообразие интерфейса
- промежуточные узлы (слои)

RESTful API

PUT `http://api.someshop.com/orders/42?status=delivered`

- API root
- путь к ресурсу
- параметры запроса

RESTful API

`http://api.someshop.com/orders`

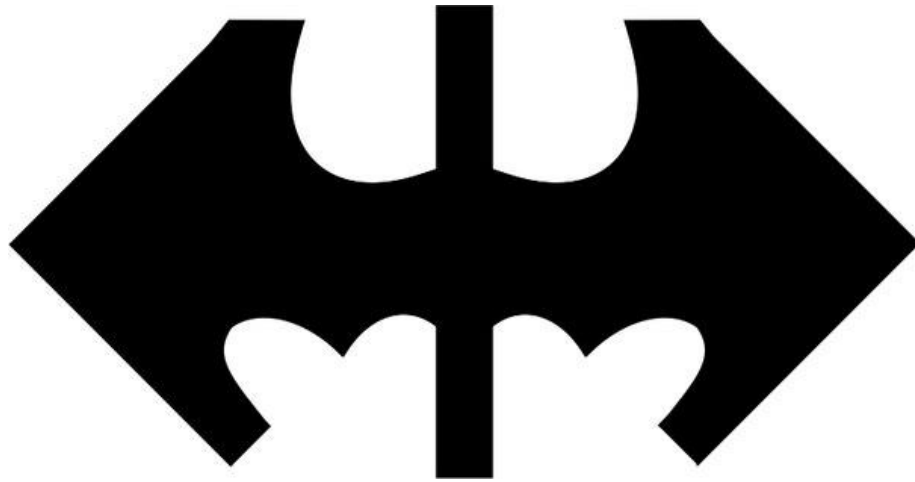
CRUD (**c**reate, **r**ead, **u**ppdate, **d**eleete)

- POST
- GET
- PUT
- DELETE

- /addNewItem
- /listAllDeliveredOrders
- /updateUserName
- /item/42/delete

...

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Bookshop API

- **POST** /books
- **GET** /books/:book_id
- **PUT** /books/:book_id?author=name&year=1984&in_stock=42...

Bookshop API

```
type BooksAPI
  = "books" :> ReqBody `[JSON] Book          :> Post `[JSON] BookId
  :<|> "books" :> Capture "book_id" BookId    :> Get `[JSON] Book
  :<|> "books" :> Capture "book_id" BookId    :> QueryParam "author" String
          :> QueryParam "title" String        :> QueryParam "year" Int
          :> QueryParam "in_stock" Int        :> Put `[JSON] Book
```


Bookshop API

- **GET** /books
 - **POST** /books
 - **GET** /books/:book_id
 - **DELETE** /books/:book_id
 - **PUT** /books/:book_id?author=name&year=1984&in_stock=42...
-
- **GET** /orders
 - **POST** /orders
 - **GET** /orders/:order_id
 - **PUT** /orders/:order_id?status=cancelled...

Bookshop API

```
type BookshopAPI
  = "books"    :> BooksAPI
  :<|> "orders" :> OrdersAPI
  :<|> "users"  :> UsersAPI
  :<|> "info"   :> InfoAPI
  ...
```

Bookshop API

```
type BooksAPI
```

```
    = Get '[JSON] [(BookId, Book)]
```

```
    :<|> ReqBody '[JSON] Book          :> Post '[JSON] BookId
```

```
    :<|> Capture "book_id" BookId      :> Get '[JSON] Book
```

```
    :<|> Capture "book_id" BookId      :> Delete '[JSON] ()
```

```
    :<|> Capture "book_id" BookId      :> QueryParam "author" String :>
```

```
        QueryParam "title" String :> QueryParam "year" Int          :>
```

```
        QueryParam "in_stock" Int :> Put '[JSON] Book
```

Time to code!



API type



- server
- client in Haskell
- client for JS, etc.
- documentation
- mock server

...

Контакты



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