

RESTful Transfer Web service

Prerequisites:

- MySQL 5.x
- Postman or any other REST Clients

The solution has been built with SpringBoot, Maven and JPA as persistence framework.

Initial configuration steps:

Its necessary to create the database to use: *CREATE DATABASE transfer_service;*

Data tables are created at the runtime considering the java entities from the application.

There is a configuration file (application.properties) which is necessary to update with the database credentials and the database created before:

```
# The database connection URL
spring.datasource.url=jdbc:mysql://localhost:3306/transfer_service?useSSL=false

# Username
spring.datasource.username=root

# Password
spring.datasource.password=admin
```

to launch the application (under target directory):

```
$ java -jar mysql-rest-service-1.0-SNAPSHOT.jar
```

```
mvn clean verify; cd target; java -jar mysql-rest-service-1.0-SNAPSHOT.jar
```

or from IDE:

running main method from Application java class

```
public class Application {

    public static void main(String[] args) {
        SpringApplication.run(Application.class, args);
    }
}
```

Accounts:

```
mysql> desc account;
+-----+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| account_id | varchar(14) | NO | PRI | NULL | |
| balance | float | NO | | NULL | |
| currency | varchar(8) | YES | | NULL | |
| date | varchar(255) | YES | | NULL | |
+-----+-----+-----+-----+-----+-----+
```

Creating new ones:

POST

http://localhost:8080/accounts

Send

Params

Authorization

Headers (1)

Body

Pre-request Script

Tests

none

form-data

x-www-form-urlencoded

raw

binary

JSON (application/json)

```

1 {
2   "accountId": "a",
3   "balance": "20.5"
4 }

```

Body

Cookies

Headers (3)

Test Results

Status: 200 OK

Time: 7885 ms

Size: 217

Pretty

Raw

Preview

JSON

```

1 {
2   "accountId": "a",
3   "balance": 20.5,
4   "currency": "EUR",
5   "date": "Fri Nov 16 00:00:20 CET 2018"
6 }

```

```
mysql> select * from account;
```

account_id	balance	currency	date
a	20.5	EUR	Fri Nov 16 00:00:20 CET 2018
ABN152365BS8	1235690000	EUR	Fri Nov 16 00:03:55 CET 2018
b	3000	EUR	Fri Nov 16 00:02:17 CET 2018
c	3000	EUR	Fri Nov 16 00:04:10 CET 2018
d	5000.51	EUR	Fri Nov 16 00:04:51 CET 2018
ING152365BS8	125	EUR	Fri Nov 16 00:03:31 CET 2018
NL152365BS8	0	EUR	Fri Nov 16 00:03:12 CET 2018

GET

http://localhost:8080/accounts

Pretty

Raw

Preview

JSON

```

1 {
2   {
3     "accountId": "a",
4     "balance": 20.5,
5     "currency": "EUR",
6     "date": "Fri Nov 16 00:00:20 CET 2018"
7   },
8   {
9     "accountId": "ABN152365BS8",
10    "balance": 1235689980,
11    "currency": "EUR",
12    "date": "Fri Nov 16 00:03:55 CET 2018"
13  },
14  {
15    "accountId": "b",
16    "balance": 3000,
17    "currency": "EUR",
18    "date": "Fri Nov 16 00:02:17 CET 2018"
19  },
20  {
21    "accountId": "c",
22    "balance": 3000,
23    "currency": "EUR",
24    "date": "Fri Nov 16 00:04:10 CET 2018"
25  },
26  {
27    "accountId": "d",
28    "balance": 5000.51
29  }
30 }

```

Transfers:

POST http://localhost:8080/transfer

Params Authorization Headers (1) Body ● Pre

● none ● form-data ● x-www-form-urlencoded ● raw

```
1 {
2   "sourceId": "a",
3   "destinationId": "b",
4   "amount": "10000"
5 }
```

```
mysql> select * from account where account_id in("a","b");
```

account_id	balance	currency	date
a	20.5	EUR	Fri Nov 16 00:00:20 CET 2018
b	3000	EUR	Fri Nov 16 00:02:17 CET 2018

Body Cookies Headers (3) Test Results

Pretty Raw Preview Auto ▼

1 Exception: Overdrawing source account

POST http://localhost:8080/transfer

Params Authorization Headers (1) Bo

● none ● form-data ● x-www-form-urlencoded

```
1 {
2   "sourceId": "a",
3   "destinationId": "ExcpGenerator",
4   "amount": "10000"
5 }
```

```
mysql> select * from account where account_id in("a","ExcpGenerator");
```

account_id	balance	currency	date
a	20.5	EUR	Fri Nov 16 00:00:20 CET 2018

Body Cookies Headers (3) Test Results

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1 Exception: Invalid account

POST http://localhost:8080/transfer

Send Save

● none ● form-data ● x-www-form-urlencoded ● raw ● binary ● json(application/json) ● xml

```
1 {
2   "sourceId": "d",
3   "destinationId": "a",
4   "amount": "5000.50"
5 }
```

```
mysql> select * from account where account_id in("a","d");
```

account_id	balance	currency	date
a	5021	EUR	Fri Nov 16 00:00:20 CET 2018
d	0.00976562	EUR	Fri Nov 16 00:04:51 CET 2018

Body Cookies Headers (3) Test Results

Status: 200 OK Time: 8048 ms Size: 257 B Download

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1 Transfer done succesfully{transferId=1, sourceId='d', destinationId='a', amount=5000.5, currency='EUR', date='Fri Nov 16 00:40:38 CET 2018'}