

CUSTOMER-INFO-SERVICE:

1. Post personal customer without errors:

The screenshot shows a Postman request to `localhost:8081/api/v1/customers` using the `POST` method. The `Body` tab contains the following JSON payload:

```
1 {
2   "type": "Personal",
3   "status": "Active",
4   "personDetails": {
5     "name": "Luis",
6     "lastname": "Mendoza",
7     "identityNumber": "74145236",
8     "address": {
9       "number": 144,
10      "street": "Av. Ricardo Palma",
11      "city": "Cuzco",
12      "country": "Peru"
13    }
14 }
```

The response status is `201 Created`, and the response body is identical to the request body.

2. Post new personal customer with error: duplicated identityNumber field

As it can be seen, the customer to create have the same identityNumber as the user created in operation 1. For that reason, post operation returns a 409-conflict error.

The screenshot shows a Postman request to `localhost:8081/api/v1/customers` using the `POST` method. The `Body` tab contains the following JSON payload, which includes a duplicate identity number:

```
1 {
2   "type": "Personal",
3   "status": "Active",
4   "personDetails": {
5     "name": "Jorge",
6     "lastname": "Valdivia",
7     "identityNumber": "74145236",
8     "address": {
9       "number": 45,
10      "street": "Av. Rogelio Diaz",
11    }
12 }
```

The response status is `409 Conflict`, and the response body is a single digit '1'.

In the application console we can see the following logs:

```

2022-01-10 18:47:28.421 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerServiceImpl : Creating new customer: [Customer(id=null, type=Personal, status=Active, person...
2022-01-10 18:47:29.425 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerServiceImpl : New customer was created successfully
2022-01-10 18:48:06.786 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Get operation in /customers
2022-01-10 18:48:06.786 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to retrieve all customers
2022-01-10 18:48:06.786 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerServiceImpl : Retrieving all customers
2022-01-10 18:48:06.797 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerServiceImpl : All customers retrieved successfully
2022-01-10 18:48:06.797 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : End of operation to retrieve all customers
2022-01-10 19:00:57.429 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Post operation in /customers
2022-01-10 19:00:57.429 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to create a customer
2022-01-10 19:00:57.429 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerServiceImpl : Validating customer uniqueness
2022-01-10 19:00:57.430 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to retrieve all customers
2022-01-10 19:00:57.430 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Retrieving all customers
2022-01-10 19:00:57.430 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : All customers retrieved successfully
2022-01-10 19:00:57.430 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : End of operation to retrieve all customers
2022-01-10 19:00:57.430 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Post operation in /customers
2022-01-10 19:00:57.430 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Start of operation to create a customer
2022-01-10 19:00:57.430 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Validating customer uniqueness
2022-01-10 19:00:57.435 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Start of operation to retrieve all customers
2022-01-10 19:00:57.435 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Retrieving all customers
2022-01-10 19:00:57.435 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : All customers retrieved successfully
2022-01-10 19:00:57.435 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : End of operation to retrieve all customers
2022-01-10 19:08:46.646 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Post operation in /customers
2022-01-10 19:08:46.646 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Start of operation to create a customer
2022-01-10 19:08:46.647 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Validating customer uniqueness
2022-01-10 19:08:46.647 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Start of operation to retrieve all customers
2022-01-10 19:08:46.647 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Retrieving all customers
2022-01-10 19:08:46.648 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : All customers retrieved successfully
2022-01-10 19:08:46.648 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : End of operation to retrieve all customers
2022-01-10 19:08:46.648 INFO 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Post operation in /customers
2022-01-10 19:08:46.657 WARN 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Customer does not accomplish with uniqueness specifications
2022-01-10 19:08:46.658 WARN 24484 --- [nio-8081-exec-1] c.n.b.c.b.impl.CustomerController : Proceeding to abort create operation

```

3. Post business customer without errors:

POST /localhost:8081/api/v1/customers

Params: none

Headers: Authorization, Content-Type, Content-Type: application/json

Body: JSON

```

1 {
2     "type": "Business",
3     "status": "Active",
4     "businessDetails": {
5         "name": "Ficticio SAC",
6         "ruc": "20874563347",
7         "address": {
8             "number": 10,
9             "street": "Jr. Comercio",
10            "city": "Lima",
11        }
}

```

Status: 201 Created Time: 23 ms Size: 879 B Save Response

4. Post new business customer with error: duplicated name field:

As it can be seen, the customer to create have the same name as the customer created in operation 3. For that reason, post operation returns a 409-conflict error.

In console, we can see the following logs:

```

2022-01-10 19:00:57.430 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to retrieve all customers
2022-01-10 19:00:57.430 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Retrieving all customers
2022-01-10 19:00:57.430 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : All customers retrieved successfully
2022-01-10 19:00:57.430 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : End of operation to retrieve all customers
2022-01-10 19:00:57.430 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : End of operation to create a customer
2022-01-10 19:00:57.435 INFO 24484 --- [nioLoopGroup-3-3] c.n.b.c.b.impl.CustomerServiceImpl : Creating new customer: {Customer(id=null, type=Business, status=Active, perso...
2022-01-10 19:00:57.435 INFO 24484 --- [nioLoopGroup-3-3] c.n.b.c.b.impl.CustomerServiceImpl : New customer was created successfully
2022-01-10 19:08:46.646 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Post operation in /customers
2022-01-10 19:08:46.646 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to create a customer
2022-01-10 19:08:46.647 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Validating customer uniqueness
2022-01-10 19:08:46.647 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to retrieve all customers
2022-01-10 19:08:46.647 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Retrieving all customers
2022-01-10 19:08:46.648 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : All customers retrieved successfully
2022-01-10 19:08:46.648 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : End of operation to retrieve all customers
2022-01-10 19:08:46.648 INFO 24484 --- [nioLoopGroup-3-3] c.n.b.c.b.impl.CustomerServiceImpl : End of operation to create a customer
2022-01-10 19:08:46.657 INFO 24484 --- [nioLoopGroup-3-3] c.n.b.c.b.impl.CustomerServiceImpl : Customer does not accomplish with uniqueness specifications
2022-01-10 19:08:46.658 WARN 24484 --- [nioLoopGroup-3-3] c.n.b.c.b.impl.CustomerServiceImpl : Proceeding to abort create operation
2022-01-10 19:17:42.579 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerController : Post operation in /customers
2022-01-10 19:17:42.580 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to create a customer
2022-01-10 19:17:42.580 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Validating customer uniqueness
2022-01-10 19:17:42.580 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to retrieve all customers
2022-01-10 19:17:42.580 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Retrieving all customers
2022-01-10 19:17:42.581 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : All customers retrieved successfully
2022-01-10 19:17:42.581 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : End of operation to retrieve all customers
2022-01-10 19:17:42.581 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : End of operation to create a customer
2022-01-10 19:17:42.586 WARN 24484 --- [nioLoopGroup-3-3] c.n.b.c.b.impl.CustomerServiceImpl : Customer does not accomplish with uniqueness specifications
2022-01-10 19:17:42.586 WARN 24484 --- [nioLoopGroup-3-3] c.n.b.c.b.impl.CustomerServiceImpl : Proceeding to abort create operation

```

5. Post new business customer with error: duplicated ruc field:

As it can be seen, the customer to create have the same RUC as the customer created in operation 3. For that reason, post operation returns a 409-conflict error.

customer-info-service / Post new business customer with error: duplicated ruc field

POST localhost:8081/api/v1/customers

Params Authorization Headers (9) Body Pre-request Script Tests Settings

none form-data x-www-form-urlencoded raw binary GraphQL JSON

```

1
2   "type": "Business",
3   "status": "Active",
4   "businessDetails": {
5     "name": "Empresa SAC",
6     "ruc": "20074563347",
7     "address": {
8       "number": 881,
9       "street": "Jr. Puno",
10      "city": "Lima",

```

Body Cookies Headers (1) Test Results

Pretty Raw Preview Visualize Text

Status: 409 Conflict Time: 17 ms Size: 44 B Save Response

Find and Replace Console

Capture Requests Bootcamp Runner Trash

In console, we can see the following logs:

File Edit View Navigate Code Refactor Build Run Tools Git Window Help customer-info-service - application.yml

customer-info-service src/main/resources application.yml

Project CustomerServiceImpl.java CustomerService.java CustomerController.java application.yml pom.xml (customer-info-service)

Run: CustomerInfoServiceApplication

Console

```

2022-01-10 19:08:46.647 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to retrieve all customers
2022-01-10 19:08:46.647 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Retrieving all customers
2022-01-10 19:08:46.648 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : All customers retrieved successfully
2022-01-10 19:08:46.648 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : End of operation to retrieve all customers
2022-01-10 19:08:46.648 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to create a customer
2022-01-10 19:08:46.657 WARN 24484 --- [nioLoopGroup-3-3] c.n.b.c.b.impl.CustomerServiceImpl : Customer does not accomplish with uniqueness specifications
2022-01-10 19:08:46.657 WARN 24484 --- [nioLoopGroup-3-3] c.n.b.c.b.impl.CustomerServiceImpl : Proceeding to abort create operation
2022-01-10 19:17:42.579 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Post operation in /customers
2022-01-10 19:17:42.579 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to create a customer
2022-01-10 19:17:42.580 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Validating customer uniqueness
2022-01-10 19:17:42.580 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to retrieve all customers
2022-01-10 19:17:42.580 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Retrieving all customers
2022-01-10 19:17:42.581 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : All customers retrieved successfully
2022-01-10 19:17:42.581 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : End of operation to retrieve all customers
2022-01-10 19:17:42.583 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Customer does not accomplish with uniqueness specifications
2022-01-10 19:17:42.586 WARN 24484 --- [nioLoopGroup-3-3] c.n.b.c.b.impl.CustomerServiceImpl : Proceeding to abort create operation
2022-01-10 19:42:35.074 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Post operation in /customers
2022-01-10 19:42:35.074 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to create a customer
2022-01-10 19:42:35.075 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Validating customer uniqueness
2022-01-10 19:42:35.075 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Start of operation to retrieve all customers
2022-01-10 19:42:35.075 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : Retrieving all customers
2022-01-10 19:42:35.076 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : All customers retrieved successfully
2022-01-10 19:42:35.076 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : End of operation to retrieve all customers
2022-01-10 19:42:35.076 INFO 24484 --- [ctor-http-nio-3] c.n.b.c.b.impl.CustomerServiceImpl : End of operation to create a customer
2022-01-10 19:42:35.084 WARN 24484 --- [nioLoopGroup-3-3] c.n.b.c.b.impl.CustomerServiceImpl : Customer does not accomplish with uniqueness specifications
2022-01-10 19:42:35.085 WARN 24484 --- [nioLoopGroup-3-3] c.n.b.c.b.impl.CustomerServiceImpl : Proceeding to abort create operation

```

79161 (59 char) CR/LF UTF-8 2 spaces feature/config-server Event Log

6. Get all customers:

customer-info-service / Get all customers

GET localhost:8081/api/v1/customers

Params Authorization Headers (7) Body Pre-request Script Tests Settings

Query Params

KEY	VALUE	DESCRIPTION
		Bulk Edit

Body Cookies Headers (2) Test Results

Pretty Raw Preview Visualize JSON

```

1 [
2   {
3     "id": "61cc588fb2e3495cb42613",
4     "type": "Personal",
5     "status": "Active",
6     "personDetails": {
7       "name": "Luis",
8       "lastname": "Mendoza",
9       "identityNumber": "74145236",
10      "address": {
11        "number": 144,
12        "street": "Av. Ricardo Palma",
13        "city": "Cozco",
14        "country": "Peru"
15      },
16      "email": "luis.mendoza@gmail.com",
17      "phoneNumber": "+965874125",
18      "mobileNumber": "9478584",
19      "birthdate": "1998-10-30T00:00:00+00:00"
20    }

```

Find and Replace Console

Status: 200 OK Time: 31 ms Size: 1.24 KB Save Response

Capture Requests Bootcamp Runner Trash

7. Get customer by id:

```

customer-info-service / Get customer by id
GET      localhost:8081/api/v1/customers/61dcc8b9ff2e3495cb42614
Params   Authorization   Headers (7)   Body   Pre-request Script   Tests   Settings
Body   Cookies   Headers (2)   Test Results
Pretty   Raw   Preview   Visualize   JSON
1  [
2    "id": "61dcc8b9ff2e3495cb42614",
3    "type": "Business",
4    "status": "Active",
5    "personDetails": null,
6    "businessDetails": {
7      "name": "Ficticios SAC",
8      "ruc": "20874563347",
9      "address": {
10        "number": 10,
11        "street": "Jr. Comercio",
12        "city": "Lima",
13        "country": "Peru"
14      },
15      "representatives": [
16        {
17          "name": "Maria",
18          "lastname": "Alvarado",
19          "identityNumber": "45548966",
20          "address": {
21            "number": 123,
22            "street": "Camino Real",
23            "city": "Lima",
24            "country": "Peru"
25          }
26        }
27      ]
28    }
29  ]

```

Find and Replace Console Capture Requests Bootcamp Runner Trash

8. Put customer without error:

Updated status and name from the business account created in operation 3.

```

customer-info-service / Put account without error
PUT      localhost:8081/api/v1/customers
Params   Authorization   Headers (9)   Body   Pre-request Script   Tests   Settings
None   Form-data   x-www-form-urlencoded   raw   binary   GraphQL   JSON
1  [
2    "id": "61dcc8b9ff2e3495cb42614",
3    "type": "Business",
4    "status": "Blocked",
5    "businessDetails": {
6      "name": "Empresa SAC",
7      "ruc": "20874563347",
8      "address": {
9        "number": 10,
10       "street": "Jr. Comercio",
11     }
12   }
13 ]

```

Find and Replace Console Status: 200 OK Time: 55 ms Size: 873 B Save Response

This operation also validates name and ruc uniqueness for business accounts and identityNumber uniqueness for personal accounts.

9. Put customer with error: customer not found:

Customer was not found, so a 404-not-found status was returned.

The screenshot shows a POST request to `localhost:8081/api/v1/customers` with the following JSON body:

```

1 {
2   "id": "any-not-existing-id",
3   "type": "Business",
4   "status": "Blocked",
5   "businessDetails": {
6     "name": "Empresa SAC",
7     "ruc": "20874563347",
8     "address": {
9       "number": 10,
10      "street": "Jr. Comercio",
}

```

The response status is 404 Not Found, indicating the customer was not found.

In console, we can see the following logs:

The log output shows several INFO messages from the `CustomerServiceImpl` class, indicating various operations like updates, retrievals, and validations. One message specifically handles the deletion of a non-existent customer:

```

2022-01-10 20:14:21.223 [INFO] [nnioGroup-3] c.n.b.c.b.impl.CustomerServiceImpl : Customer with id: [61dcad8fffb2e3495cb42615] does not exist in database
2022-01-10 20:14:21.223 [INFO] [nnioGroup-3] c.n.b.c.b.impl.CustomerServiceImpl : Proceeding to abort update operation

```

10. Delete customer without error:

The screenshot shows a DELETE request to `localhost:8081/api/v1/customers/61dcad8fffb2e3495cb42615` with the following JSON body:

```

1 {
2   "id": "61dcad8fffb2e3495cb42615",
3   "type": "Business",
4   "status": "Active",
5   "personnelList": null,
6   "businessDetails": {
7     "name": "Empresa SAC",
8     "ruc": "58841236112",
9     "address": {
10       "number": 881,
11       "street": "Jr. Puno",
12       "city": "Lima",
13       "country": "Peru"
14     },
15     "representatives": [
16       {
17         "name": "Maria",
18         "lastname": "Alvarado",
19         "identityNumber": "45548966",
20         "address": {
21           "number": 123,
22           "street": "Camino Real",
23           "city": "Lima",
24           "country": "Peru"
}

```

The response status is 200 OK, indicating the customer was successfully deleted.

11. Delete customer with error: customer not found:

Customer was not found, so a 404-not-found status was returned.

The screenshot shows a Postman interface with the following details:

- Request URL:** customer-info-service / Delete customer with error: customer not found
- Method:** DELETE
- Response Status:** Status: 404 Not Found
- Response Time:** Time: 22 ms
- Response Size:** Size: 45 B
- Response Content:** (Empty)

PASSIVE-OPERATIONS-SERVICE:

1. Post new personal account without error:

The screenshot shows a Postman interface with the following details:

- Request URL:** passive-operations-service / Post new account without error
- Method:** POST
- Response Status:** Status: 201 Created
- Response Time:** Time: 264 ms
- Response Size:** Size: 1.09 KB
- Response Content:** (JSON object representing a new account record)

2. Post new personal account with error: personal customers can only have one account:

When attempting to create another account for the same customerId of operation 1, we get a 500-internal-server-error response, because personal customers can only have one account.

localhost:8082/api/v1/accounts

POST localhost:8082/api/v1/accounts

Body (JSON)

```
{
  "customerId": "61dcc588fffb2e3495cb42613",
  "accountType": {
    "description": "Savings",
    "maximumNumberOfOperations": 10
  },
  "issueDate": "2020-01-09",
  "dueDate": "2026-01-04",
  "holders": [
    {
      "name": "Mario"
    }
  ]
}
```

Status: 500 Internal Server Error Time: 51 ms Size: 57 B Save Response

In console, we see the following logs:

```

2022-01-10 21:08:22.170 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving customer
2022-01-10 21:08:22.171 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer retrieved successfully
2022-01-10 21:08:22.171 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to retrieve customer with id: [61dcc588fffb2e3495cb42613]
2022-01-10 21:08:22.183 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to create an account
2022-01-10 21:08:22.183 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Validating account
2022-01-10 21:08:22.184 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer exists in database
2022-01-10 21:08:22.184 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to retrieve all accounts of the customer with id: [61dcc588fffb2e3495cb42613]
2022-01-10 21:08:22.184 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving accounts
2022-01-10 21:08:22.184 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Accounts retrieved successfully
2022-01-10 21:08:22.184 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to retrieve accounts of the customer with id: [61dcc588fffb2e3495cb42613]
2022-01-10 21:08:22.192 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Account successfully validated
2022-01-10 21:08:22.271 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Creating new account: [Account{id=null, status=Active, customer=Customer(id=6
2022-01-10 21:08:37.488 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.expose.AccountController : Post operation in /accounts
2022-01-10 21:08:37.489 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to create an account
2022-01-10 21:08:37.489 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to retrieve customer with id [61dcc588fffb2e3495cb42613] fr
2022-01-10 21:08:37.489 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving customer
2022-01-10 21:08:37.490 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer retrieved successfully
2022-01-10 21:08:37.490 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to retrieve customer with id: [61dcc588fffb2e3495cb42613]
2022-01-10 21:08:37.491 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to create an account
2022-01-10 21:08:37.507 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Validating account
2022-01-10 21:08:37.508 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer exists in database
2022-01-10 21:08:37.508 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to retrieve all accounts of the customer with id: [61dcc588fffb2e3495cb42613]
2022-01-10 21:08:37.508 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving accounts
2022-01-10 21:08:37.509 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Accounts retrieved successfully
2022-01-10 21:08:37.509 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to retrieve accounts of the customer with id: [61dcc588fffb2e3495cb42613]
2022-01-10 21:08:37.531 WARN 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Can not create more than one account for a personal customer
2022-01-10 21:08:37.531 WARN 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Proceeding to abort create account

```

3. Post new business account without error:

passive-operations-service / Post new business account without errors

POST localhost:8082/api/v1/accounts

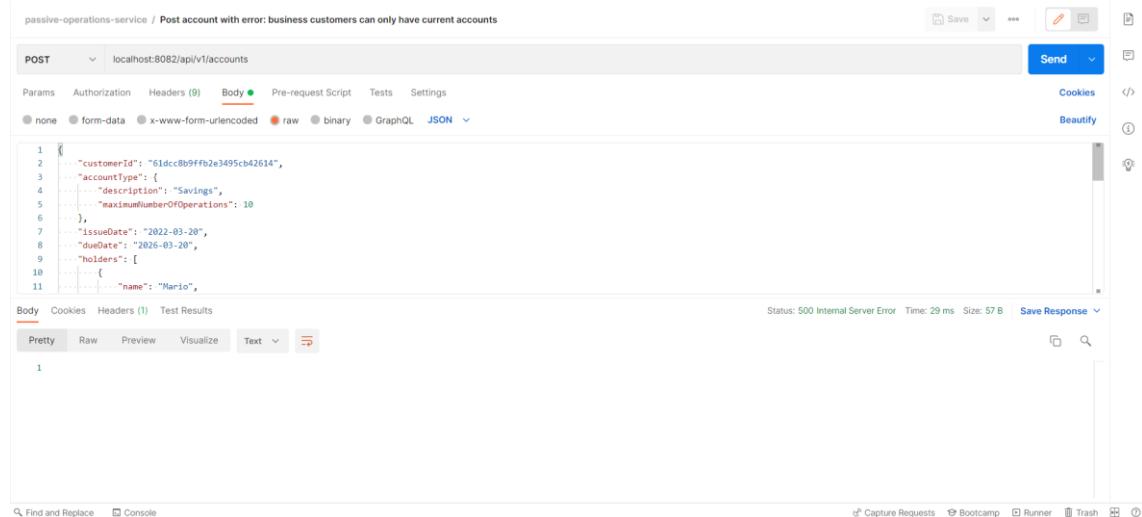
Body (JSON)

```
{
  "customerId": "61dcc8b9fffb2e3495cb42614",
  "accountType": {
    "description": "Current",
    "commission": 20
  },
  "issueDate": "2022-03-20",
  "dueDate": "2026-03-20",
  "holders": [
    {
      "name": "Mario"
    }
  ]
}
```

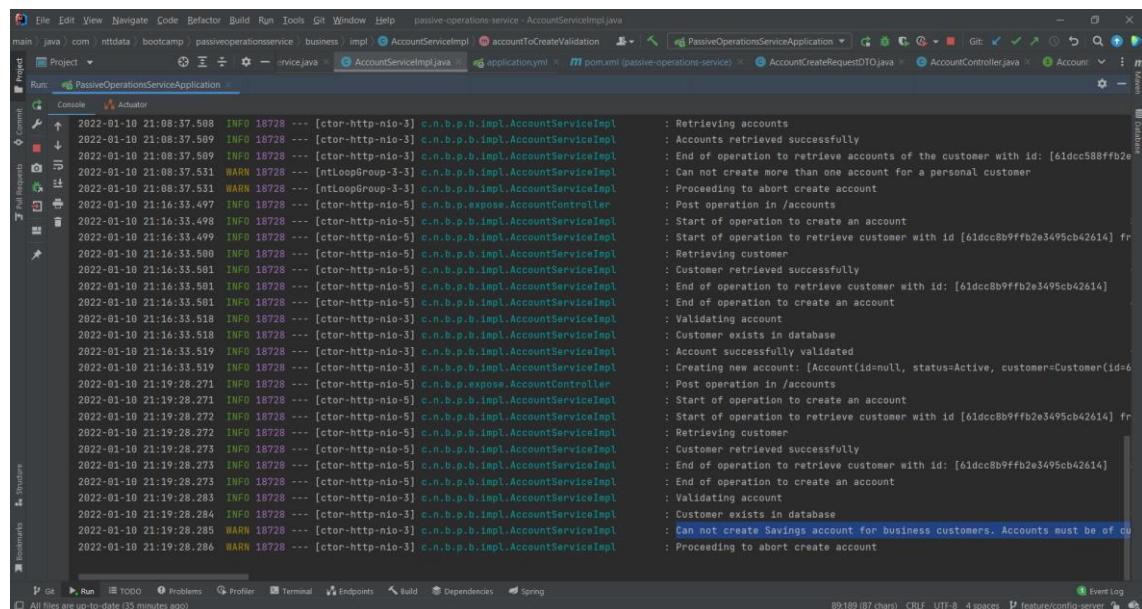
Status: 201 Created Time: 33 ms Size: 1.09 KB Save Response

4. Post new business account with error: business customers can only have current accounts:

When attempting to create a non-current account for a business customer, we get a 500-internal-server-error response, because business customers can only have current accounts.



In console, we see the following logs:



5. Post new account with error: customers cannot create accounts when they have locked status:

When attempting to create an account for a blocked customer, we get a 423-locked response.

passive-operations-service / Post new account with error: customers can not create accounts when they have locked status

POST localhost:8082/api/v1/accounts

Params Authorization Headers (9) Body Pre-request Script Tests Settings

none form-data x-www-form-urlencoded raw binary GraphQL JSON

```

1 {
2   "customerId": "61dcc8b9ff2e3495cb42614",
3   "accountType": {
4     "description": "Current",
5     "commission": 20
6   },
7   "issueDate": "2022-03-20",
8   "dueDate": "2026-03-20",
9   "holders": [
10     {
11       "name": "Mario"
12     }
13   ]
14 }

```

Body Cookies Headers (1) Test Results

Pretty Raw Preview Visualize Text

Status: 423 Locked Time: 37 ms Size: 42 B Save Response

Find and Replace Console Capture Requests Bootcamp Runner Trash

In console, we get the following logs:

```

2022-01-10 21:16:33.501 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to create an account
2022-01-10 21:16:33.518 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Validating account
2022-01-10 21:16:33.518 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer exists in database
2022-01-10 21:16:33.519 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Account successfully validated
2022-01-10 21:16:33.519 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Creating new account: [AccountId=null, status=Active, customer=Customer(id=61dcc8b9ff2e3495cb42614)]
2022-01-10 21:19:28.271 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountController : Post operation in /accounts
2022-01-10 21:19:28.271 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to create an account
2022-01-10 21:19:28.271 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to retrieve customer with id [61dcc8b9ff2e3495cb42614]
2022-01-10 21:19:28.271 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving customer
2022-01-10 21:19:28.273 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer retrieved successfully
2022-01-10 21:19:28.273 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to retrieve customer with id: [61dcc8b9ff2e3495cb42614]
2022-01-10 21:19:28.273 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to create an account
2022-01-10 21:19:28.283 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Validating account
2022-01-10 21:19:28.284 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer exists in database
2022-01-10 21:19:28.285 WARN 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Can not create Savings account for business customers. Accounts must be of cu
2022-01-10 21:19:28.286 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Proceeding to abort create account
2022-01-10 21:23:57.097 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountController : Post operation in /accounts
2022-01-10 21:23:57.098 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to create an account
2022-01-10 21:23:57.098 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to retrieve customer with id [61dcc8b9ff2e3495cb42614]
2022-01-10 21:23:57.098 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving customer
2022-01-10 21:23:57.099 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer retrieved successfully
2022-01-10 21:23:57.099 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to retrieve customer with id: [61dcc8b9ff2e3495cb42614]
2022-01-10 21:23:57.099 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to create an account
2022-01-10 21:23:57.127 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Validating account
2022-01-10 21:23:57.127 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer exists in database
2022-01-10 21:23:57.128 WARN 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer have blocked status
2022-01-10 21:23:57.128 WARN 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Proceeding to abort create account

```

6. Post new account with error: account does not have holders

passive-operations-service / Post new account with error: account does not have holders

POST localhost:8082/api/v1/accounts

Params Authorization Headers (9) Body Pre-request Script Tests Settings

none form-data x-www-form-urlencoded raw binary GraphQL JSON

```

1 {
2   "customerId": "61dcc8b9ff2e3495cb42614",
3   "accountType": {
4     "description": "Current",
5     "commission": 20
6   },
7   "issueDate": "2022-03-20",
8   "dueDate": "2026-03-20",
9   "holders": [
10     {
11       "name": "String",
12     }
13   ]
14 }

```

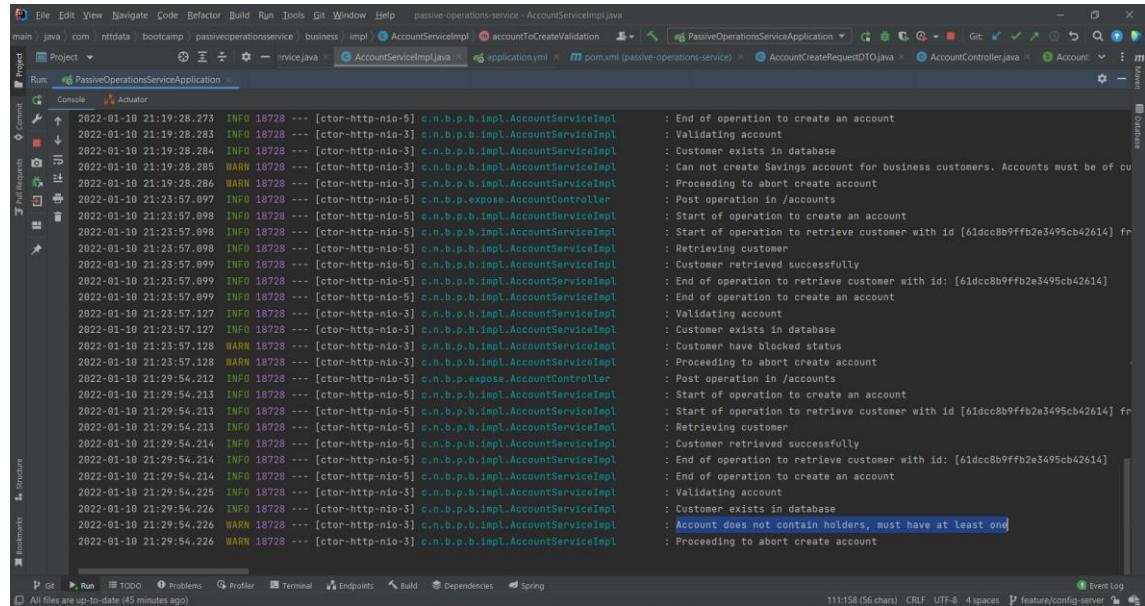
Body Cookies Headers (1) Test Results

Pretty Raw Preview Visualize Text

Status: 400 Bad Request Time: 26 ms Size: 47 B Save Response

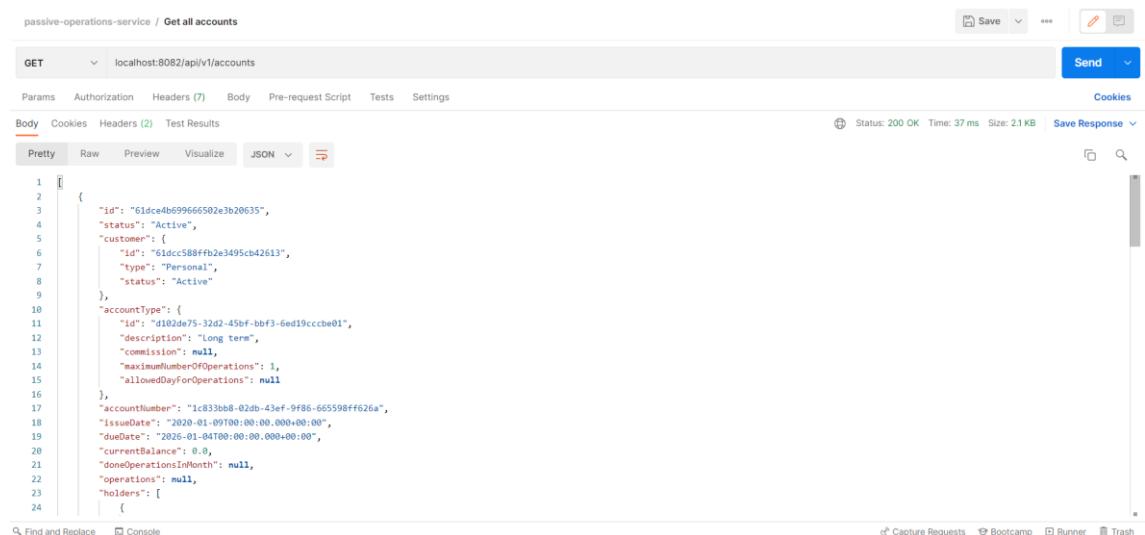
Find and Replace Console Capture Requests Bootcamp Runner Trash

In console, we see the following logs:



```
2022-01-10 21:19:28.273 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to create an account
2022-01-10 21:19:28.283 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Validating account
2022-01-10 21:19:28.284 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer exists in database
2022-01-10 21:19:28.285 WARN 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Can not create Savings account for business customers. Accounts must be of cu
2022-01-10 21:19:28.286 WARN 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Proceeding to abort create account
2022-01-10 21:23:57.097 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.expose.AccountController : Post operation in /accounts
2022-01-10 21:23:57.098 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to create an account
2022-01-10 21:23:57.098 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to retrieve customer with id [61dcc8b9ffb2e3495cb42614] fr
2022-01-10 21:23:57.098 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving customer
2022-01-10 21:23:57.099 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer retrieved successfully
2022-01-10 21:23:57.099 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to retrieve customer with id: [61dcc8b9ffb2e3495cb42614]
2022-01-10 21:23:57.099 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to create an account
2022-01-10 21:23:57.127 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Validating account
2022-01-10 21:23:57.127 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer exists in database
2022-01-10 21:23:57.128 WARN 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer have blocked status
2022-01-10 21:23:57.128 WARN 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Proceeding to abort create account
2022-01-10 21:29:54.212 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.expose.AccountController : Post operation in /accounts
2022-01-10 21:29:54.213 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to create an account
2022-01-10 21:29:54.213 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to retrieve customer with id [61dcc8b9ffb2e3495cb42614] fr
2022-01-10 21:29:54.213 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving customer
2022-01-10 21:29:54.214 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer retrieved successfully
2022-01-10 21:29:54.214 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to retrieve customer with id: [61dcc8b9ffb2e3495cb42614]
2022-01-10 21:29:54.214 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to create an account
2022-01-10 21:29:54.226 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Validating account
2022-01-10 21:29:54.226 WARN 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Account does not contain holders, must have at least one
2022-01-10 21:29:54.226 WARN 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Proceeding to abort create account
```

7. Get all accounts:



passive-operations-service / Get all accounts

GET localhost:8082/api/v1/accounts Send

Status: 200 OK Time: 37 ms Size: 2.1 KB Save Response

Body

```
1 [
2   {
3     "id": "61dceab699666502e3b20635",
4     "status": "Active",
5     "customer": {
6       "id": "61dcc58ffbf2e3495cb42613",
7       "type": "Personal",
8       "status": "Active"
9     },
10    "accountType": {
11      "id": "d102de75-32d2-45bf-bbf3-6ed19ccbe01",
12      "description": "Long term",
13      "commission": null,
14      "maximumNumberOfOperations": 1,
15      "allowedDayForOperations": null
16    },
17    "accountNumber": "1c833bbb-02db-43ef-9f86-665598ff626a",
18    "issueDate": "2020-01-04T00:00:00.000+00:00",
19    "dueDate": "2026-01-04T00:00:00.000+00:00",
20    "currentBalance": 0.0,
21    "doneOperationsInMonth": null,
22    "operations": null,
23    "holders": [
24      {
25        "name": "John Doe",
26        "id": "61dceab699666502e3b20635"
27      }
28    ]
29  }
30]
```

8. Get account by id:

```

1 {
2   "id": "61dce4b699666502e3b20635",
3   "status": "Active",
4   "customer": {
5     "id": "61dcc588fffb2e3495cb42613",
6     "type": "Personal",
7     "status": "Active"
8   },
9   "accountType": {
10    "id": "d192de75-32d2-45bf-bbf3-6ed19ccbe01",
11    "description": "Long term",
12    "commission": null,
13    "maximumNumberOfOperations": 1,
14    "allowedDaysForOperations": null
15  },
16  "accountNumber": "1c833bb8-02db-43ef-9f86-665598ff626a",
17  "issueDate": "2020-01-09T00:00:00.000+00:00",
18  "dueDate": "2026-01-04T00:00:00.000+00:00",
19  "currentBalance": 0.0,
20  "doneOperationsInMonth": null,
21  "operations": null,
22  "holders": [
23    {
24      "name": "Mario",
25    }
26  ]
27}

```

9. Put account without error:

```

1 {
2   "id": "61dce4b699666502e3b20635",
3   "status": "Blocked",
4   "dueDate": "2026-01-04",
5   "currentBalance": 0.0,
6   "doneOperationsInMonth": null,
7   "operations": null,
8   "holders": [
9     {
10       "name": "Mario",
11       "lastname": "Araujo",
12       "identityNumber": "88554461",
13     }
14   ]
15 }

```

10. Put account with error: not found account:

Account was not found, so a 404-not-found status was returned.

```

1 {
2   "id": "any-not-existing-id",
3   "status": "Blocked",
4   "dueDate": "2026-01-04",
5   "currentBalance": 0.0,
6   "doneOperationsInMonth": null,
7   "operations": null,
8   "holders": [
9     {
10       "name": "Mario",
11       "lastname": "Araujo",
12       "identityNumber": "88554461",
13     }
14   ]
15 }

```

11. Put account with error: account does not have holders:

Account does not contain holders, it must contain at least one, so we get a 400-bad-request status.

The screenshot shows a POST request to `localhost:8082/api/v1/accounts`. The JSON body is:

```

1 {
2   "id": "61dce4b699666502e3b20635",
3   "status": "Blocked",
4   "dueDate": "2026-01-04",
5   "currentBalance": 0.0,
6   "doneOperationsInMonth": null,
7   "operations": null,
8   "signers": [
9     {
10       "name": "String",
11       "lastName": "String",
12       "identityNumber": "String",
13     }
14   ]
15 }

```

The response status is 400 Bad Request.

In console, we see the following logs:

The screenshot shows the IntelliJ IDEA application log. It includes log entries from the `AccountController` and `AccountServiceImpl` classes. Key log messages include:

- `INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving account with id: [61dce4b699666502e3b20635]`
- `: Account with id: [61dce4b699666502e3b20635] was retrieved successfully`
- `: End of operation to find an account by id`
- `: End of operation to update an account`
- `: Validating account`
- `: Account exists in database`
- `: Account successfully validated`
- `: Updating account: [Account{id=61dce4b699666502e3b20635, status=Active, custom`
- `: Account with id: [61dce4b699666502e3b20635] was successfully updated`
- `: Put operation in /accounts`
- `: Start of operation to update an account`
- `: Start of operation to find an account by id`
- `: Retrieving account with id: [any-not-existing-id]`
- `: Account with id: [any-not-existing-id] was retrieved successfully`
- `: End of operation to find an account by id`
- `: End of operation to update an account`
- `: Put operation in /accounts`
- `: Start of operation to update an account`
- `: Start of operation to find an account by id`
- `: Retrieving account with id: [61dce4b699666502e3b20635]`
- `: Account with id: [61dce4b699666502e3b20635] was retrieved successfully`
- `: End of operation to find an account by id`
- `: End of operation to update an account`
- `: Validating account`
- `: Account exists in database`
- `: Account does not contain holders, must have at least one`
- `: Proceeding to abort update account`

12. Delete account without error:

```

1 {
2   "id": "61dcf1979966502e3b20637",
3   "status": "Active",
4   "customer": {
5     "id": "61dcc8b9fffb2e3495cb42614",
6     "type": "Business",
7     "status": "Active"
8   },
9   "accountType": {
10    "id": "c67de554-eb4b-4511-a417-2989fe00104b",
11    "description": "Current",
12    "commission": 20.0,
13    "maximumNumberOfOperations": null,
14    "allowedDayForOperations": null
15  },
16  "accountNumber": "bd4b3891-a03b-4793-94b8-78604fc8c5d",
17  "issueDate": "2022-03-20T00:00:00.000+00:00",
18  "dueDate": "2026-03-20T00:00:00.000+00:00",
19  "currentBalance": 0.0,
20  "doneOperationsInMonth": null,
21  "operations": null,
22  "holders": [
23    {
24      "name": "Mario",
25    }
26  ]
27}

```

13. Delete account with error: account not found:

Account was not found, so a 404-not-found status was returned.

```

1

```

14. Get accounts by customer id:

```

1 [
2   {
3     "id": "61dcf1979966502e3b20637",
4     "status": "Active",
5     "customer": {
6       "id": "61dcc8b9fffb2e3495cb42614",
7       "type": "Business",
8       "status": "Active"
9     },
10    "accountType": {
11      "id": "c67de554-eb4b-4511-a417-2989fe00104b",
12      "description": "Current",
13      "commission": 20.0,
14      "maximumNumberOfOperations": null,
15      "allowedDayForOperations": null
16    },
17    "accountNumber": "bd4b3891-a03b-4793-94b8-78604fc8c5d",
18    "issueDate": "2022-03-20T00:00:00.000+00:00",
19    "dueDate": "2026-03-20T00:00:00.000+00:00",
20    "currentBalance": 0.0,
21    "doneOperationsInMonth": null,
22    "operations": null,
23    "holders": [
24      {
25        "name": "Mario",
26      }
27    ]
28  }
29]

```

15. Post do operation without error:

The screenshot shows a Postman interface with the following details:

- Request URL:** localhost:8082/api/v1/accounts/operations
- Method:** POST
- Body (JSON):**

```

1 {
2   ...
3   "id": "61dce88199666502e3b20636",
4   ...
5   "operation": {
6     ...
7     "type": "Deposit",
8     ...
9     "amount": 250.00
10    ...
11  }
12 }

```

- Response Status:** 201 Created
- Response Time:** 396 ms
- Response Size:** 1.21 KB

16. Post do operation with error: account has insufficient funds:

A customer cannot withdraw an amount greater than its current balance. If it attempts to do so, then an status 400-bad-request is returned.

The screenshot shows a Postman interface with the following details:

- Request URL:** localhost:8082/api/v1/accounts/operations
- Method:** POST
- Body (JSON):**

```

1 {
2   ...
3   "id": "61dce88199666502e3b20636",
4   ...
5   "operation": {
6     ...
7     "type": "Withdrawal",
8     ...
9     "amount": 1200.00
10    ...
11  }
12 }

```

- Response Status:** 400 Bad Request
- Response Time:** 12 ms
- Response Size:** 47 B

In console, we can see the following logs:

The screenshot shows an IDE interface with several tabs open. The main tab displays Java code for a service implementation. Below the code, a large block of log output from the application's runtime environment is shown. The logs are timestamped and detail various operations being performed by the service, such as account creation, validation, and updates. Some log entries indicate successful operations, while others show errors or warnings, such as insufficient funds.

```

2022-01-11 00:30:33.640 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start to save a new account operation for the account with id: [61dce881996656502e3b20636]
2022-01-11 00:30:33.641 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End to save a new account operation for the account with id: [61dce881996656502e3b20636]
2022-01-11 00:30:33.650 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Validating operation
2022-01-11 00:30:33.650 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Account exists in database
2022-01-11 00:30:33.651 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Operation successfully validated
2022-01-11 00:30:33.651 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Doing deposit of [250.0] to account with id [61dce881996656502e3b20636]
2022-01-11 00:30:33.651 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Saving operation into account: [Account{id=61dce881996656502e3b20636, status=A}]
2022-01-11 00:30:33.652 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Operation was successfully updated
2022-01-11 00:31:04.123 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountController : Put operation in /accounts
2022-01-11 00:31:04.123 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountController : Start of operation to update an account
2022-01-11 00:31:04.123 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountController : Start of operation to find an account by id
2022-01-11 00:31:04.123 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountController : Retrieving account with id: [61dce4b6996656502e3b20635]
2022-01-11 00:31:04.124 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountController : Account with id: [61dce4b6996656502e3b20635] was retrieved successfully
2022-01-11 00:31:04.124 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountController : End of operation to find an account by id
2022-01-11 00:31:04.124 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountController : End of operation to update an account
2022-01-11 00:31:04.129 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Validating account
2022-01-11 00:31:04.129 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Account exists in database
2022-01-11 00:31:04.130 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Account successfully validated
2022-01-11 00:31:04.130 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Updating account: [Account{id=61dce4b6996656502e3b20635, status=Active, custom=A}]
2022-01-11 00:31:04.130 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Account with id: [61dce4b6996656502e3b20635] was successfully updated
2022-01-11 00:31:51.203 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountController : Post operation in /accounts/operation
2022-01-11 00:31:51.204 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountController : Start to save a new account operation for the account with id: [61dce881996656502e3b20636]
2022-01-11 00:31:51.204 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountController : End to save a new account operation for the account with id: [61dce881996656502e3b20636]
2022-01-11 00:31:51.207 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Validating operation
2022-01-11 00:31:51.207 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Account exists in database
2022-01-11 00:31:51.208 INFO 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Account has insufficient funds
2022-01-11 00:31:51.208 WARN 18728 --- [nioLoopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Proceeding to abort do operation

```

17. Post do operation with error: allowed day for operations does not match current day of the month:

The screenshot shows a POST request made to the endpoint `/api/v1/accounts/operations`. The request body contains a JSON object representing a deposit operation. The response status is 500 Internal Server Error, indicating that the allowed day for operations does not match the current day of the month. The response body is empty.

In console, we can see the following logs:

```

2022-01-11 00:36:25.039 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving account with id: [61dce4b699666502e3b20635]
2022-01-11 00:36:25.039 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Account with id: [61dce4b699666502e3b20635] was retrieved successfully
2022-01-11 00:36:25.039 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to find an account by id
2022-01-11 00:36:25.039 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Account with id: [61dce4b699666502e3b20635] was successfully deleted
2022-01-11 00:36:25.040 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to remove a customer
2022-01-11 00:36:47.627 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.expose.AccountController : Post operation in /accounts
2022-01-11 00:36:47.627 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to create an account
2022-01-11 00:36:47.627 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to retrieve customer with id [61dcc588ffbb2e3495cb42613] from database
2022-01-11 00:36:47.628 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving customer
2022-01-11 00:36:47.628 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer retrieved successfully
2022-01-11 00:36:47.628 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to retrieve customer with id: [61dcc588ffbb2e3495cb42613]
2022-01-11 00:36:47.628 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to create an account
2022-01-11 00:36:47.630 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Validating account
2022-01-11 00:36:47.630 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer exists in database
2022-01-11 00:36:47.755 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to retrieve all accounts of the customer with id: [61dcc588ffbb2e3495cb42613]
2022-01-11 00:36:47.755 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving accounts
2022-01-11 00:36:47.756 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Accounts retrieved successfully
2022-01-11 00:36:47.756 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to retrieve accounts of the customer with id: [61dcc588ffbb2e3495cb42613]
2022-01-11 00:36:47.759 INFO 18728 --- [nloopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Account successfully validated
2022-01-11 00:36:47.759 INFO 18728 --- [nloopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Creating new account: [AccountId=null, status=Active, customer=Customer(id=61dd17df9966502e3b20635)]
2022-01-11 00:37:04.895 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.expose.AccountController : Post operation in /accounts/operation
2022-01-11 00:37:04.896 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start to save a new account operation for the account with id: [61dd17df9966502e3b20635]
2022-01-11 00:37:04.897 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End to save a new account operation for the account with id: [61dd17df9966502e3b20635]
2022-01-11 00:37:04.902 INFO 18728 --- [nloopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Validating operation
2022-01-11 00:37:04.903 INFO 18728 --- [nloopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Account exists in database
2022-01-11 00:37:04.904 INFO 18728 --- [nloopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Allowed day [10] for operations in this account does not match with current day [11]
2022-01-11 00:37:04.994 WARN 18728 --- [nloopGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Proceeding to abort do operation

```

18. Post do operation with error: maximum number of operations reached:

passive-operations-service / Post do operation with error: maximum number of operations reached

POST localhost:8082/api/v1/accounts/operations

Params Authorization Headers (9) Body **Pre-request Script** Tests Settings

none form-data x-www-form-urlencoded raw binary GraphQL JSON

```

1 {
2     "id": "61dd17df9966502e3b20639",
3     "operation": {
4         "type": "Deposit",
5         "amount": 200.00
6     }
7 }
```

Body Cookies Headers (1) Test Results

Pretty Raw Preview Visualize Text

Status: 500 Internal Server Error Time: 0 ms Size: 57 B Save Send Cookies Beautify

Find and Replace Console Capture Requests Bootcamp Runner Trash

In console, we can see the following logs:

```

2022-01-11 00:38:39.035 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer retrieved successfully
2022-01-11 00:38:39.035 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to retrieve customer with id: [61dcc588fffb2e3495cb42613]
2022-01-11 00:38:39.037 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to create an account
2022-01-11 00:38:39.062 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Validating account
2022-01-11 00:38:39.063 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Customer exists in database
2022-01-11 00:38:39.063 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start of operation to retrieve all accounts of the customer with id: [61dcc588fffb2e]
2022-01-11 00:38:39.064 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Retrieving accounts
2022-01-11 00:38:39.064 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Accounts retrieved successfully
2022-01-11 00:38:39.065 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End of operation to retrieve accounts of the customer with id: [61dcc588fffb2e]
2022-01-11 00:38:39.066 INFO 18728 --- [nnioGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Account successfully validated
2022-01-11 00:38:39.069 INFO 18728 --- [nnioGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Creating new account: [Account{id=null, status=Active, customersCustomerId=61dd17df99665802e3b20639}]
2022-01-11 00:40:10.479 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.expose.AccountController : Post operation in /accounts/operation
2022-01-11 00:40:10.480 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start to save a new account operation for the account with id: [61dd17df99665802e3b20639]
2022-01-11 00:40:10.481 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End to save a new account operation for the account with id: [61dd17df99665802e3b20639]
2022-01-11 00:40:10.483 INFO 18728 --- [nnioGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Validating operation
2022-01-11 00:40:10.483 INFO 18728 --- [nnioGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Account exists in database
2022-01-11 00:40:10.483 INFO 18728 --- [nnioGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Operation successfully validated
2022-01-11 00:40:10.484 INFO 18728 --- [nnioGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Doing deposit of [200.0] to account with id [61dd17df99665802e3b20639]
2022-01-11 00:40:10.484 INFO 18728 --- [nnioGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Saving operation into account: [Account{id=61dd17df99665802e3b20639, status=A}]
2022-01-11 00:40:10.484 INFO 18728 --- [nnioGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Operation was successfully updated
2022-01-11 00:40:12.889 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.expose.AccountController : Post operation in /accounts/operation
2022-01-11 00:40:12.889 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : Start to save a new account operation for the account with id: [61dd17df99665802e3b20639]
2022-01-11 00:40:12.890 INFO 18728 --- [ctor-http-nio-5] c.n.b.p.b.impl.AccountServiceImpl : End to save a new account operation for the account with id: [61dd17df99665802e3b20639]
2022-01-11 00:40:12.893 INFO 18728 --- [nnioGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Validating operation
2022-01-11 00:40:12.893 INFO 18728 --- [nnioGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Account exists in database
2022-01-11 00:40:12.893 INFO 18728 --- [nnioGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Maximum number of operations reached, can not do more operations
2022-01-11 00:40:12.893 WARN 18728 --- [nnioGroup-3-3] c.n.b.p.b.impl.AccountServiceImpl : Proceeding to abort do operation

```

19. Post do operation with error: account not found:

Account was not found, so a 404-not-found status was returned.

POST localhost:8082/api/v1/accounts/operations

Params Authorization Headers (9) Body Pre-request Script Tests Settings

none form-data x-www-form-urlencoded raw binary GraphQL JSON

```

1 {
2   "id": "any-not-existing-id",
3   "operation": {
4     "type": "Deposit",
5     "amount": 200.00
6   }
7 }

```

Body Cookies Headers (1) Test Results

Pretty Raw Preview Visualize Text

Status: 404 Not Found Time: 13 ms Size: 45 B Save Response

20. Put reset done operations in the month without errors:

For testing purposes, there were added an endpoint to reset the number of done operations in a specified account. As it can be seen in the example, doneOperationsInMonth field has been reset to zero.

```

1 {
2   "id": "61dd17df99666502e3b20639",
3   "status": "Active",
4   "customer": {
5     "id": "63dcc588ff02e3495cb42613",
6     "type": "Personal",
7     "status": "Active"
8   },
9   "accountType": {
10    "id": "d392ead4-50e2-4181-aef5-87979315e873",
11    "description": "Long term",
12    "commission": null,
13    "maximumNumberOfOperations": 1,
14    "allowedDayForOperations": 11
15  },
16  "accountNumber": "c443d0ca-bc6c-45ca-b3a6-18023f29cd6",
17  "issueDate": "2020-01-09T00:00:00.000+00:00",
18  "dueDate": "2026-01-04T00:00:00.000+00:00",
19  "currentBalance": 200.0,
20  "doneOperationsInMonth": 0,
21  "operations": [
22    {
23      "operationNumber": "f6c0314d-a6ca-4613-9846-75df4b7bf94",
24      "time": "2022-01-11T05:40:10.484+00:00",

```

21. Put reset done operations in the month without errors:

Account was not found, so a 404-not-found status was returned.

```

1

```

22. Get operations by account id:

```

1 [
2   {
3     "operationNumber": "4e652303-e532-45c8-9be3-ae355e1902f9",
4     "time": "2022-01-11T05:25:13.967+00:00",
5     "type": "Deposit",
6     "amount": 250.0
7   },
8   {
9     "operationNumber": "18423152-a106-4fd8-8ded-5a946103bce1",
10    "time": "2022-01-11T05:30:33.651+00:00",
11    "type": "Deposit",
12    "amount": 250.0
13  },
14  {
15    "operationNumber": "17e045de-beab-40cd-baab-99508814d510",
16    "time": "2022-01-11T05:56:11.081+00:00",
17    "type": "Withdrawal",
18    "amount": 120.0
19  }
20 ]

```

23. Get balances by customer id:

```

1 [
2   {
3     "id": "61dce88199666502e3b20636",
4     "accountType": "Current",
5     "currentBalance": 380.0
6   },
7   {
8     "id": "61dd1bcc99666502e3b2063a",
9     "accountType": "Current",
10    "currentBalance": 820.0
11  }
12 ]

```

ACTIVE-OPERATIONS-SERVICE:

1. Post new personal credit without error:

```

1 {
2   "customerId": "61dc558fffb2e3495cb42613",
3   "fullGrantedAmount": 8000.00,
4   "issueDate": "2019-09-27",
5   "dueDate": "2023-09-27",
6   "billingDetails": {
7     "interestPercentage": 3,
8     "closingDay": 5
9   }
10 }

```

```

1 {
2   "id": "61dd1db71190468347f1d2b",
3   "status": "Active",
4   "customer": {
5     "id": "61dc558fffb2e3495cb42613",
6     "type": "Personal",
7     "status": "Active"
8   },
9   "fullGrantedAmount": 8000.0,
10  "availableAmount": 8000.0

```

2. Post new personal credit with error: personal customers can only have one credit:

When attempting to create another credit for the same customerId of operation 1, we get a 500-internal-server-error response, because personal customers can only have one credit.

passive-operations-service / Post new personal credit with error: personal customers can only have one credit

POST localhost:8083/api/v1/credits

Body (JSON)

```
{
  "customerId": "61dcc588ff2e3495cb42613",
  "fullGrantedAmount": 8000.00,
  "issueDate": "2019-09-27",
  "dueDate": "2023-09-27",
  "billingDetails": {
    "interestPercentage": 3,
    "closingDay": 5
  }
}
```

Status: 500 Internal Server Error Time: 62 ms Size: 57 B Save Response

Find and Replace Console Capture Requests Bootcamp Runner Trash

In console, we can see the following logs:

```

2022-01-11 01:02:49.485 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving customer
2022-01-11 01:02:49.531 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer retrieved successfully
2022-01-11 01:02:49.531 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to retrieve customer with id: [61dcc588ff2e3495cb42613]
2022-01-11 01:02:49.532 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Creating new credit: [Credit(id=null, status=Active, customer=Customer(id=61dcc588ff2e3495cb42613))]
2022-01-11 01:02:49.532 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to create a credit
2022-01-11 01:02:50.495 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-11 01:02:50.495 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer exists in database
2022-01-11 01:02:50.495 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to retrieve all credits of the customer with id: [61dcc588ff2e3495cb42613]
2022-01-11 01:02:50.495 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving credits
2022-01-11 01:02:50.518 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Credits retrieved successfully
2022-01-11 01:02:50.518 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to retrieve credits of the customer with id: [61dcc588ff2e3495cb42613]
2022-01-11 01:02:50.613 INFO 13512 --- [nioLoopGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Credit successfully validated
2022-01-11 01:02:50.613 INFO 13512 --- [nioLoopGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Creating new credit: [Credit(id=null, status=Active, customer=Customer(id=61dcc588ff2e3495cb42613))]
2022-01-11 01:05:34.857 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.expose.CreditController : Post operation in /credits
2022-01-11 01:05:34.858 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to create a credit
2022-01-11 01:05:34.859 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to retrieve customer with id [61dcc588ff2e3495cb42613]
2022-01-11 01:05:34.859 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving customer
2022-01-11 01:05:34.860 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer retrieved successfully
2022-01-11 01:05:34.860 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to retrieve customer with id: [61dcc588ff2e3495cb42613]
2022-01-11 01:05:34.861 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to retrieve customer with id: [61dcc588ff2e3495cb42613]
2022-01-11 01:05:34.880 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-11 01:05:34.881 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer exists in database
2022-01-11 01:05:34.881 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to retrieve all credits of the customer with id: [61dcc588ff2e3495cb42613]
2022-01-11 01:05:34.881 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving credits
2022-01-11 01:05:34.882 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Credits retrieved successfully
2022-01-11 01:05:34.883 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to retrieve credits of the customer with id: [61dcc588ff2e3495cb42613]
2022-01-11 01:05:34.908 WARN 13512 --- [nioLoopGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Can not create more than one credit for a personal customer
2022-01-11 01:05:34.908 WARN 13512 --- [nioLoopGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Proceeding to abort create credit

```

3. Post new business credit without error:

passive-operations-service / Post new business credit without error

POST localhost:8083/api/v1/credits

Body (JSON)

```
{
  "customerId": "61dcc8b9ff2e3495cb42614",
  "fullGrantedAmount": 120500.00,
  "issueDate": "2021-11-03",
  "dueDate": "2025-11-03",
  "billingDetails": {
    "interestPercentage": 4,
    "closingDay": 10
  }
}
```

Status: 201 Created Time: 31 ms Size: 487 B Save Response

Find and Replace Console Capture Requests Bootcamp Runner Trash

4. Post new credit with error: customers cannot create credits when they have blocked status:

When attempting to create a credit for a blocked customer, we get a 423-locked response.

The screenshot shows a Postman request to `localhost:8083/api/v1/credits`. The JSON body is:

```
1 {
2     "customerId": "61dcc8b9fffb2e3495cb42614",
3     "fullGrantedAmount": 120500.00,
4     "issueDate": "2021-11-02",
5     "dueDate": "2025-11-03",
6     "billingDetails": {
7         "interestPercentage": 4,
8         "closingDay": 10
9     }
10 }
```

The response status is 423 Locked.

In console, we get the following logs:

```
2022-01-11 01:05:34.881 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving credits
2022-01-11 01:05:34.882 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Credits retrieved successfully
2022-01-11 01:05:34.883 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to retrieve credits of the customer with id: [61dcc8b9fffb2e3495cb42614]
2022-01-11 01:05:34.908 WARN 13512 --- [nioLoopGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Can not create more than one credit for a personal customer
2022-01-11 01:05:34.908 WARN 13512 --- [nioLoopGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Proceeding to abort create credit
2022-01-11 01:09:03.342 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.expose.CreditController : Post operation in /credits
2022-01-11 01:09:03.342 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to create a credit
2022-01-11 01:09:03.342 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to retrieve customer with id [61dcc8b9fffb2e3495cb42614]
2022-01-11 01:09:03.342 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving customer
2022-01-11 01:09:03.342 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer retrieved successfully
2022-01-11 01:09:03.342 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to retrieve customer with id: [61dcc8b9fffb2e3495cb42614]
2022-01-11 01:09:03.342 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to create a credit
2022-01-11 01:09:03.342 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-11 01:09:03.358 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer exists in database
2022-01-11 01:09:03.358 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Credit successfully validated
2022-01-11 01:09:03.358 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Creating new credit: [credit(id=null, status=Active, customer=Customer(id=61dcc8b9fffb2e3495cb42614))
2022-01-11 01:12:14.313 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.expose.CreditController : Post operation in /credits
2022-01-11 01:12:14.314 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to create a credit
2022-01-11 01:12:14.314 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to retrieve customer with id [61dcc8b9fffb2e3495cb42614]
2022-01-11 01:12:14.316 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving customer
2022-01-11 01:12:14.317 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer retrieved successfully
2022-01-11 01:12:14.318 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to retrieve customer with id: [61dcc8b9fffb2e3495cb42614]
2022-01-11 01:12:14.335 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to create a credit
2022-01-11 01:12:14.335 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-11 01:12:14.336 WARN 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer exists in database
2022-01-11 01:12:14.336 WARN 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer have blocked status
2022-01-11 01:12:14.336 WARN 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Proceeding to abort create credit
```

5. Post new credit with error: credit does not have billing details:

The screenshot shows the Postman interface with a POST request to `localhost:8083/api/v1/credits`. The JSON body is:

```

1 {
2   "customerId": "61dcc8b9fffb2e3495cb42614",
3   "fullGrantedAmount": 128500.00,
4   "issueDate": "2021-11-03",
5   "dueDate": "2025-11-03"
6 }

```

The response status is 400 Bad Request with the message: "Credit does not have billing details".

In console, we see the following logs:

The screenshot shows the IntelliJ IDEA log window with the following log entries:

```

2022-01-11 01:09:03.342 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to create a credit
2022-01-11 01:09:03.353 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-11 01:09:03.358 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer exists in database
2022-01-11 01:09:03.358 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Credit successfully validated
2022-01-11 01:09:03.358 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Creating new credit: [Credit(id=null, status=Active, customer=Customer(id=61dcc8b9fffb2e3495cb42614) fr
2022-01-11 01:12:14.313 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.expose.CreditController : Post operation in /credits
2022-01-11 01:12:14.314 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to create a credit
2022-01-11 01:12:14.314 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to retrieve customer with id [61dcc8b9fffb2e3495cb42614] fr
2022-01-11 01:12:14.317 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving customer
2022-01-11 01:12:14.317 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer retrieved successfully
2022-01-11 01:12:14.318 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to retrieve customer with id: [61dcc8b9fffb2e3495cb42614]
2022-01-11 01:12:14.318 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-11 01:12:14.335 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer exists in database
2022-01-11 01:12:14.335 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Proceeding to abort create credit
2022-01-11 01:12:14.336 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.expose.CreditController : Post operation in /credits
2022-01-11 01:12:14.336 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to create a credit
2022-01-11 01:12:14.336 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to retrieve customer with id [61dcc8b9fffb2e3495cb42614] fr
2022-01-11 01:12:14.336 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving customer
2022-01-11 01:12:14.336 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer retrieved successfully
2022-01-11 01:12:14.336 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.expose.CreditController : End of operation to create a credit
2022-01-11 01:14:22.331 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to create a credit
2022-01-11 01:14:22.331 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to retrieve customer with id [61dcc8b9fffb2e3495cb42614] fr
2022-01-11 01:14:22.332 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving customer
2022-01-11 01:14:22.332 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer retrieved successfully
2022-01-11 01:14:22.332 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to retrieve customer with id: [61dcc8b9fffb2e3495cb42614]
2022-01-11 01:14:22.333 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to create a credit
2022-01-11 01:14:22.333 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-11 01:14:22.364 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Customer exists in database
2022-01-11 01:14:22.364 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Proceeding to abort update account
2022-01-11 01:14:22.364 WARN 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Credit does not contain billing details
2022-01-11 01:14:22.364 WARN 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Proceeding to abort update account

```

6. Get all credits:

The screenshot shows the Postman interface with a GET request to `localhost:8083/api/v1/credits`. The response status is 200 OK and the JSON body is:

```

1 [
2   {
3     "id": "61dd1d8a71190468347f1d2b",
4     "status": "Active",
5     "customer": {
6       "id": "61dc588fb2e3495cb42613",
7       "type": "Personal",
8       "status": "Active"
9     },
10    "fullGrantedAmount": 8000.0,
11    "availableAmount": 8000.0,
12    "creditCardNumber": "5ad9e9ff-39b5-4cea-bd73-2443060c3440",
13    "issueDate": "2019-09-27T00:00:00.000+00:00",
14    "dueDate": "2023-09-27T00:00:00.000+00:00",
15    "operations": null,
16    "billingDetails": {
17      "interestPercentage": 3.0,
18      "closingDay": 5
19    }
20  },
21  {
22    "id": "61dd1eff71190468347f1d2c",
23    "status": "Active",
24    "customer": {

```

7. Get credit by id:

The screenshot shows a Postman request for "passive-operations-service / Get credit by id". The method is GET, and the URL is `localhost:8083/api/v1/credits/61dd1d8a71190468347fid2b`. The response status is 200 OK, time 32 ms, size 477 B. The response body is a JSON object representing a credit record.

```
1 {
2     "id": "61dd1d8a71190468347fid2b",
3     "status": "Active",
4     "customer": {
5         "id": "61dcc588ffbe3495cb42613",
6         "type": "Personal",
7         "status": "Active"
8     },
9     "fullGrantedAmount": 8000.0,
10    "availableAmount": 8000.0,
11    "creditCardNumber": "5ad9e9fff-39b5-4cea-bd73-2443060c3440",
12    "issueDate": "2019-09-27T00:00:00.000+00:00",
13    "dueDate": "2023-09-27T00:00:00.000+00:00",
14    "operations": null,
15    "billingDetails": {
16        "interestPercentage": 3.0,
17        "closingDay": 5
18    }
19 }
```

8. Put credit without error:

The screenshot shows a Postman request for "passive-operations-service / Put credit without error". The method is PUT, and the URL is `localhost:8083/api/v1/credits`. The response status is 200 OK, time 122 ms, size 477 B. The response body is a JSON object representing the updated credit record.

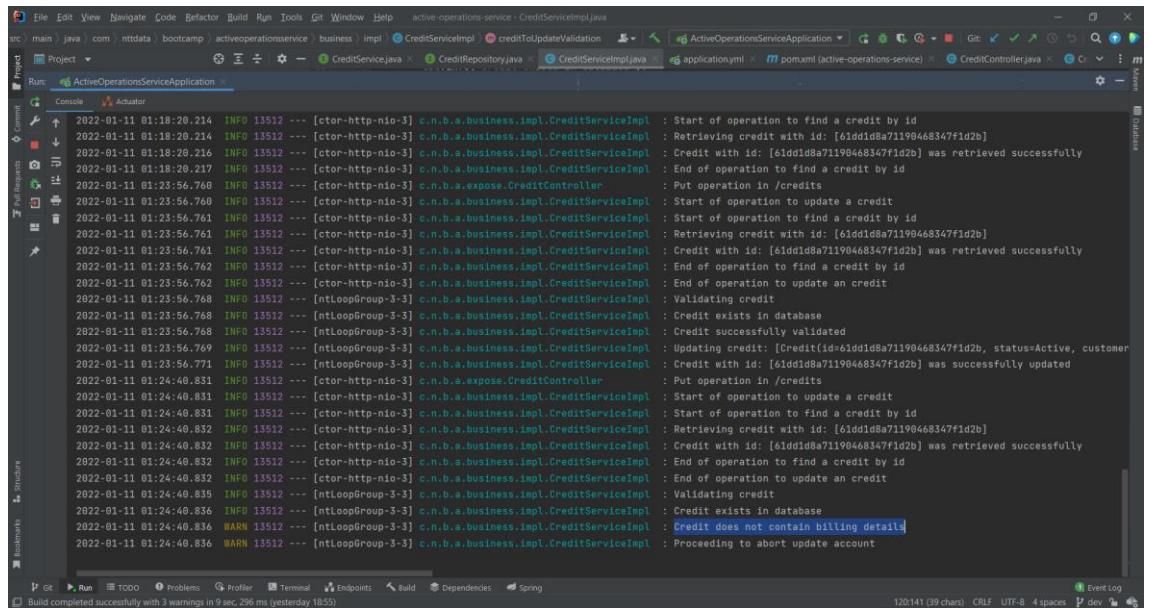
```
1 {
2     "id": "61dd1d8a71190468347fid2b",
3     "status": "Active",
4     "fullGrantedAmount": 7500.0,
5     "availableAmount": 7500.0,
6     "dueDate": "2025-09-27",
7     "billingDetails": {
8         "interestPercentage": 4.0,
9         "closingDay": 5
10    }
11 }
```

9. Put credit with error: credit does not have billing details:

The screenshot shows a Postman request for "passive-operations-service / Put credit with error: credit does not have billing details". The method is PUT, and the URL is `localhost:8083/api/v1/credits`. The response status is 400 Bad Request, time 12 ms, size 47 B. The response body is a JSON object indicating the error.

```
1 {
2     "id": "61dd1d8a71190468347fid2b",
3     "status": "Active",
4     "fullGrantedAmount": 7500.0,
5     "availableAmount": 7500.0,
6     "dueDate": "2025-09-27"
7 }
```

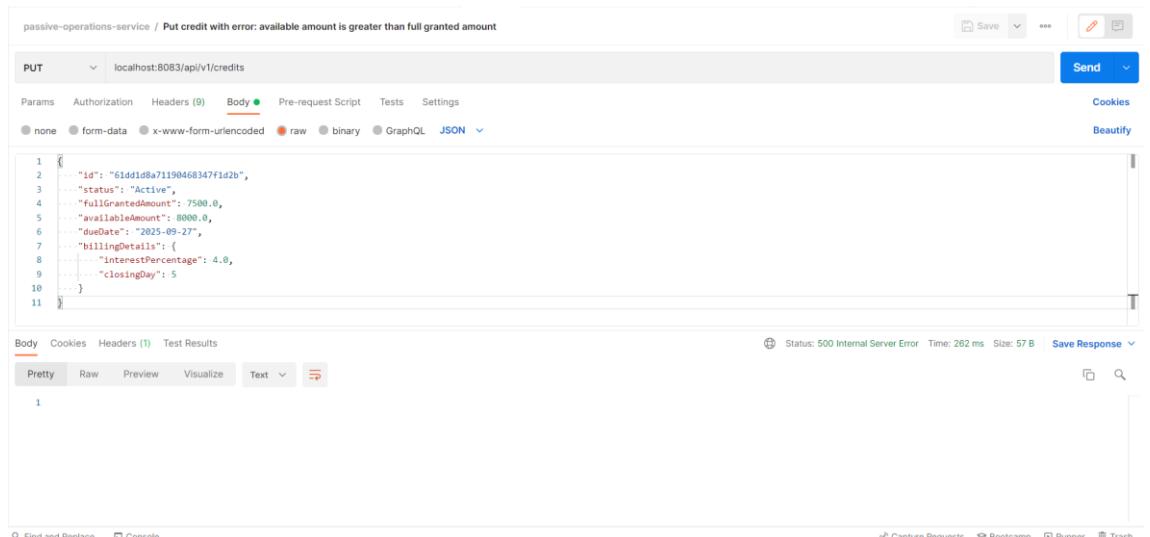
In console, we can see the following logs:



```
2022-01-11 01:18:20.214 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to find a credit by id
2022-01-11 01:18:20.214 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving credit with id: [61dd1d8a71190468347ff1d2b]
2022-01-11 01:18:20.216 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Credit with id: [61dd1d8a71190468347ff1d2b] was retrieved successfully
2022-01-11 01:18:20.217 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to find a credit by id
2022-01-11 01:23:56.760 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.expose.CreditController : Put operation in /credits
2022-01-11 01:23:56.760 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to update a credit
2022-01-11 01:23:56.761 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to find a credit by id
2022-01-11 01:23:56.761 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving credit with id: [61dd1d8a71190468347ff1d2b]
2022-01-11 01:23:56.761 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Credit with id: [61dd1d8a71190468347ff1d2b] was retrieved successfully
2022-01-11 01:23:56.762 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to find a credit by id
2022-01-11 01:23:56.762 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to update an credit
2022-01-11 01:23:56.762 INFO 13512 --- [nnioGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-11 01:23:56.768 INFO 13512 --- [nnioGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Credit exists in database
2022-01-11 01:23:56.768 INFO 13512 --- [nnioGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Credit successfully validated
2022-01-11 01:23:56.769 INFO 13512 --- [nnioGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Updating credit: [Credit{id=61dd1d8a71190468347ff1d2b, status=Active, customer
2022-01-11 01:23:56.771 INFO 13512 --- [nnioGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Credit with id: [61dd1d8a71190468347ff1d2b] was successfully updated
2022-01-11 01:24:40.831 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.expose.CreditController : Put operation in /credits
2022-01-11 01:24:40.831 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to update a credit
2022-01-11 01:24:40.831 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to find a credit by id
2022-01-11 01:24:40.832 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving credit with id: [61dd1d8a71190468347ff1d2b]
2022-01-11 01:24:40.832 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Credit with id: [61dd1d8a71190468347ff1d2b] was retrieved successfully
2022-01-11 01:24:40.832 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to find a credit by id
2022-01-11 01:24:40.832 INFO 13512 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to update an credit
2022-01-11 01:24:40.835 INFO 13512 --- [nnioGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-11 01:24:40.836 INFO 13512 --- [nnioGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Credit exists in database
2022-01-11 01:24:40.836 WARN 13512 --- [nnioGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Credit does not contain billing details
2022-01-11 01:24:40.836 WARN 13512 --- [nnioGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Proceeding to abort update account
```

10. Put credit with error: available amount is greater than full granted amount:

Available amount cannot be greater than the full granted amount.



```
PUT /api/v1/credits
localhost:8083
```

Body (JSON)

```
{
  "id": "61dd1d8a71190468347ff1d2b",
  "status": "Active",
  "fullGrantedAmount": 7500.0,
  "availableAmount": 8000.0,
  "dueDate": "2025-09-27",
  "billingDetails": {
    "interestPercentage": 4.0,
    "closingDay": 5
  }
}
```

Status: 500 Internal Server Error Time: 262 ms Size: 57 B Save Response

In console, we can see the following logs:

```

2022-01-13 01:28:53.541 INFO 8980 --- [ restartedMain] n.b.a.ActiveOperationsServiceApplication : Starting ActiveOperationsServiceApplication using Java 11.0.13 on Lenovo-Laptop
2022-01-13 01:28:53.561 DEBUG 8980 --- [ restartedMain] n.b.a.ActiveOperationsServiceApplication : Running with Spring Boot v2.6.2, Spring v5.3.14
2022-01-13 01:28:53.610 INFO 8980 --- [ restartedMain] o.s.b.context.config.ConfigDataLoader : Fetching config from server at : http://localhost:8888
2022-01-13 01:28:53.610 INFO 8980 --- [ restartedMain] e.DevToolsPropertyDefaultsPostProcessor : Devtools property defaults active! Set 'spring.devtools.add-properties' to 'false' or 'skipPropertiesSet=true' to skip this message.
2022-01-13 01:28:53.610 INFO 8980 --- [ restartedMain] e.DevToolsPropertyDefaultsPostProcessor : For additional web related logging consider setting the 'logging.level.web' property to 'DEBUG'
2022-01-13 01:28:54.246 INFO 8980 --- [ restartedMain] s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data Reactive MongoDB repositories in DEFAULT mode.
2022-01-13 01:28:54.303 INFO 8980 --- [ restartedMain] s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 54 ms. Found 1 Reactive MongoDB repository.
2022-01-13 01:28:54.651 INFO 8980 --- [ restartedMain] o.s.cloud.context.scope.GenericScope : BeanFactory id=14f988fc-01ec-3c29-9660-d79a04f86226
2022-01-13 01:28:55.211 WARN 8980 --- [ restartedMain] o.s.b.a.OptionalLiveReloadServer : Unable to start LiveReload server
2022-01-13 01:28:56.991 INFO 8980 --- [ restartedMain] o.s.b.a.web.EndpointLinksResolver : Exposing 1 endpoint(s) beneath base path '/actuator'
2022-01-13 01:28:58.251 INFO 8980 --- [ restartedMain] o.s.b.a.web.embedded.netty.NettyWebServer : Netty started on port 8883
2022-01-13 01:29:00.284 INFO 8980 --- [ restartedMain] n.b.a.ActiveOperationsServiceApplication : Started ActiveOperationsServiceApplication in 10.687 seconds (JVM running for 10.687s)
2022-01-13 01:29:14.161 INFO 8980 --- [ctor-http-nio-3] c.n.b.a.expose.CreditController : Put operation in /credits
2022-01-13 01:29:14.161 INFO 8980 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to update a credit
2022-01-13 01:29:14.161 INFO 8980 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to find a credit by id
2022-01-13 01:29:14.161 INFO 8980 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving credit with id: [61dd1d8a71198468347f1d2b]
2022-01-13 01:29:14.181 INFO 8980 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Credit with id: [61dd1d8a71198468347f1d2b] was retrieved successfully
2022-01-13 01:29:14.181 INFO 8980 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to find a credit by id
2022-01-13 01:29:14.181 INFO 8980 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to update an credit
2022-01-13 01:29:14.241 INFO 8980 --- [nttLoopGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-13 01:29:14.241 INFO 8980 --- [nttLoopGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Credit exists in database
2022-01-13 01:29:14.241 WARN 8980 --- [nttLoopGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : The credit available amount can not be bigger than the full granted amount
2022-01-13 01:29:14.241 WARN 8980 --- [nttLoopGroup-3-3] c.n.b.a.business.impl.CreditServiceImpl : Proceeding to abort update credit

```

11. Put credit with error: credit not found:

Credit was not found, so a 404-not-found status was returned.

passive-operations-service / Put credit with error: credit not found

PUT localhost:8083/api/v1/credits

Body

```

1 {
2     "id": "any-non-existing-id",
3     "status": "Active",
4     "fullGrantedAmount": 7500.0,
5     "availableAmount": 7500.0,
6     "dueDate": "2025-09-27",
7     "billingDetails": {
8         "interestPercentage": 4.0,
9         "closingDay": 5
10    }
11 }

```

Status: 404 Not Found Time: 15 ms Size: 45 B Save Response

12. Delete credit by id without error:

passive-operations-service / Delete credit by id without error

Save

DELETE localhost:8083/api/v1/credits/61dd2861a6af8025bba3a2fa

Send

Params Authorization Headers (7) Body Pre-request Script Tests Settings Cookies

Body Cookies Headers (2) Test Results

Pretty Raw Preview Visualize JSON

Status: 200 OK Time: 35 ms Size: 478 B Save Response

1 {
2 "id": "61dd2861a6af8025bba3a2fa",
3 "status": "Active",
4 "customer": {
5 "id": "61dcc809fffb2e3495cb42614",
6 "type": "Business",
7 "status": "Active"
8 },
9 "fullGrantedAmount": 1300.0,
10 "availableAmount": 1300.0,
11 "creditCardNumber": "d8a6c18a-2d4c-4f7d-ae6b-4758e08f9685",
12 "issueDate": "2021-11-03T00:00:00.000+00:00",
13 "dueDate": "2025-11-03T00:00:00.000+00:00",
14 "operations": null,
15 "billingDetails": {
16 "interestPercentage": 4.0,
17 "closingDay": 10
18 }
19 }

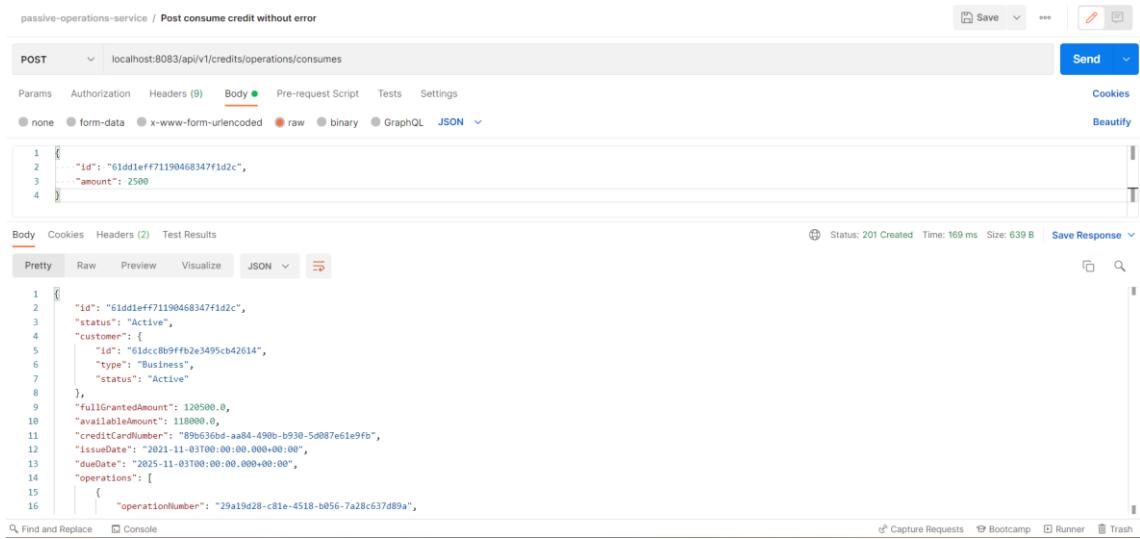
13. Delete credit by id with error: credit not found:

Credit was not found, so a 404-not-found status was returned.

The screenshot shows the Postman application interface. At the top, there are several tabs: 'GET Get all ...' (red), 'GET Get all ...' (green), 'DEL Delete ...' (orange), 'POST localh... (red)', 'POST localh... (red)', 'POST localh... (red)', 'GET localho... (red)', 'GET localho... (red)', 'POST localh... (red)', '+ (grey)', and 'No Environment'. Below the tabs, the URL 'passive-operations-service / Delete credit by id with error: credit not found' is displayed. The main area shows a 'DELETE' request to 'localhost:8083/api/v1/credits/any-non-existing-id'. The 'Params', 'Authorization', 'Headers (7)', 'Body', 'Pre-request Script', 'Tests', and 'Settings' tabs are visible. Under the 'Body' tab, the 'Pretty' option is selected, showing the response body as '1'. The status bar at the bottom indicates 'Status: 404 Not Found Time: 16 ms Size: 45 B' and includes 'Save Response' and 'Cookies' buttons. The bottom navigation bar includes 'Find and Replace', 'Console', 'Capture Requests', 'Bootcamp', 'Runner', and 'Trash'.

14. Get credits by customer id:

15. Post consume credit without error:



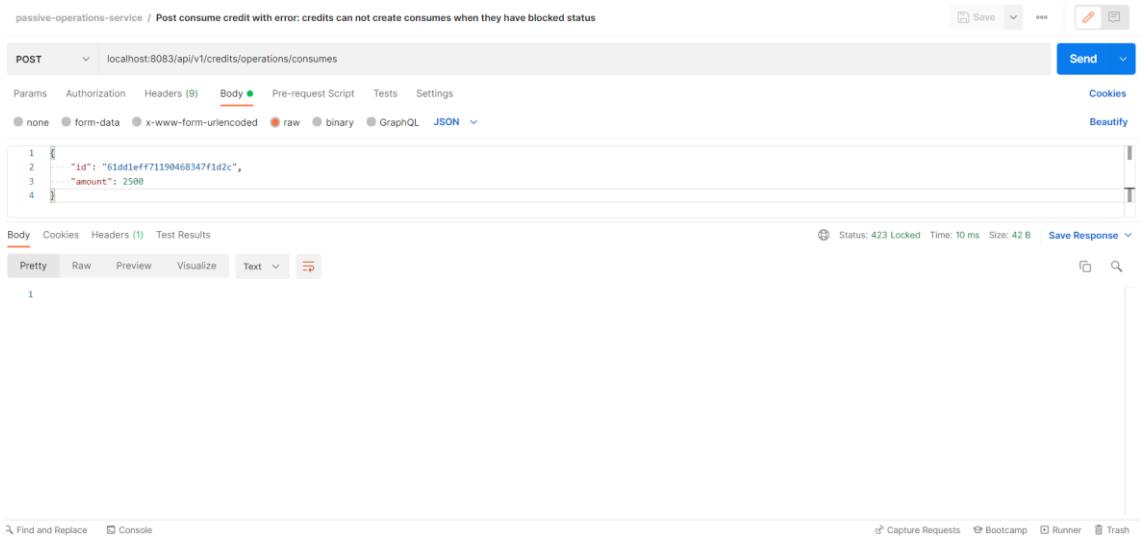
The screenshot shows a Postman interface with a POST request to `localhost:8083/api/v1/credits/operations/consumes`. The request body is a JSON object with fields `id` and `amount`. The response status is `201 Created`, and the response body contains detailed information about the consumed credit.

```
1 {
2   "id": "61dd1eff71190468347fid2c",
3   "amount": 2500
4 }
```

```
1 {
2   "id": "61dd1eff71190468347fid2c",
3   "status": "Active",
4   "customer": {
5     "id": "61dcc8b9fffb2e3495cb42614",
6     "type": "Business",
7     "status": "Active"
8   },
9   "fullGrantedAmount": 120500.0,
10  "availableAmount": 118000.0,
11  "creditCardNumber": "89b63bd-aab4-490b-b930-5d087e51e9fb",
12  "issueDate": "2021-11-03T00:00:00.000+00:00",
13  "dueDate": "2025-11-03T00:00:00.000+00:00",
14  "operations": [
15    {
16      "operationNumber": "29a19d28-c81e-451b-b056-7a28c637d89a",
17    }
18  ]
19 }
```

16. Post consume credit with error: credits can not create consumes when they have blocked status

When attempting to create an consume for a blocked credit, we get a 423-locked response.



The screenshot shows a Postman interface with a POST request to `localhost:8083/api/v1/credits/operations/consumes`. The request body is identical to the previous successful request. The response status is `423 Locked`, and the response body is empty.

```
1 {
2   "id": "61dd1eff71190468347fid2c",
3   "amount": 2500
4 }
```

In console, we can see the following logs:

```

2022-01-11 02:45:35.513 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Doing consumption of [2500.0] to credit with id: [61dd1eff71190468347fd2c]
2022-01-11 02:45:35.515 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Saving consumption into credit: [CreditConsumeCreditRequestTO(id=61dd1eff71190468347fd2c)]
2022-01-11 02:45:35.516 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Consumption was successfully saved
2022-01-11 02:48:17.575 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Get operation in /credits
2022-01-11 02:48:17.575 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Start of operation to retrieve all credits
2022-01-11 02:48:17.576 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Retrieving all credits
2022-01-11 02:48:17.576 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : All credits retrieved successfully
2022-01-11 02:48:17.576 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : End of operation to retrieve all credits
2022-01-11 02:49:31.423 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Put operation in /credits
2022-01-11 02:49:31.423 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Start of operation to update a credit
2022-01-11 02:49:31.423 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Start of operation to find a credit by id
2022-01-11 02:49:31.423 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Retrieving credit with id: [61dd1eff71190468347fd2c]
2022-01-11 02:49:31.424 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Credit with id: [61dd1eff71190468347fd2c] was retrieved successfully
2022-01-11 02:49:31.425 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : End of operation to find a credit by id
2022-01-11 02:49:31.425 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : End of operation to update an credit
2022-01-11 02:49:31.429 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Validating credit
2022-01-11 02:49:31.429 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Credit exists in database
2022-01-11 02:49:31.430 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Credit successfully validated
2022-01-11 02:49:31.430 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Updating credit: [Credit(id=61dd1eff71190468347fd2c, status=Blocked, customer]
2022-01-11 02:49:31.431 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Credit with id: [61dd1eff71190468347fd2c] was successfully updated
2022-01-11 02:49:42.429 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Post operation in /credits/operation/consumes
2022-01-11 02:49:42.430 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Start to save a new credit consumption for the credit with id: [61dd1eff71190468347fd2c]
2022-01-11 02:49:42.430 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : End to save a new account operation for the credit with id: [61dd1eff71190468347fd2c]
2022-01-11 02:49:42.434 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Validating consumption operation
2022-01-11 02:49:42.434 INFO 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Credit exists in database
2022-01-11 02:49:42.434 WARN 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Credit have blocked status
2022-01-11 02:49:42.434 WARN 9800 --- [nio-8080-exec-1] c.n.b.a.expose.CreditController : Proceeding to abort consumption operation

```

Build completed successfully in 4 sec. 205 ms (today 01-28)

24. Post consume credit with error: credit has insufficient funds:

POST /passive-operations-service / Post consume credit with error: credit has insufficient funds

localhost:8083/api/v1/credits/operations/consumes

Body

```

1 {
2   ... "id": "61dd1eff71190468347fd2c",
3   ... "amount": 5000000
4 }

```

Status: 400 Bad Request Time: 17 ms Size: 47 B Save Response

In console, we can see the following logs:

```

2022-01-11 02:49:31.451 INFO 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Credit with id: [61dd1eff71190468347f1d2c] was successfully updated
2022-01-11 02:49:42.429 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.expose.CreditController : Post operation in /credits/operation/consumes
2022-01-11 02:49:42.430 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start to save a new credit consumption for the credit with id: [61dd1eff71190468347f1d2c]
2022-01-11 02:49:42.430 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End to save a new account operation for the credit with id: [61dd1eff71190468347f1d2c]
2022-01-11 02:49:42.434 INFO 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Validating consumption operation
2022-01-11 02:49:42.434 INFO 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Credit exists in database
2022-01-11 02:49:42.434 WARN 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Credit have blocked status
2022-01-11 02:52:22.462 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.expose.CreditController : Proceeding to abort consumption operation
2022-01-11 02:52:22.462 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Put operation in /credits
2022-01-11 02:52:22.462 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to update a credit
2022-01-11 02:52:22.462 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start of operation to find a credit by id
2022-01-11 02:52:22.462 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Retrieving credit with id: [61dd1eff71190468347f1d2c]
2022-01-11 02:52:22.463 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Credit with id: [61dd1eff71190468347f1d2c] was retrieved successfully
2022-01-11 02:52:22.463 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Credit exists in database
2022-01-11 02:52:22.463 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End of operation to find a credit by id
2022-01-11 02:52:22.466 INFO 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : End of operation to update an credit
2022-01-11 02:52:22.466 INFO 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-11 02:52:22.466 INFO 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Credit exists in database
2022-01-11 02:52:22.466 INFO 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Credit successfully validated
2022-01-11 02:52:22.467 INFO 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Updating credit: [Credit{id=61dd1eff71190468347f1d2c, status=Active, customerName='John Doe'}]
2022-01-11 02:52:22.469 INFO 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Credit with id: [61dd1eff71190468347f1d2c] was successfully updated
2022-01-11 02:53:57.533 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.expose.CreditController : Post operation in /credits/operation/consumes
2022-01-11 02:53:57.533 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : Start to save a new credit consumption for the credit with id: [61dd1eff71190468347f1d2c]
2022-01-11 02:53:57.534 INFO 9880 --- [ctor-http-nio-3] c.n.b.a.business.impl.CreditServiceImpl : End to save a new account operation for the credit with id: [61dd1eff71190468347f1d2c]
2022-01-11 02:53:57.536 INFO 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Validating consumption operation
2022-01-11 02:53:57.537 INFO 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Credit exists in database
2022-01-11 02:53:57.537 INFO 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Credit has insufficient funds
2022-01-11 02:53:57.537 WARN 9880 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Proceeding to abort do operation

```

17. Post consume credit with error: credit not found:

Credit was not found, so a 404-not-found status was returned.

```

POST      localhost:8083/api/v1/credits/operations/consumes
Params   Authorization   Headers (9)   Body   Pre-request Script   Tests   Settings
Body
Params: none
Headers: Content-Type: application/json
Body:
{
  "id": "any-non-existing-id",
  "amount": 2500
}

```

Body	Cookies	Headers (1)	Test Results
Pretty	Raw	Preview	Visualize

Status: 404 Not Found Time: 16 ms Size: 45 B Save Response

18. Post generate billing order without error:

For testing purposes, this endpoint generates a billing order with a randomly selected amount. Billing orders are used to pay customer's credit products, so before doing a payment this endpoint must be used for generating a billing order.

The screenshot shows a Postman interface with the following details:

- Method:** POST
- URL:** localhost:8083/api/v1/credits/61dd1eff71190468347fd2c/generate-billing-order
- Status:** 201 Created
- Time:** 32 ms
- Size:** 700 B
- Body:** JSON response (Pretty) showing a customer object with various fields like type, status, fullGrantedAmount, availableAmount, creditCardNumber, issueDate, dueDate, operations, and billingDetails.

19. Post generate billing order with error: customer does not have debts in credit

If the credit card available amount is equal to the full granted amount, that means that the customer is not owing for any consumption and, because of that, a billing order can not be generated.

The screenshot shows a Postman interface with the following details:

- Method:** POST
- URL:** localhost:8083/api/v1/credits/61dd34faa6af8025bba3a2fb/generate-billing-order
- Status:** 500 Internal Server Error
- Time:** 17 ms
- Size:** 57 B
- Body:** Text response (1 character: "1")

In console, we can see the following logs:

```

2022-01-11 02:52:22,467 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Updating credit: [Credit{id=61dd1eff71190468347f1d2c, status=Active, customerName='John Doe', amount=120000, availableAmount=119383.32, creditCardNumber='5678123456789012', issueDate='2021-11-03T00:00:00.000+00:00', dueDate='2025-11-03T00:00:00.000+00:00', operations=[...], billingOrder: {...}], credit with id: [61dd1eff71190468347f1d2c] was successfully updated
2022-01-11 02:52:22,469 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Post operation in /credits/operation/consumes
2022-01-11 02:53:57.533 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.expose.CreditController : Start to save a new credit consumption for the credit with id: [61dd1eff71190468347f1d2c]
2022-01-11 02:53:57.533 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : End to save a new account operation for the credit with id: [61dd1eff71190468347f1d2c]
2022-01-11 02:53:57.536 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Validating consumption operation
2022-01-11 02:53:57.537 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Credit exists in database
2022-01-11 02:53:57.537 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Credit has insufficient funds
2022-01-11 02:55:38.867 WARN 8980 --- [nio-8083-exec-1] c.n.b.a.expose.CreditController : Proceeding to abort do operation
2022-01-11 02:55:38.868 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Post operation in /credits/operation/consumes
2022-01-11 02:55:38.869 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.expose.CreditController : Start to save a new credit consumption for the credit with id: [any-non-existing]
2022-01-11 02:58:13.692 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : End to save a new account operation for the credit with id: [any-non-existing]
2022-01-11 02:58:13.692 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.expose.CreditController : Post operation in /credits/operations/payments/generate-billing-order
2022-01-11 02:58:13.694 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Start to generate a billing order for the credit with id: [61dd1eff71190468347f1d2c]
2022-01-11 02:58:13.699 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : End to generate a new billing order for the credit with id: [61dd1eff71190468347f1d2c]
2022-01-11 02:58:13.699 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-11 02:58:13.699 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Credit exists in database
2022-01-11 02:58:13.699 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Operation successfully validated
2022-01-11 02:58:13.703 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Generating billing order into credit with id: [61dd1eff71190468347f1d2c]
2022-01-11 02:58:13.704 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Generation was successful
2022-01-11 03:05:44.908 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.expose.CreditController : Post operation in /credits/operations/payments/generate-billing-order
2022-01-11 03:05:44.909 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.expose.CreditController : Start to generate a billing order for the credit with id: [61dd34faaa6af8025bba]
2022-01-11 03:05:44.911 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : End to generate a new billing order for the credit with id: [61dd34faaa6af8025bba]
2022-01-11 03:05:44.915 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Validating credit
2022-01-11 03:05:44.915 INFO 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Credit exists in database
2022-01-11 03:05:44.916 WARN 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Customer does not have debts for this credit
2022-01-11 03:05:44.916 WARN 8980 --- [nio-8083-exec-1] c.n.b.a.business.impl.CreditServiceImpl : Proceeding to abort billing order generation

```

20. Post generate billing order with error: credit not found:

Credit not found, so a 404-not-found status was returned.

POST localhost:8083/api/v1/credits/any-non-existing-credit/generate-billing-order

Status: 404 Not Found Time: 12 ms Size: 45 B Save Response

21. Post pay credit without error:

POST localhost:8083/api/v1/credits/operations/payments/df0e1f32-0559-4578-bbcd-b37a58ed6833

Status: 201 Created Time: 43 ms Size: 763 B Save Response

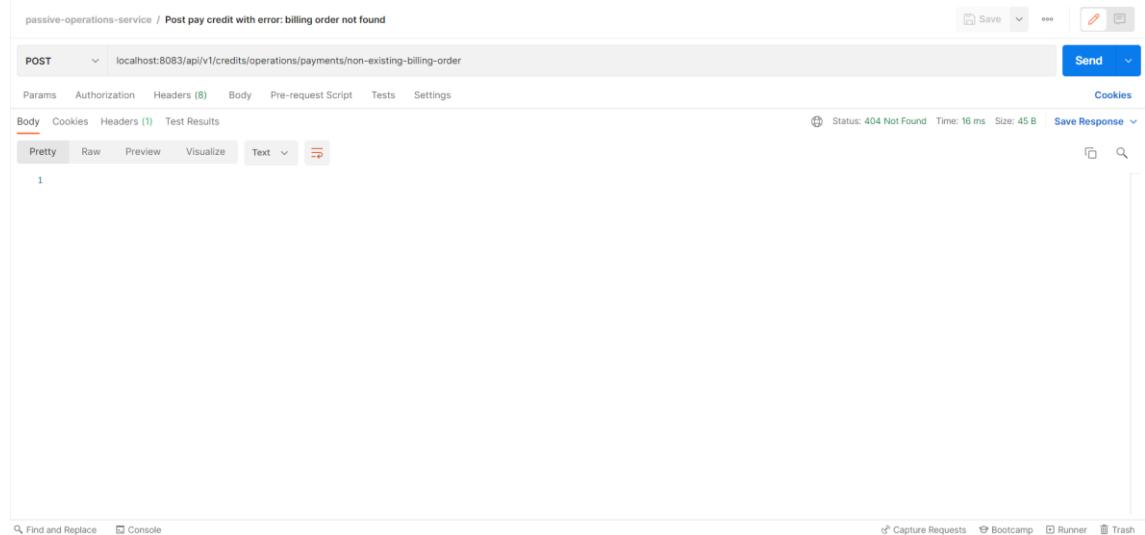
```

{
    "id": "df0e1f32-0559-4578-bbcd-b37a58ed6833",
    "type": "Payment",
    "amount": 1438.65,
    "dueDate": "2025-11-03T00:00:00.000+00:00",
    "operations": [
        {
            "operationNumber": "6b4cb2fe-8dc7-4a42-92dc-35bde12c2aeef",
            "time": "2022-01-11T08:12:33.168+00:00",
            "type": "Payment",
            "amount": 1438.65,
            "billingOrder": {
                "id": "df0e1f32-0559-4578-bbcd-b37a58ed6833",
                "calculatedAmount": 1438.65,
                "amountToRefund": 1383.32,
                "cycle": "1/2022",
                "status": "Paid"
            }
        }
    ],
    "billingDetails": {
        "interestPercentage": 4.0
    }
}

```

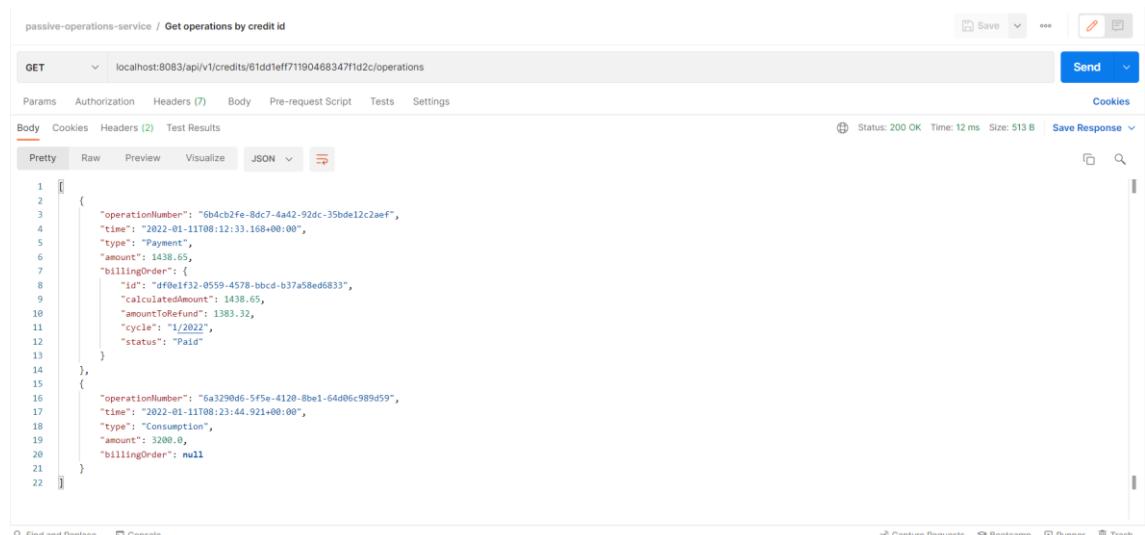
22. Post pay credit with error: billing order not found:

Billing order not found, so a 404-not-found status was returned.



The screenshot shows a Postman request for a POST operation at `localhost:8083/api/v1/credits/operations/payments/non-existing-billing-order`. The response status is 404 Not Found, indicating that the billing order does not exist. The response body is empty.

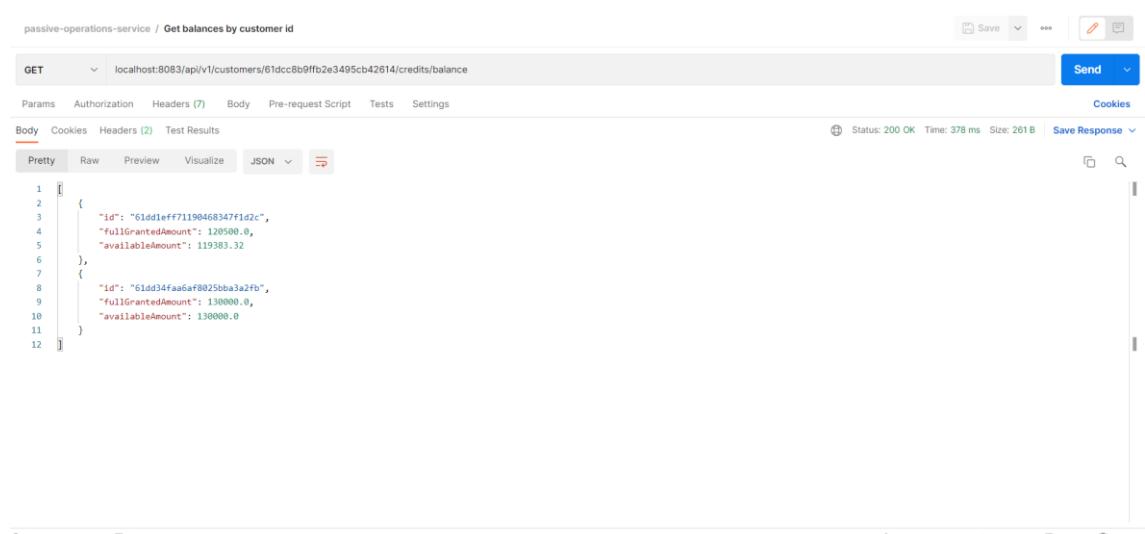
23. Get operations by credit id:



The screenshot shows a GET request for credit operations with ID `61dd1eff71190468347f1d2c`. The response status is 200 OK and contains two JSON objects representing credit operations. The first operation is a payment of 1438.65, and the second is a consumption of 3200.0.

```
[{"id": "6b4cb2fe-8dc7-4a42-92dc-35bde12c2ae", "time": "2022-01-11T08:12:33.168+00:00", "type": "Payment", "amount": 1438.65, "billingOrder": {"id": "d0ef1f32-0559-4578-bbcd-b37a58ed6833", "calculatedAmount": 1438.65, "amountToRefund": 1383.32, "cycle": "1/2022", "status": "Paid"}}, {"id": "6a3290d6-5f5e-4120-8be1-6d06c989d59", "time": "2022-01-11T08:23:44.921+00:00", "type": "Consumption", "amount": 3200.0, "billingOrder": null}]
```

24. Get balances by customer id:



The screenshot shows a GET request for customer balances with ID `61dd1eff71190468347f1d2c`. The response status is 200 OK and contains two JSON objects representing customer balances. The first balance is for a customer with ID `61dd1eff71190468347f1d2c`, and the second is for a customer with ID `61dd4ffa6ff803bb3a2fb`.

```
[{"id": "61dd1eff71190468347f1d2c", "fullGrantedAmount": 120500.0, "availableAmount": 119383.32}, {"id": "61dd4ffa6ff803bb3a2fb", "fullGrantedAmount": 130000.0, "availableAmount": 130000.0}]
```