
Decentralized Real Estate Market Documentation

Release 0.1

BEP

February 28, 2017

1	Introduction	3
2	Class diagram	5
3	RESTful API	7
4	Indices and tables	13
	HTTP Routing Table	15
	Python Module Index	17

Contents:

Introduction

Decentralized Real Estate Market API

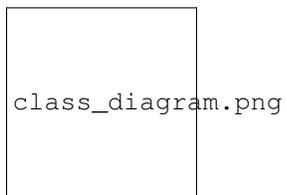
Work in Progress

This API is a work in progress, and is subject to change. The goal is to make the API stateless, but as of this writing this is not the case.

In this documentation the payload for all API calls are explained.

Class diagram

The following diagram shows the design of our data model used in the market:



Overview

The RESTful API allows you to control the decentralized mortgage market with external software.

Endpoints

Campaigns

`class market.restapi.campaigns_endpoint.CampaignInvestmentsEndpoint` (*market_community*,
campaign_id)

This class handles requests regarding investments of a particular campaign

`render_GET` (*request*)

GET /campaigns/(string: campaign_id)/investments

A GET request to this endpoint returns a list of investments of a campaign.

Example request:

```
curl -X GET http://localhost:8085/campaigns/8593AB_89/investments
```

Example response:

```
{
  "investments": [{
    "investor_id": "a94a8fe5ccb19ba61c4c0873d391e987982fbbd3",
    "amount": 9000,
    "duration": 24,
    "interest_rate": 4.9,
    "mortgage_id": "8593AB_89",
    "status": "ACCEPTED"
  }, ...]
}
```

`class market.restapi.campaigns_endpoint.CampaignsEndpoint` (*market_community*)

This class handles requests regarding campaigns in the mortgage market community.

render_GET (*request*)

GET /campaigns

A GET request to this endpoint returns information about the ongoing campaigns.

Example request:

```
curl -X GET http://localhost:8085/campaigns
```

Example response:

```
{
  "campaigns": [{
    "id": "8593AB_23",
    "mortgage": {
      "user_id": "a94a8fe5ccb19ba61c4c0873d391e987982fbbd3",
      "house": {
        "postal_code": "8593AB",
        "house_number": "23",
        "address": "Teststraat, Rotterdam",
        "price": 395000,
        "url": "http://www.funda.nl/koop/hollandscheveld/huis-49981036-3e-zandwi",
        "seller_phone_number": "+31685938573",
        "seller_email": "seller@gmail.com"
      },
      "bank": "ABN",
      "amount": 395000,
      "bank_amount": 200000,
      "mortgage_type": "FIXEDRATE",
      "interest_rate": 5.3,
      "max_investment_rate": 4.3,
      "default_rate": 4.3,
      "duration": 120,
      "risk": 300000,
      "status": "ACCEPTED"
    },
    "amount": "195000",
    "end_date": "23-08-2017",
    "completed": False
  }, ...]
}
```

render_PUT (*request*)

PUT /campaigns

A PUT request to this endpoint will create a new campaign. Various parameters are required: - mortgage_id: the identifier of the mortgage. This mortgage should be yours and be accepted.

Example request:

```
curl -X PUT http://localhost:8085/campaign --data "mortgage_id=8593AB_89"
```

Example response:

```
{"success": True}
```

class `market.restapi.campaigns_endpoint.SpecificCampaignEndpoint` (*market_community*,
campaign_id)

This class handles requests for a specific campaign.

render_GET (*request*)

GET `/campaigns/(string: campaign_id)`

A GET request to this endpoint returns detailed information about a specific campaign.

Example request:

```
curl -X GET http://localhost:8085/campaigns/8593AB_89
```

Example response:

```
{
  "campaign": {
    "id": "8593AB_89",
    "user_id": "a94a8fe5ccb19ba61c4c0873d391e987982fbbd3",
    "mortgage": {
      "user_id": "a94a8fe5ccb19ba61c4c0873d391e987982fbbd3",
      "house": {
        "postal_code": "8593AB",
        "house_number": "23",
        "address": "Teststraat, Rotterdam",
        "price": 395000,
        "url": "http://www.funda.nl/koop/hollandscheveld/huis-49981036-3e-zandwi",
        "seller_phone_number": "+31685938573",
        "seller_email": "seller@gmail.com"
      },
      "bank": "ABN",
      "amount": 395000,
      "bank_amount": 200000,
      "mortgage_type": "FIXEDRATE",
      "interest_rate": 5.3,
      "max_investment_rate": 4.3,
      "default_rate": 4.3,
      "duration": 120,
      "risk": 300000,
      "status": "ACCEPTED"
    },
    "amount": "195000",
    "end_date": "23-08-2017",
    "completed": False
  }
}
```

class `market.restapi.campaigns_endpoint.SpecificCampaignInvestmentEndpoint` (*market_community*,
campaign_id,
investment_id)

This class handles requests for a specific investment in a campaign

render_PATCH (*request*)

PATCH /campaigns/(string: campaign_id)/investments/(string: investment_id)

A PATCH request to this endpoint will accept/reject an investment offer. This is performed by the borrower of a mortgage.

Example request:

```
curl -X PATCH http://localhost:8085/campaigns/8948EE_43/investments/4344503b7e797ebf3
--data "state=ACCEPT"
```

Example response:

```
{"success": True}
```

Loan requests

class `market.restapi.loanrequests_endpoint.LoanRequests` (*market_community*)

This class handles requests regarding loan requests in the mortgage market community. Only accessible by financial institutions.

render_GET (*request*)

GET /loanrequests

A GET request to this endpoint returns a list of loan requests. Only accessible by financial institutions.

Example request:

```
curl -X GET http://localhost:8085/loanrequests
```

Example response:

```
{
  "loan_requests": [{
    "id": "a94a8fe5ccb19ba61c4c0873d391e987982fbbd3_8948AB_16",
    "user_id": "a94a8fe5ccb19ba61c4c0873d391e987982fbbd3",
    "mortgage_type": "FIXEDRATE",
    "banks": ["ABN", "RABO"],
    "description": "...",
    "amount_wanted": 395000,
    "status": "PENDING"
  }, ...]
}
```

class `market.restapi.loanrequests_endpoint.SpecificLoanRequestEndpoint` (*market_community*, *loan_request_id*)

This class handles requests for a specific loan request.

render_PATCH (*request*)

PATCH /loanrequests/(string: loan_request_id)

A PATCH request to this endpoint will accept/reject a loan request. This is performed by a financial institution.

Example request:

```
curl -X PATCH http://localhost:8085/loanrequests/a94a8fe5ccb19ba61c4c0873d391e987982f
--data "state=ACCEPT"
```

Example response:

```
{"success": True}
```

Users

class `market.restapi.users_endpoint.SpecificUserEndpoint` (*market_community*,
pub_key)

This class handles requests for a specific user, identified by their public key.

render_GET (*request*)

GET `/user/(string: user_id)`

A GET request to this endpoint returns information about a particular user in the system.

Example request:

```
curl -X GET http://localhost:8085/user/a94a8fe5ccb19ba61c4c0873d391e987982fbbbd3
```

Example response:

```
{
  "user": {
    "id": "a94a8fe5ccb19ba61c4c0873d391e987982fbbbd3",
    "role": "BORROWER",
    "time_added": "29-03-2017 13:59:39"
  }
}
```

class `market.restapi.users_endpoint.SpecificUserProfileEndpoint` (*market_community*,
pub_key)

This class handles requests regarding the profile of a specific user.

render_GET (*request*)

GET `/user/(string: user_id)/profile`

A GET request to this endpoint returns information about a profile of a user.

Example request:

```
curl -X GET http://localhost:8085/user/a94a8fe5ccb19ba61c4c0873d391e987982fbbbd3/profile
```

Example response:

```
{
  "profile": {
    "type": "investor",
    "first_name": "Piet",
    "last_name": "Tester",
    "email": "piettester@gmail.com",
    "iban": "NL90RABO0759395830",
  }
}
```

```
        "phone_number": "06685985936"
    }
}
```

class `market.restapi.users_endpoint.UsersEndpoint` (*market_community*)

This class handles requests regarding users in the mortgage market community.

render_GET (*request*)

GET `/users`

A GET request to this endpoint returns information about the known users in the system.

Example request:

```
curl -X GET http://localhost:8085/users
```

Example response:

```
{
  "users": [{
    "id": "a94a8fe5ccb19ba61c4c0873d391e987982fbbd3",
    "role": "BORROWER",
    "time_added": "29-03-2017 13:59:39"
  }, ...]
}
```

You

Indices and tables

- `genindex`
- `modindex`
- `search`

/campaigns

GET /campaigns, 8
GET /campaigns/(string: campaign_id),
9
GET /campaigns/(string:
campaign_id)/investments, 7
PUT /campaigns, 8
PATCH /campaigns/(string:
campaign_id)/investments/(string:
investment_id), 9

/loanrequests

GET /loanrequests, 10
PATCH /loanrequests/(string:
loan_request_id), 10

/user

GET /user/(string: user_id), 11
GET /user/(string: user_id)/profile,
11

/users

GET /users, 12

m

market.restapi.campaigns_endpoint, [7](#)
market.restapi.loanrequests_endpoint,
 [10](#)
market.restapi.users_endpoint, [11](#)

C

CampaignInvestmentsEndpoint (class in market.restapi.campaigns_endpoint), 7

CampaignsEndpoint (class in market.restapi.campaigns_endpoint), 7

L

LoanRequests (class in market.restapi.loanrequests_endpoint), 10

M

market.restapi.campaigns_endpoint (module), 7

market.restapi.loanrequests_endpoint (module), 10

market.restapi.users_endpoint (module), 11

R

render_GET() (market.restapi.campaigns_endpoint.CampaignInvestmentsEndpoint method), 7

render_GET() (market.restapi.campaigns_endpoint.CampaignsEndpoint method), 7

render_GET() (market.restapi.campaigns_endpoint.SpecificCampaignEndpoint method), 9

render_GET() (market.restapi.loanrequests_endpoint.LoanRequests method), 10

render_GET() (market.restapi.users_endpoint.SpecificUserEndpoint method), 11

render_GET() (market.restapi.users_endpoint.SpecificUserProfileEndpoint method), 11

render_GET() (market.restapi.users_endpoint.UsersEndpoint method), 12

render_PATCH() (market.restapi.campaigns_endpoint.SpecificCampaignInvestmentEndpoint method), 9

render_PATCH() (market.restapi.loanrequests_endpoint.SpecificLoanRequestEndpoint method), 10

render_PUT() (market.restapi.campaigns_endpoint.CampaignsEndpoint method), 8

S

SpecificCampaignEndpoint (class in market.restapi.campaigns_endpoint), 8

SpecificCampaignInvestmentEndpoint (class in market.restapi.campaigns_endpoint), 9

SpecificLoanRequestEndpoint (class in market.restapi.loanrequests_endpoint), 10

SpecificUserEndpoint (class in market.restapi.users_endpoint), 11

SpecificUserProfileEndpoint (class in market.restapi.users_endpoint), 11

U

UsersEndpoint (class in market.restapi.users_endpoint), 12