Instituto Politécnico de Viana do Castelo

Murders

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Orientador(es):

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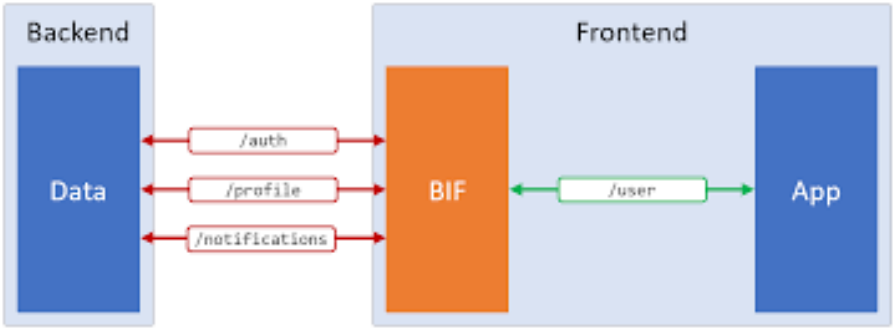
Licenciatura em Engenharia Informática | Escola Superior de Tecnologia e Gestão| Unidade Curricular: Projeto III | Ano Letivo 2021/2022

Summary

1. Introduction and Objectives

On this present work the group gave continuation to the previous work, using the murders dataset.
On this present work the group explored a murders dataset which contains registry of murders that occurred between 1980 to 2014.
The exploration on this time was made fetching the data from postgree using javascript and inserting the on mongo db to create endpoints that have access to the data and displays it to a user according to he's permissions on the system, which some can only view data and some can view and alter the data.



2.Technologies and development tools

draw.io

git

Insomnia

MOCHA

mongoDB

PostgreSQL

Trello

mongoDB Compass

eSoftner

XML

node .ENV

Express JS

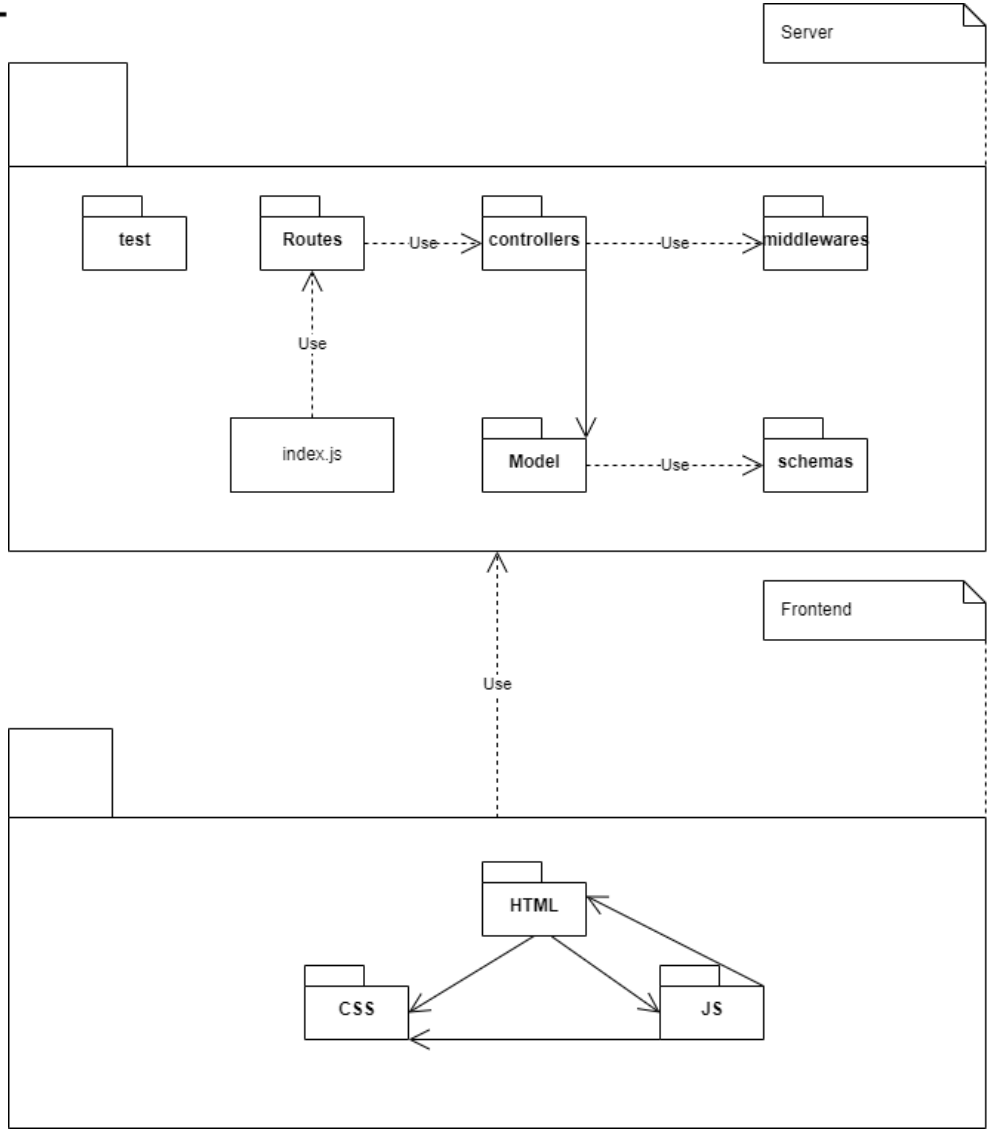
{i} JSON

BOOTSTRAP

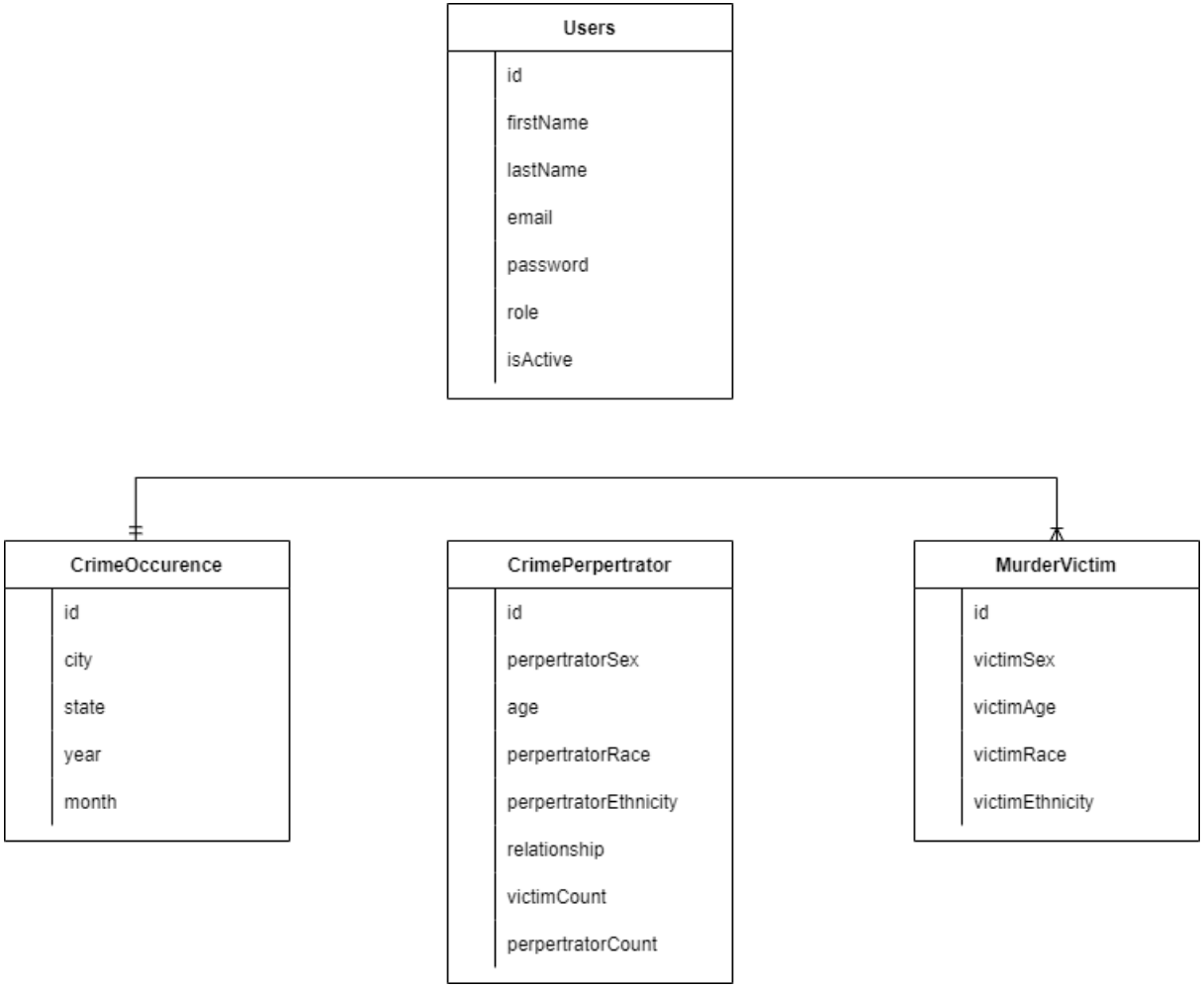
3. Modeling

On this section, the group did the classes diagram on draw.io

3.1 Modeling package diagrams

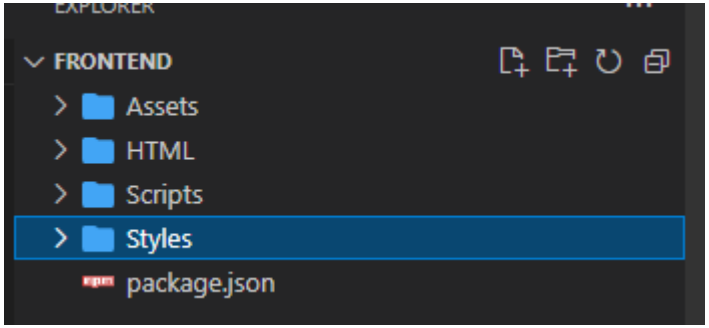


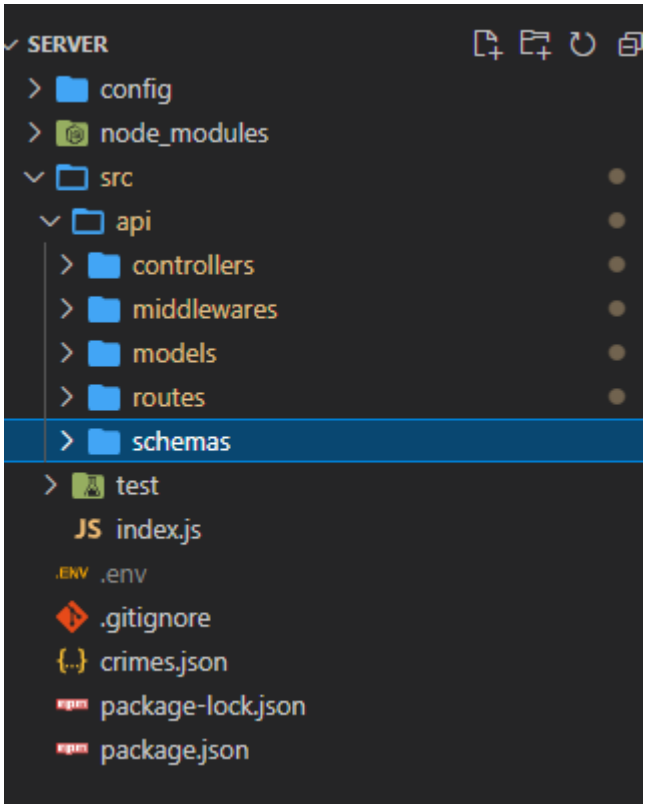
3.2 Modeling – ER model



4. File architecture

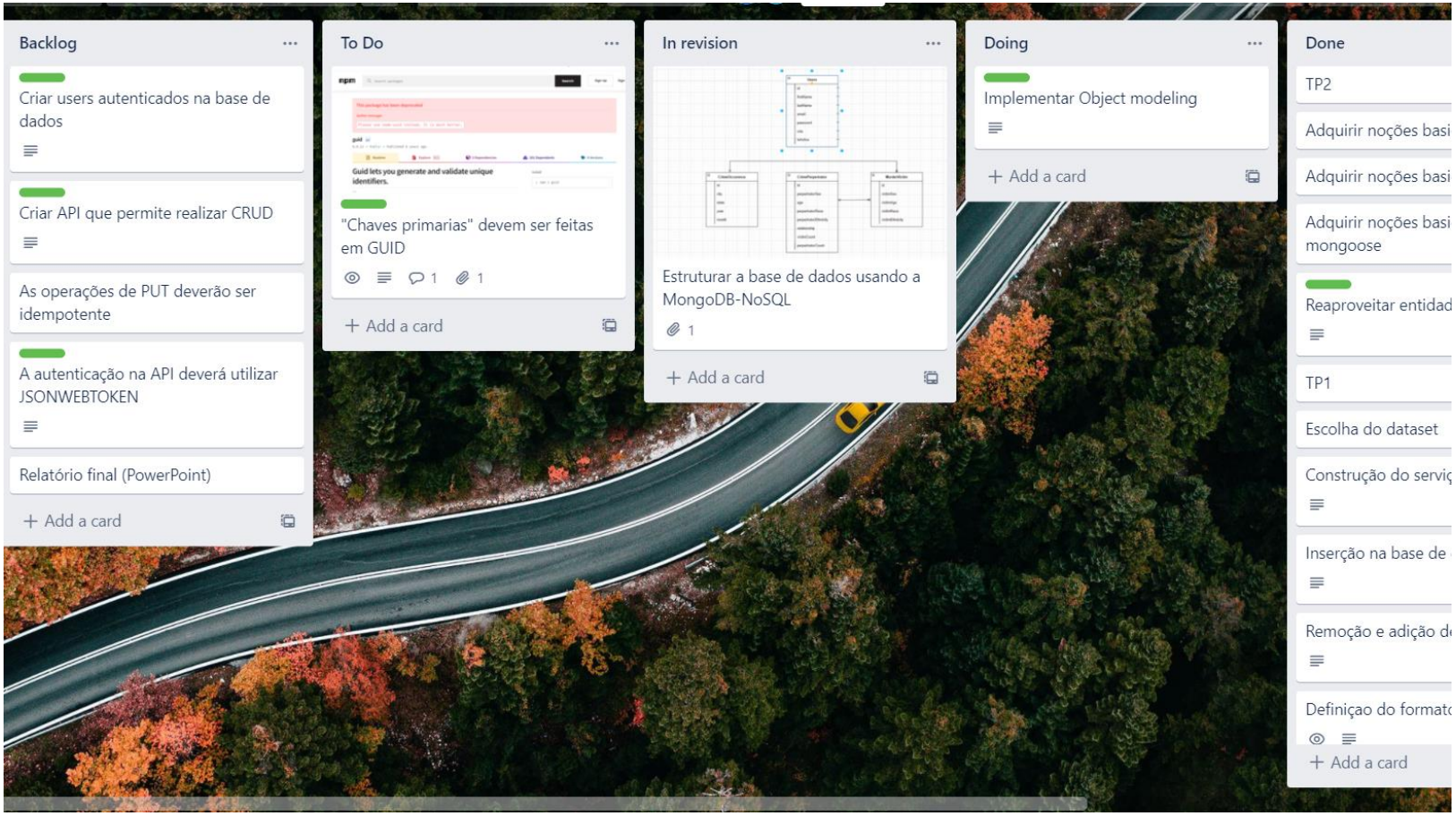
For the file architecture the group used MVC





5.Project managment

For project management the group used trello



6. tests

For testing the group used mocha.js framework and insomnia REST app.

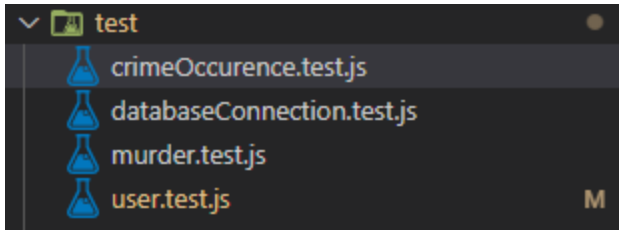
6.1 Mocha.js

Mocha.js is a javascripyt test framework on node.js

```
PS C:\Users\Valdo\Desktop\School\3rd_Year\Semestre_I\IS\TrabalhosPraticos\TP2\Server> npm test C:\Users\Valdo\Desktop\School\3rd_Ye
ar\Semestre_I\IS\TrabalhosPraticos\TP2\Server\src\test\user.test.js

> server@1.0.0 test
> mocha "C:\\Users\\Valdo\\Desktop\\School\\3rd_Year\\Semestre_I\\IS\\TrabalhosPraticos\\TP2\\Server\\src\\test\\user.test.js"



  User tests
    ✓ Insert user on DB (376ms)
    1) select user from DB
[
  {
    _id: '61bfb81cc47cf413bef6cfcc',
    firstName: 'James',
    lastName: 'Guevara',
    email: 'jamesguevara@mail.com',
    password: 'VT[illegible]',
    role: 'view',
    isActive: true,
    __v: 0
  },
  {
    _id: '61d2bf039d60fe5ffbaf538b',
    firstName: 'James',
    lastName: 'Guevara',
    email: 'jamesguevara@mail.com',
```

6.1.1 Mocha tests

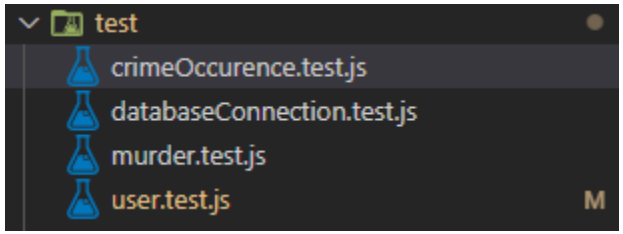
In this step the group will describe the test files of the project



6.1.1 Mocha tests

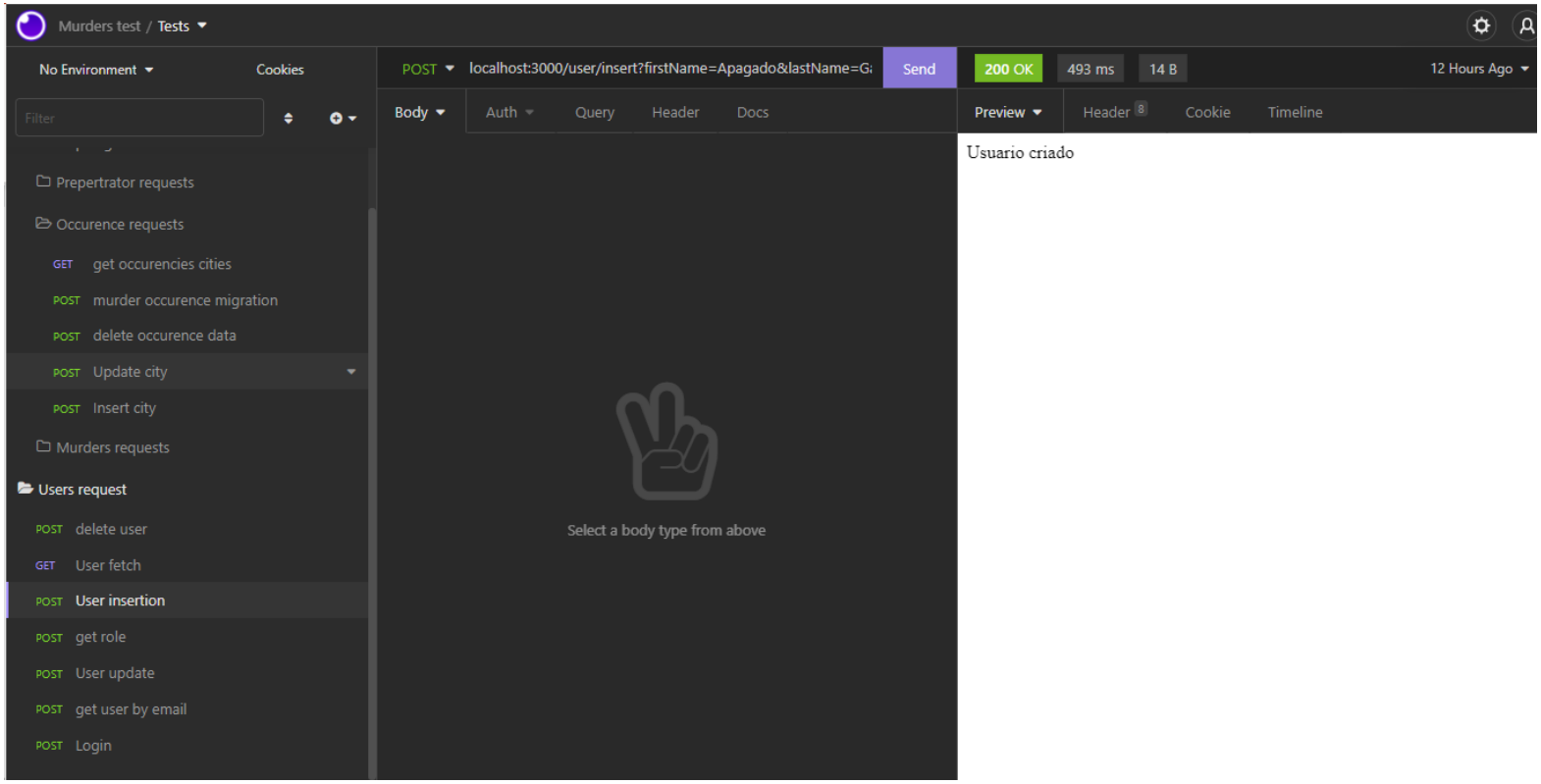
In this step the group will describe the test files of the project .

- **crimeOccurence.test.js:** Tests CRUD methods fro the crimeOccurence code;
- **databaseConnection.test.js**: Tests postgree database connection;
- **murder.test.js**: Tests CRUD methods fro the murder file code;
- **user.test.js**: Tests CRUD methods for the user code;



6.2 endpoints test.

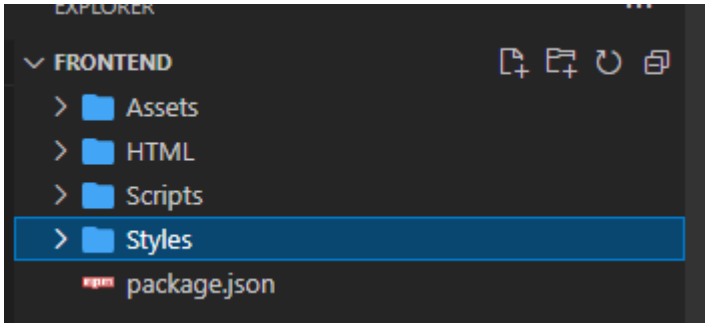
All the endpoints tests were made in Insomnia REST, which is a Free Cross-Platform Desktop Framework for testing RESTful applications.

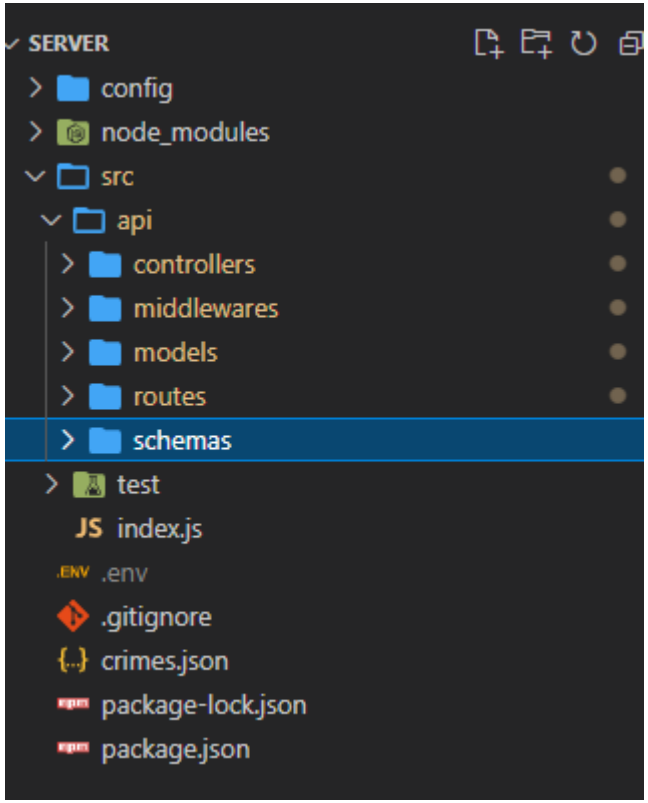


7.Code

The code is divided in two app which are:

1. Server: the server code that contains all the endpoints and business logic;
2. Frontend: the client-side code;





7.1 Server

On the server side we have:

1. **Index.js** : the main fille which starts the server on;
2. **.env**: file which contains the app secrets, like port and database connection data;
3. **test** : folder that contains tests;
4. **api** module: folder all the server's components;
5. **api/schemas**: folder that contains all the mongoose object modeling schemas;
6. **api/routes**: folder that contains all the endpoint routes;
7. **api/controllers**;
8. **api/models**;
9. **api/middlewares**;
10. **crimes.json**: exported xml file converted to JSON from postgree database;

All the insert,update and delete methods are verified by JSON web tokens.

7.2 Frontend

On the frontend side we have:

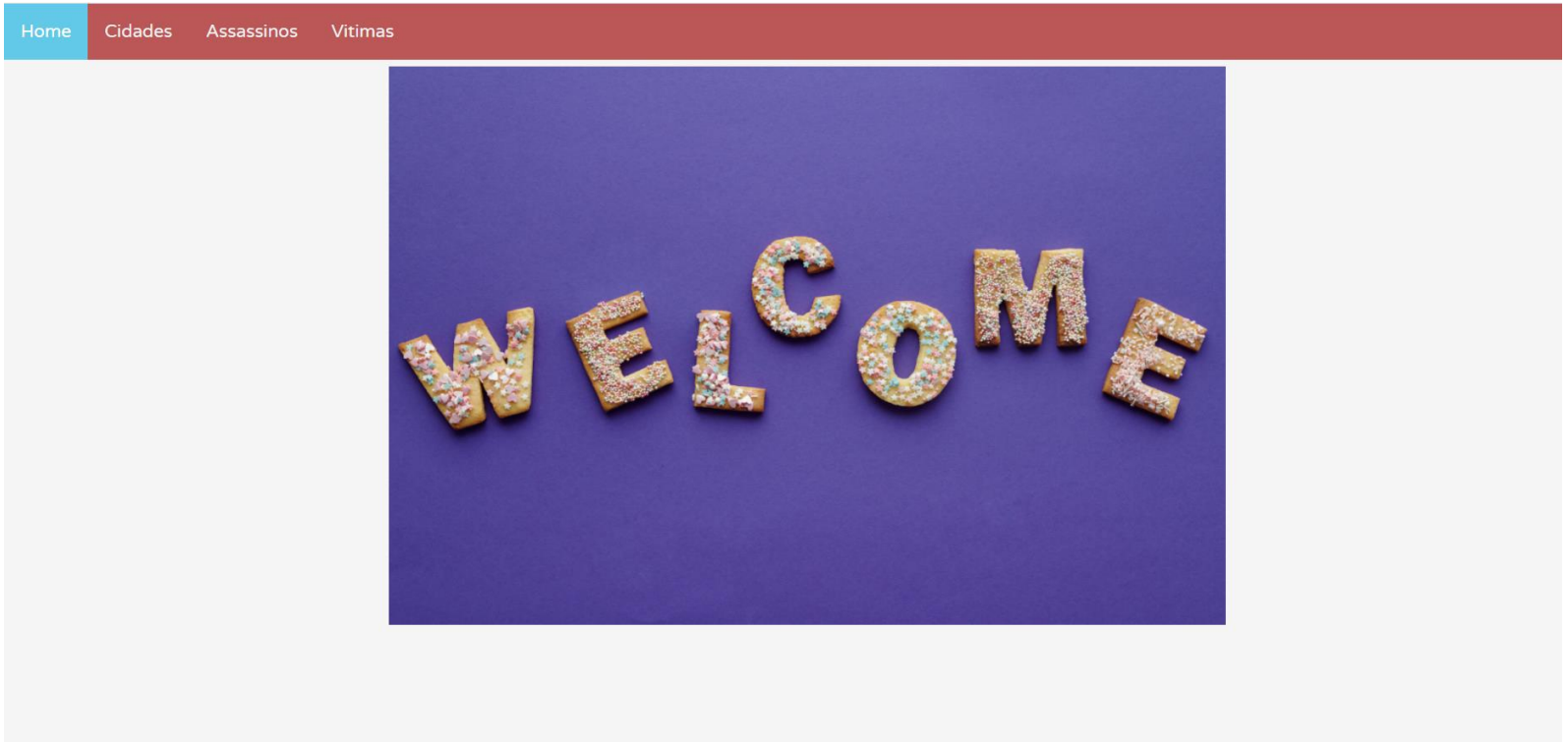
1. **HTML:** folder with all the html;
2. **CSS**: folder with all of the css;
3. **JS**: folder with all of the js;

8. Execution

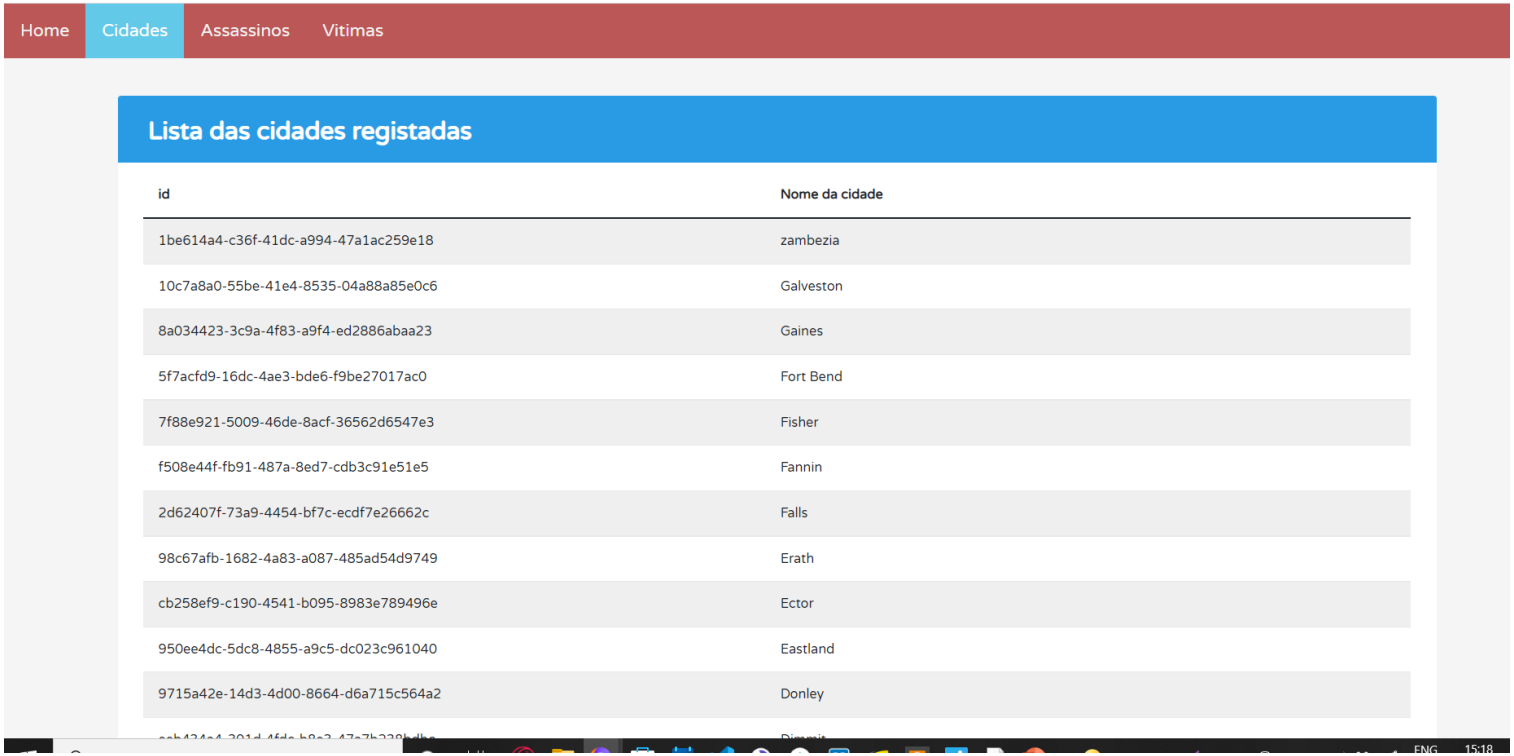
On the app, there are three types of users, which are:

1. **View**: can only view data;
2. **Edit**: can view and edit data;
3. **Admin**: can view, edit all data including users data;

8.1. View



8.1. View


Home
Cidades
Assassinos
Vitimas
Lista das cidades registadas
id
Nome da cidade
1be614a4-c36f-41dc-a994-47a1ac259e18
zambezia
10c7a8a0-55be-41e4-8535-04a88a85e0c6
Galveston
8a034423-3c9a-4f83-a9f4-ed2886abaa23
Gaines
5f7acfd9-16dc-4ae3-bde6-f9be27017ac0
Fort Bend
7f88e921-5009-46de-8acf-36562d6547e3
Fisher
f508e44f-fb91-487a-8ed7-cdb3c91e51e5
Fannin
2d62407f-73a9-4454-bf7c-ecdf7e26662c
Falls
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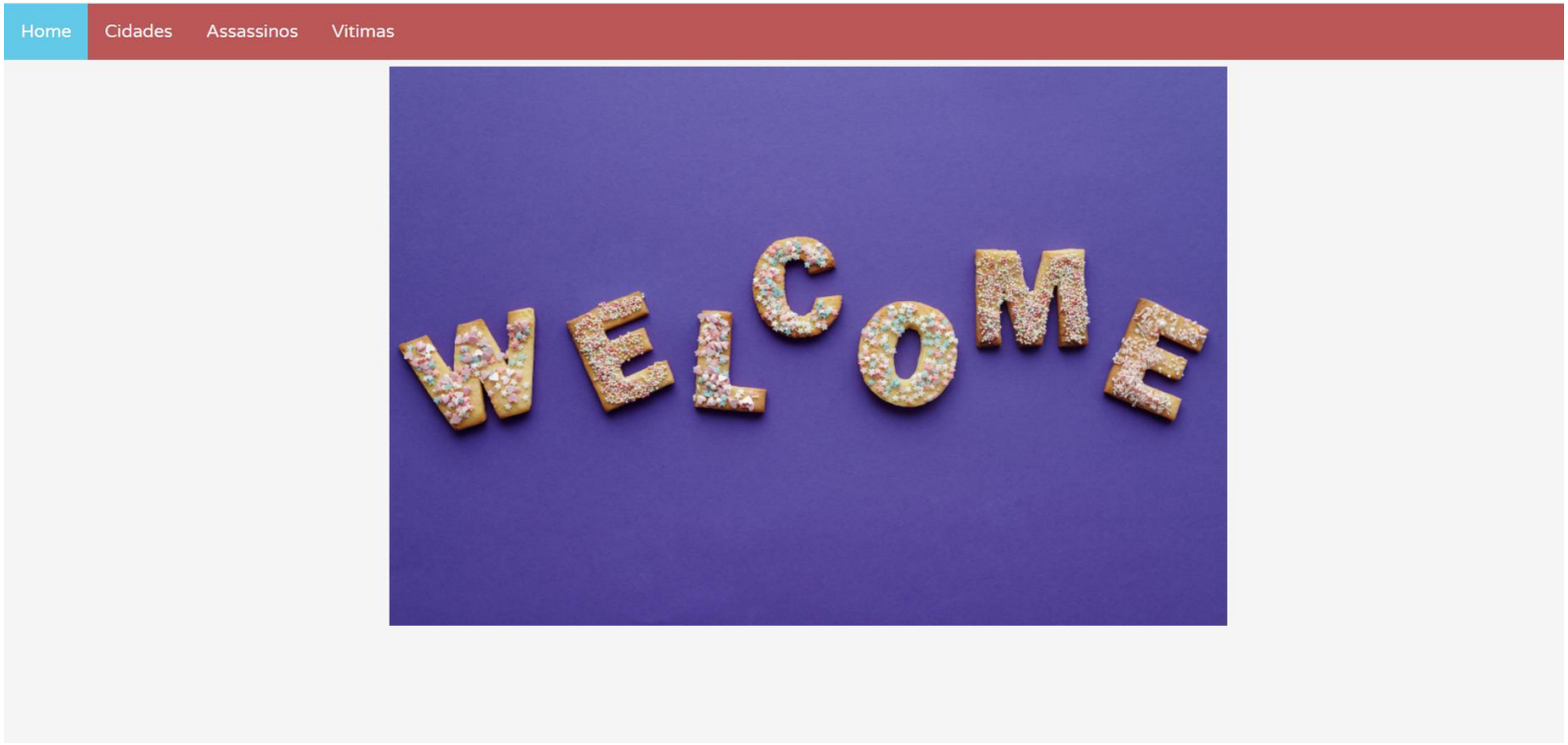
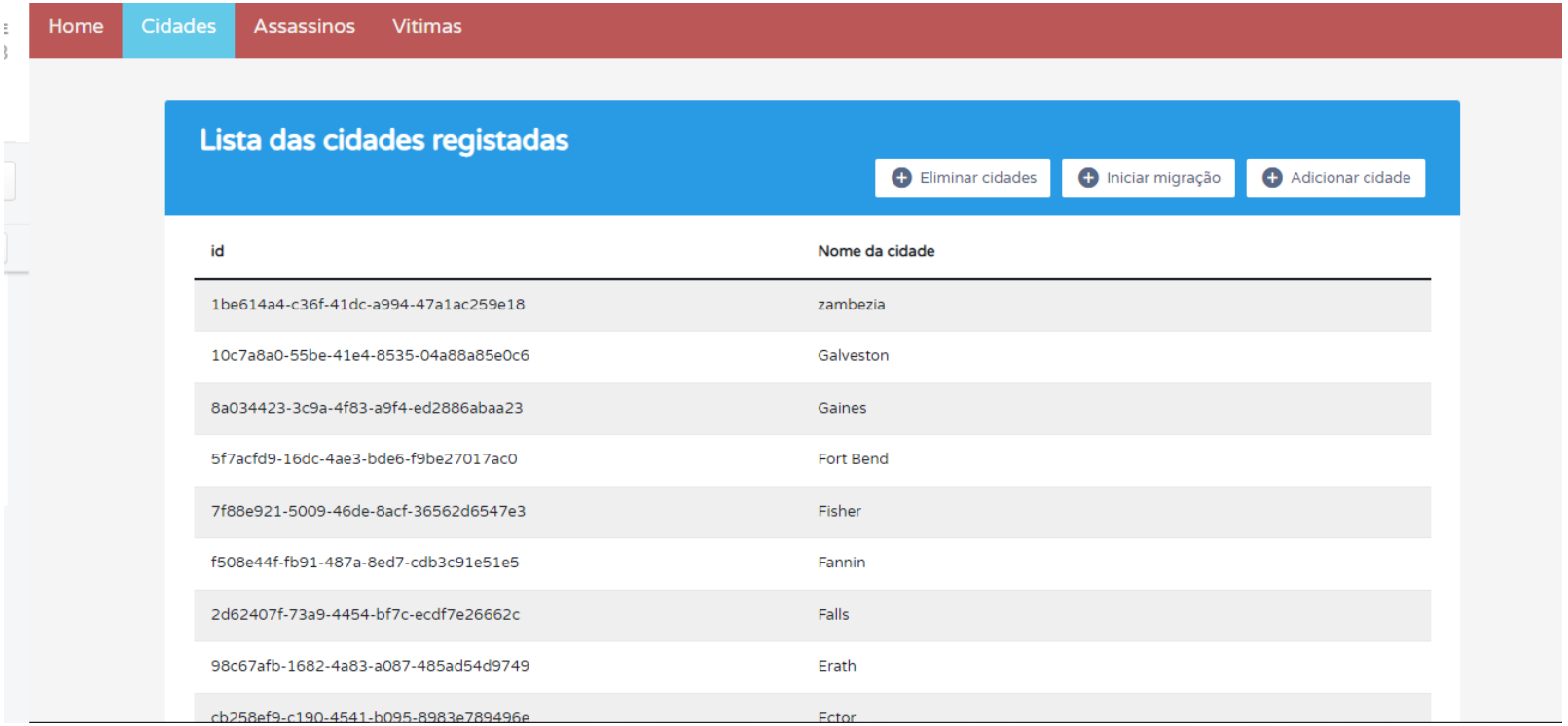
Erath
cb258ef9-c190-4541-b095-8983e789496e
Ector
950ee4dc-5dc8-4855-a9c5-dc023c961040
Eastland
9715a42e-14d3-4d00-8664-d6a715c564a2
Donley

8.2. Edit



8.2. Edit


Home
Cidades
Assassinos
Vitimas
Lista das cidades registadas
Eliminar cidades
Iniciar migração
Adicionar cidade
id
Nome da cidade
1be614a4-c36f-41dc-a994-47a1ac259e18
zambezia
10c7a8a0-55be-41e4-8535-04a88a85e0c6
Galveston
8a034423-3c9a-4f83-a9f4-ed2886abaa23
Gaines
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Fort Bend
7f88e921-5009-46de-8acf-36562d6547e3
Fisher
f508e44f-fb91-487a-8ed7-cdb3c91e51e5
Fannin
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Falls
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Erath
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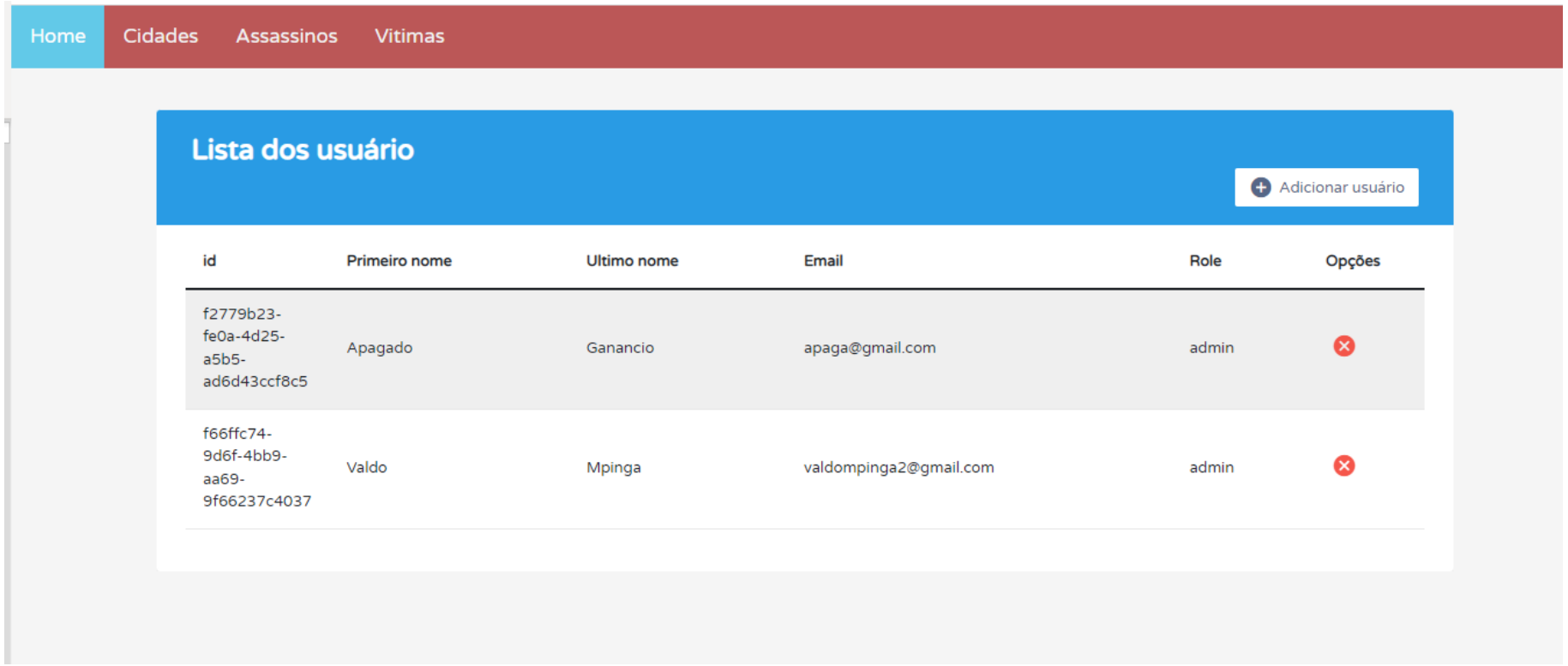
Ector

8.3. Admin


Home
Cidades
Assassinos
Vitimas
Lista dos usuário
Adicionar usuário
id
Primeiro nome
Ultimo nome
Email
Role
Opções
f2779b23-fe0a-4d25-a5b5-ad6d43ccf8c5
Apagado
Ganancio
apaga@gmail.com
admin
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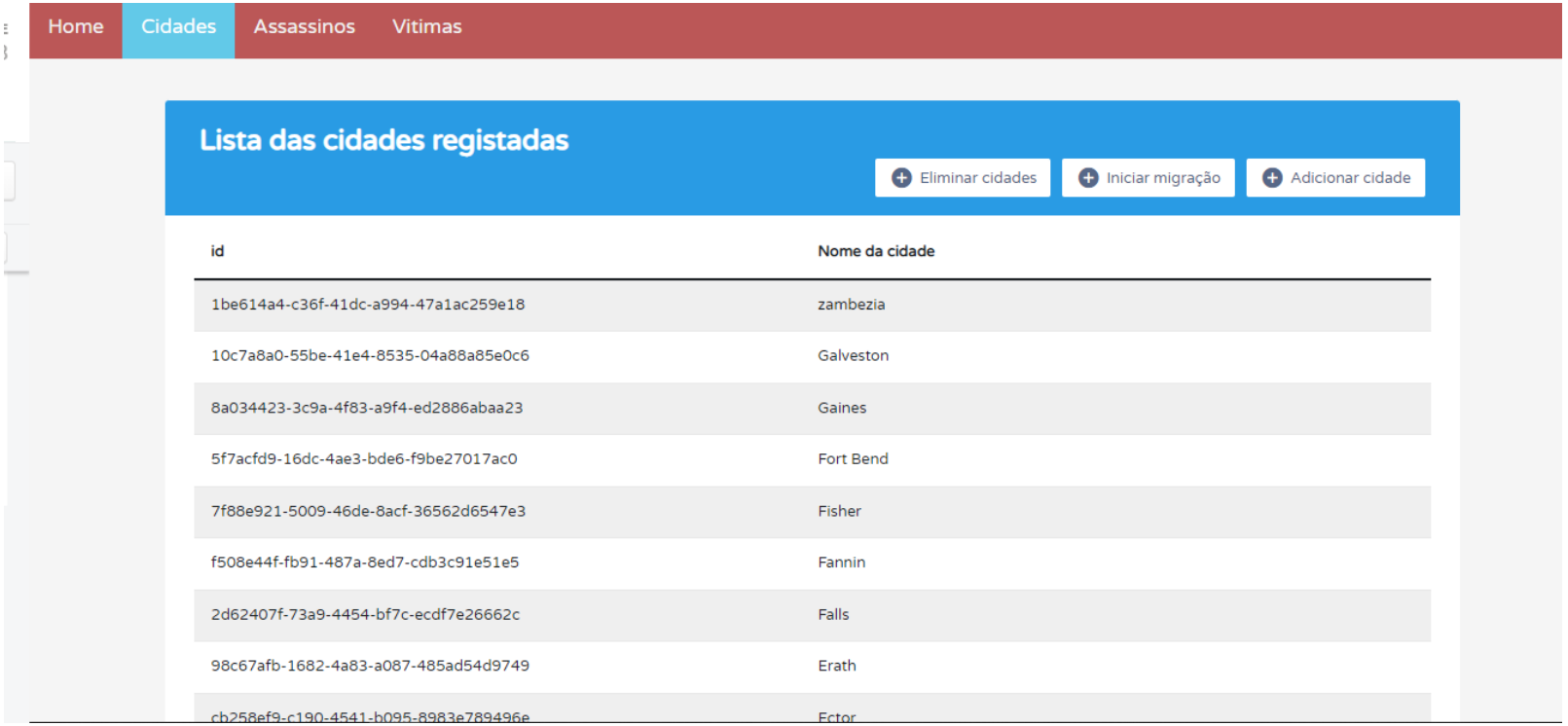
Valdo
Mpinga
valdompinga2@gmail.com
admin

8.3. Admin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zambezia
10c7a8a0-55be-41e4-8535-04a88a85e0c6
Galveston
8a034423-3c9a-4f83-a9f4-ed2886abaa23
Gaines
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Fort Bend
7f88e921-5009-46de-8acf-36562d6547e3
Fisher
f508e44f-fb91-487a-8ed7-cdb3c91e51e5
Fannin
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Falls
98c67afb-1682-4a83-a087-485ad54d9749
Erath
cb258ef9-c190-4541-b095-8983e789496e
Ector

8. Dificulties and failures

On this work we had the following difficulties:

1. The group had hard time managing time, so it wasn't possible to make things the best way possible;
2. The group failed implementing graphql;

In the end, it was a great experience and the group learned so much.

9 Bibliography

What is mocha.js : https://mochajs.org/
What is insomnia REST: https://insomnia.rest/
Mongoose docs: https://mongoosejs.com/docs/guide.html