Backend Challenge

Developed with   MongoDB v5.0.2

IntelliJ IDEA 2021.2.1

Java build 11.0.8-internal

Spring Boot v2.5.4

Possible endpoints:		
GET	/security/tokenplease /api/homes /api/homes/{id} /api/seniors /api/seniors/{id} /api/sensors/ /api/sensors/{id}	Get an access token to gain access to the resources, either all homes/seniors/sensors or by id. No, blank, expired, invalid token, invalid with wrong name throw their corresponding errors.
POST	/api/homes /api/seniors /api/sensors	Save in MongoDB a home/senior/sensor. Blanks or null non-optional parameter throw error

DELETE	/api/homes/{id} /api/seniors/{id} /api/sensors/{id}	Delete a home/senior/sensor
PUT	/assign/{sensorId}/{seniorId}	Assign a sensor to senior provided the sensor exists in the database and has not been assigned to another senior.

Some not so trivial points:

- The ChallengeApplication is presaving some homes, sensors and seniors in MongoDB. E.g. the Homes collection is :
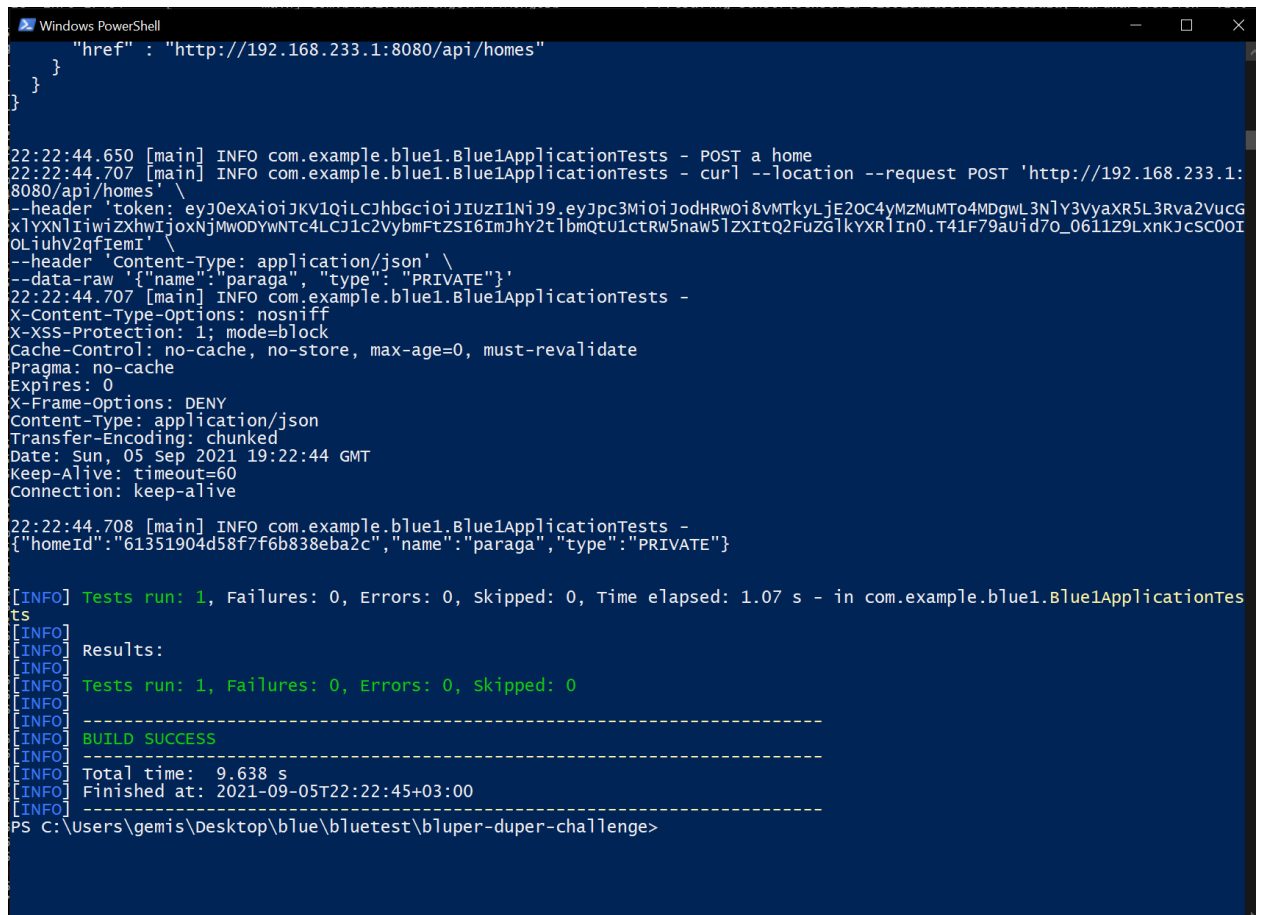
  > db.homes.find()

  { "_id" : ObjectId("6134c6be6c30231df8442186"), "name" : "home1", "type" : "NURSING", "_class" : "com.blue1.challenge.homehandler.Home" }

  { "_id" : ObjectId("6134c6be6c30231df8442187"), "name" : "home2", "type" : "PRIVATE", "_class" : "com.blue1.challenge.homehandler.Home" }

- For validation, testing and verification by your side purposes the com/example/blue1/Blue1ApplicationTests.java contains a Test method that runs some http requests and logs the cURL snippet along with the headers and body of both the request and response. These logs can be found in the appendix of this file.

- If no Id is given at element creation, a homeId/sensorId/seniorId unique id String is automatically created.

How to run

You need to have maven installed

- Download the repository
  `git clone https://github.com/gemistass/bluper-duper-challenge.git`
- Run with
  `mvn spring-boot:run`
- In another instance you can hit
  `mvn test`
  This will execute the http methods from
  com/example/blue1/Blue1ApplicationTests.java and it can verify that the service is running,
  http methods are executed successfully against the service and connection with the MongoDB
  has been established

```
        "href" : "http://192.168.233.1:8080/api/homes"
      }
    }
}

22:22:44.650 [main] INFO com.example.blue1.Blue1ApplicationTests - POST a home
22:22:44.707 [main] INFO com.example.blue1.Blue1ApplicationTests - curl --location --request POST 'http://192.168.233.1:
8080/api/homes' \
--header 'token: eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwOi8vMTkyLjE2OC4yMzMuMTo4MDgwL3NlY3VyaXR5L3Rva2VucG
xlYXNlIiwiZXhwIjoxNjMwODYwNTc4LCJ1c2VybmFtZSI6ImJhY2tlbmQtU1ctRW5naW5lZXItQ2FuZGlkYXRlIn0.T41F79aUid7O_O611Z9LxnKJcSCOOI
OLiuhV2qfIemI' \
--header 'Content-Type: application/json' \
--data-raw '{"name":"paraga", "type": "PRIVATE"}'
22:22:44.707 [main] INFO com.example.blue1.Blue1ApplicationTests -
X-Content-Type-Options: nosniff
X-XSS-Protection: 1; mode=block
Cache-Control: no-cache, no-store, max-age=0, must-revalidate
Pragma: no-cache
Expires: 0
X-Frame-Options: DENY
Content-Type: application/json
Transfer-Encoding: chunked
Date: Sun, 05 Sep 2021 19:22:44 GMT
Keep-Alive: timeout=60
Connection: keep-alive

22:22:44.708 [main] INFO com.example.blue1.Blue1ApplicationTests -
{"homeId":"61351904d58f7f6b838eba2c","name":"paraga","type":"PRIVATE"}


[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 1.07 s - in com.example.blue1.Blue1ApplicationTes
ts
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  9.638 s
[INFO] Finished at: 2021-09-05T22:22:45+03:00
[INFO] ------------------------------------------------------------------------
PS C:\Users\gemis\Desktop\blue\bluetest\bluper-duper-challenge>
```

- Now you can use the endpoints to interact with the API!

Appendix

<u>Test Logs</u>

20:15:52.550 [main] INFO com.example.blue1.Blue1ApplicationTests - request with no token

20:15:53.196 [main] INFO com.example.blue1.Blue1ApplicationTests - curl --location --request GET 'http://192.168.233.1:8080/api/homes' \

--data-raw ''

20:15:53.197 [main] INFO com.example.blue1.Blue1ApplicationTests -

error: No token provided

X-Content-Type-Options: nosniff

X-XSS-Protection: 1; mode=block

Cache-Control: no-cache, no-store, max-age=0, must-revalidate

Pragma: no-cache

Expires: 0

X-Frame-Options: DENY

Content-Type: application/json

Transfer-Encoding: chunked

Date: Sun, 05 Sep 2021 17:15:53 GMT

Keep-Alive: timeout=60

Connection: keep-alive

20:15:53.203 [main] INFO com.example.blue1.Blue1ApplicationTests -

{"timestamp":"2021-09-05T17:15:53.178+00:00","status":401,"error":"Unauthorized","path":"/api/homes"}

20:15:53.203 [main] INFO com.example.blue1.Blue1ApplicationTests - request with expired token

20:15:53.255 [main] INFO com.example.blue1.Blue1ApplicationTests - curl --location --request GET 'http://192.168.233.1:8080/api/homes' \

--header 'token: eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwOi8vMTkyLjE2OC4yMzMuMTo4MDgwL3NlY3VyaXR5L3Rva2VuGxlYXNlIiwiZXhwIjoxNjMwODUyMzEwLCJ1c2VybmFtZSI6ImJhY2tlbmQtU1ctRW5naW5lZXItQ2FuZGlkYXRlIn0.bY0Itt-nAJm6orRO2uXq1BPK7BrrdnJ0yV_Vpjsp0F4' \

--data-raw ''

20:15:53.255 [main] INFO com.example.blue1.Blue1ApplicationTests -

error: The Token has expired on Sun Sep 05 17:31:50 EEST 2021.

X-Content-Type-Options: nosniff

X-XSS-Protection: 1; mode=block

Cache-Control: no-cache, no-store, max-age=0, must-revalidate

Pragma: no-cache

Expires: 0

X-Frame-Options: DENY

Content-Type: application/json

Transfer-Encoding: chunked

Date: Sun, 05 Sep 2021 17:15:53 GMT

Connection: close

20:15:53.256 [main] INFO com.example.blue1.Blue1ApplicationTests -

{"timestamp":"2021-09-05T17:15:53.254+00:00","status":408,"error":"Request Timeout","path":"/api/homes"}

20:15:53.256 [main] INFO com.example.blue1.Blue1ApplicationTests - request token

20:15:53.273 [main] INFO com.example.blue1.Blue1ApplicationTests - curl --location --request GET 'http://192.168.233.1:8080/security/tokenplease' \

--data-raw ''

20:15:53.273 [main] INFO com.example.blue1.Blue1ApplicationTests -

access_token:
eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwOi8vMTkyLjE2OC4yMzMuMTo4MDgwL3Nl
Y3VyaXR5L3Rva2VucGxlYXNlIiwiZXhwIjoxNjMwODY1NzUzLCJ1c2VybmFtZSI6ImJhY2tlbmQtU1ctRW5na
W5lZXItQ2FuZGlkYXRlIn0.7212StqEFsLR9BgN2f5bDxO93KQHSbX6xULV92pLa3E

X-Content-Type-Options: nosniff

X-XSS-Protection: 1; mode=block

Cache-Control: no-cache, no-store, max-age=0, must-revalidate

Pragma: no-cache

Expires: 0

X-Frame-Options: DENY

Content-Type: application/json

Content-Length: 14

Date: Sun, 05 Sep 2021 17:15:53 GMT

Keep-Alive: timeout=60

Connection: keep-alive

20:15:53.274 [main] INFO com.example.blue1.Blue1ApplicationTests -

Check headers!

20:15:53.274 [main] INFO com.example.blue1.Blue1ApplicationTests - token:
eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwOi8vMTkyLjE2OC4yMzMuMTo4MDgwL3Nl
Y3VyaXR5L3Rva2VucGxlYXNlIiwiZXhwIjoxNjMwODY1NzUzLCJ1c2VybmFtZSI6ImJhY2tlbmQtU1ctRW5na
W5lZXItQ2FuZGlkYXRlIn0.7212StqEFsLR9BgN2f5bDxO93KQHSbX6xULV92pLa3E

20:15:53.274 [main] INFO com.example.blue1.Blue1ApplicationTests - get requests for homes

20:15:53.288 [main] INFO com.example.blue1.Blue1ApplicationTests - curl --location --request GET 'http://192.168.233.1:8080/api/homes' \

```
--header 'token:
eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwOi8vMTkyLjE2OC4yMzMuMTo4MDgwL3Nl
Y3VyaXR5L3Rva2VuGxlYXNlIiwiZXhwIjoxNjMwODY1NzUzLCJ1c2VybmFtZSI6ImJhY2tlbmQtU1ctRW5na
W5lZXItQ2FuZGlkYXRlIn0.7212StqEFsLR9BgN2f5bDxO93KQHSbX6xULV92pLa3E' \
--data-raw ''
```

20:15:53.288 [main] INFO com.example.blue1.Blue1ApplicationTests -

X-Content-Type-Options: nosniff

X-XSS-Protection: 1; mode=block

Cache-Control: no-cache, no-store, max-age=0, must-revalidate

Pragma: no-cache

Expires: 0

X-Frame-Options: DENY

Content-Type: application/hal+json

Transfer-Encoding: chunked

Date: Sun, 05 Sep 2021 17:15:53 GMT

Keep-Alive: timeout=60

Connection: keep-alive

20:15:53.288 [main] INFO com.example.blue1.Blue1ApplicationTests -

```
{
  "_embedded" : {
    "homes" : [ {
      "name" : "home1",
      "type" : "NURSING",
      "_links" : {
        "self" : {
          "href" : "http://192.168.233.1:8080/api/homes/6134fb3e8793227b780743d0"
        },
        "homes" : {
          "href" : "http://192.168.233.1:8080/api/homes"
        }
      }
    }, {
      "name" : "home2",
      "type" : "PRIVATE",
      "_links" : {
```

```
      "self" : {
        "href" : "http://192.168.233.1:8080/api/homes/6134fb3e8793227b780743d1"
      },
      "homes" : {
        "href" : "http://192.168.233.1:8080/api/homes"
      }
    }
  } ]
},
"_links" : {
  "self" : {
    "href" : "http://192.168.233.1:8080/api/homes"
  }
}
}
```

20:15:53.288 [main] INFO com.example.blue1.Blue1ApplicationTests - POST a home

20:15:53.325 [main] INFO com.example.blue1.Blue1ApplicationTests - curl --location --request POST 'http://192.168.233.1:8080/api/homes' \

--header 'token: eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJpc3MiOiJodHRwOi8vMTkyLjE2OC4yMzMuMTo4MDgwL3NlY3VyaXR5L3Rva2VuGxlYXNlIiwiZXhwIjoxNjMwODYwNTc4LCJ1c2VybmFtZSI6ImJhY2xlbmQtU2ctRW5naW5lZXItQ2FuZGlYXRlIn0.T41F79aUid7O_0611Z9LxnKJcSC0OIOLiuhV2qfIemI' \

--header 'Content-Type: application/json' \

--data-raw '{"name":"paraga", "type": "PRIVATE"}'

20:15:53.325 [main] INFO com.example.blue1.Blue1ApplicationTests -

X-Content-Type-Options: nosniff

X-XSS-Protection: 1; mode=block

Cache-Control: no-cache, no-store, max-age=0, must-revalidate

Pragma: no-cache

Expires: 0

X-Frame-Options: DENY

Content-Type: application/json

Transfer-Encoding: chunked

Date: Sun, 05 Sep 2021 17:15:53 GMT

```
Keep-Alive: timeout=60
Connection: keep-alive
```

```
20:15:53.326 [main] INFO com.example.blue1.Blue1ApplicationTests -
{"homeId":"6134fb498793227b780743d5","name":"paraga","type":"PRIVATE"}
```