

Compte rendu

1. Diagramme de classes :

Notre diagramme de classes comporte 4 classes :

- Image
- GpsLocation
- Object
- Bbox

La classe Image :

✓ Image (Id, file_url, width , height, date_captured, gps_location, objects)

Id : identifiant et clé primaire de la classe Image

File_url : l'url du fichier

Width : largeur de l'image

Height : longueur de l'image

Gps_location : est un objet de la classe GpsLocation dont les coordonnées là où l'image a été capturée.

Objects : est une liste d'objets qui encadrent les déformations existent dans l'objet capturé

✓ GpsLocation (Id, latitude, longitude)

Id : identifiant et clé primaire de la classe GpsLocation

Latitude: latitude de la localisation de prise de l'image

Longitude : longitude de la localisation de prise de l'image

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✓ Object (Id, annotation, bbox)

Id : identifiant et clé primaire de la classe Object

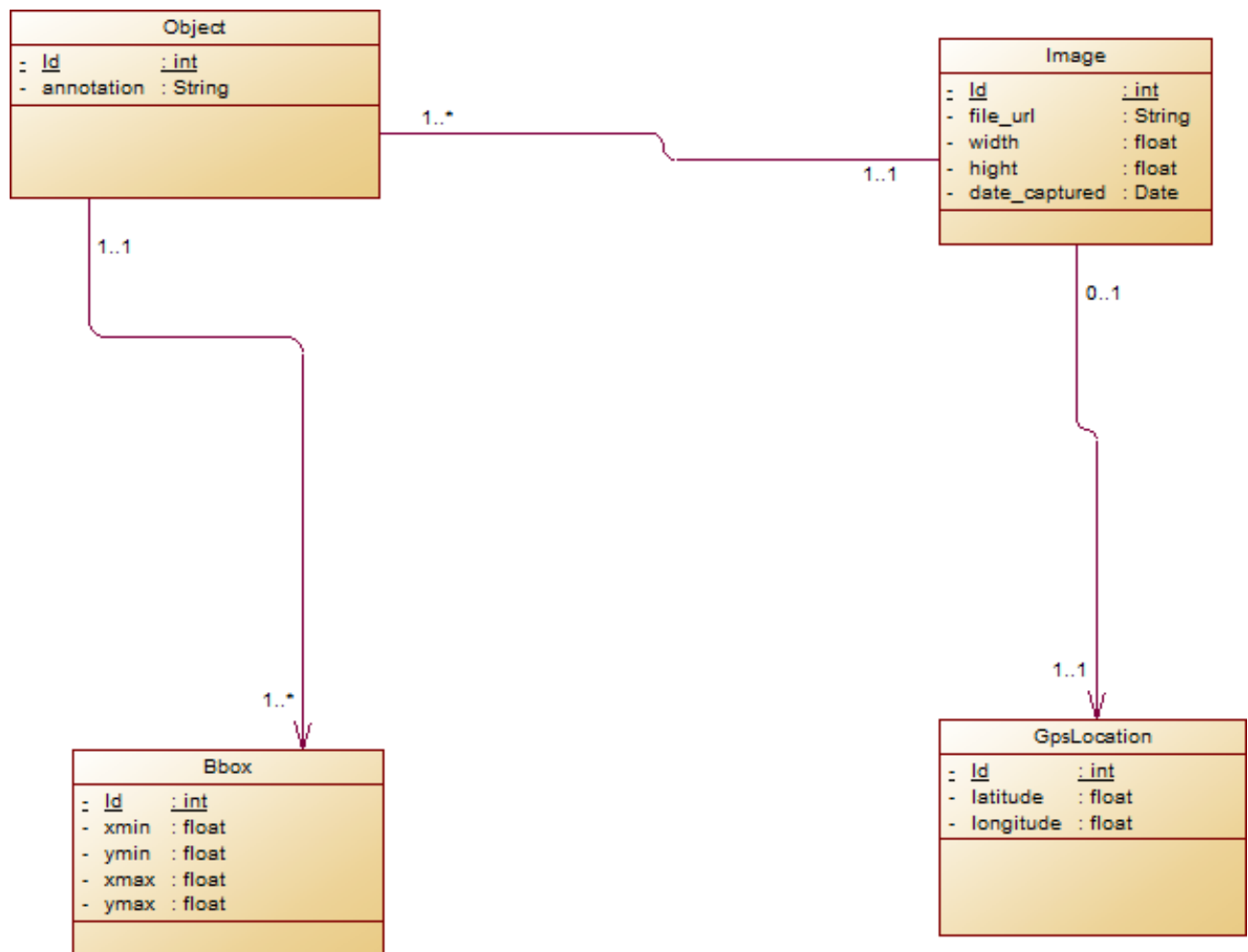
annotation: un tag associé avec l'objet capturé

bbox : est une liste d'objets de la classe Bbox concernant les coordonnées pixel de rectangle qui entoure déformation de l'objet

✓ Bbox (Id, xmax, ymax,xmin,ymin)

Id : identifiant et clé primaire de la classe Bbox

Xmax,ymax,xmin,ymin: les coordonnées pixel

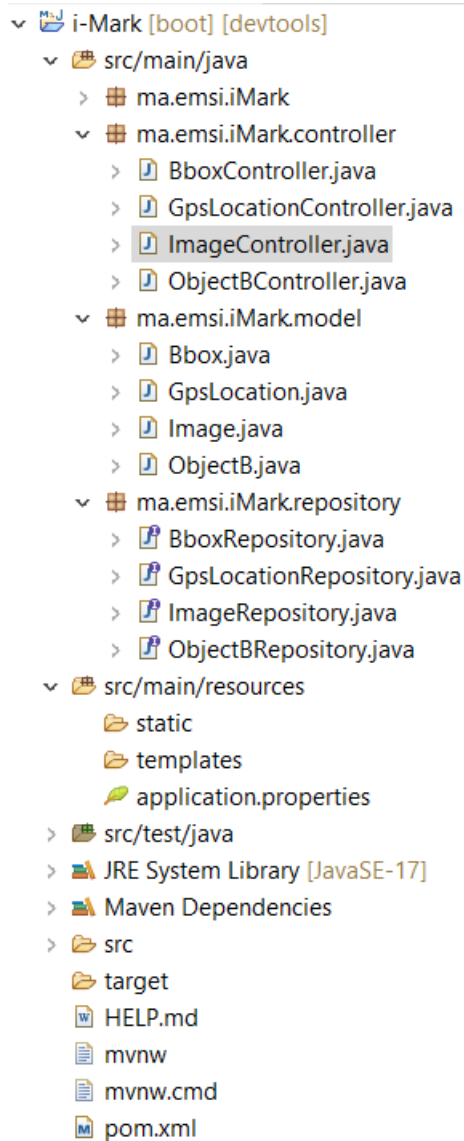


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2. BackEnd :

```
server.port=8081
spring.data.mongodb.host=localhost
spring.data.mongodb.port=27017
spring.data.mongodb.database=iMarkDB
```

Structure de projet :

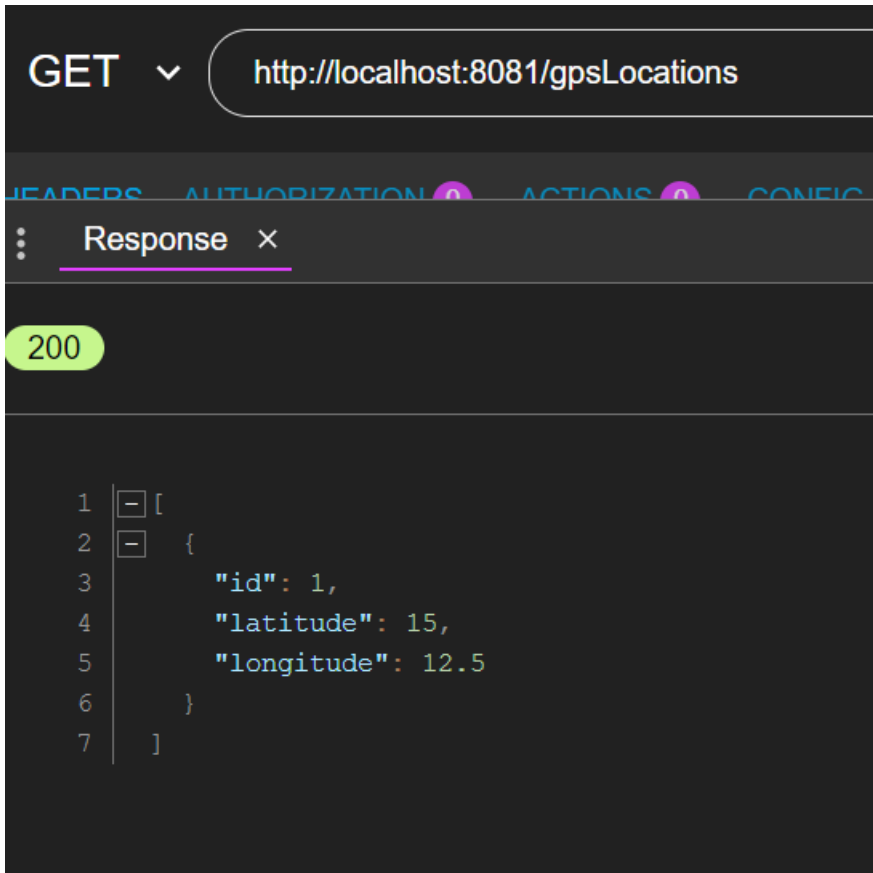


Lien github : <https://github.com/chraibibadr/i-Mark/tree/main/WEB/BACKEND/i-Mark>

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Test Advanced Rest Client :

- Ajout d'une location gps :



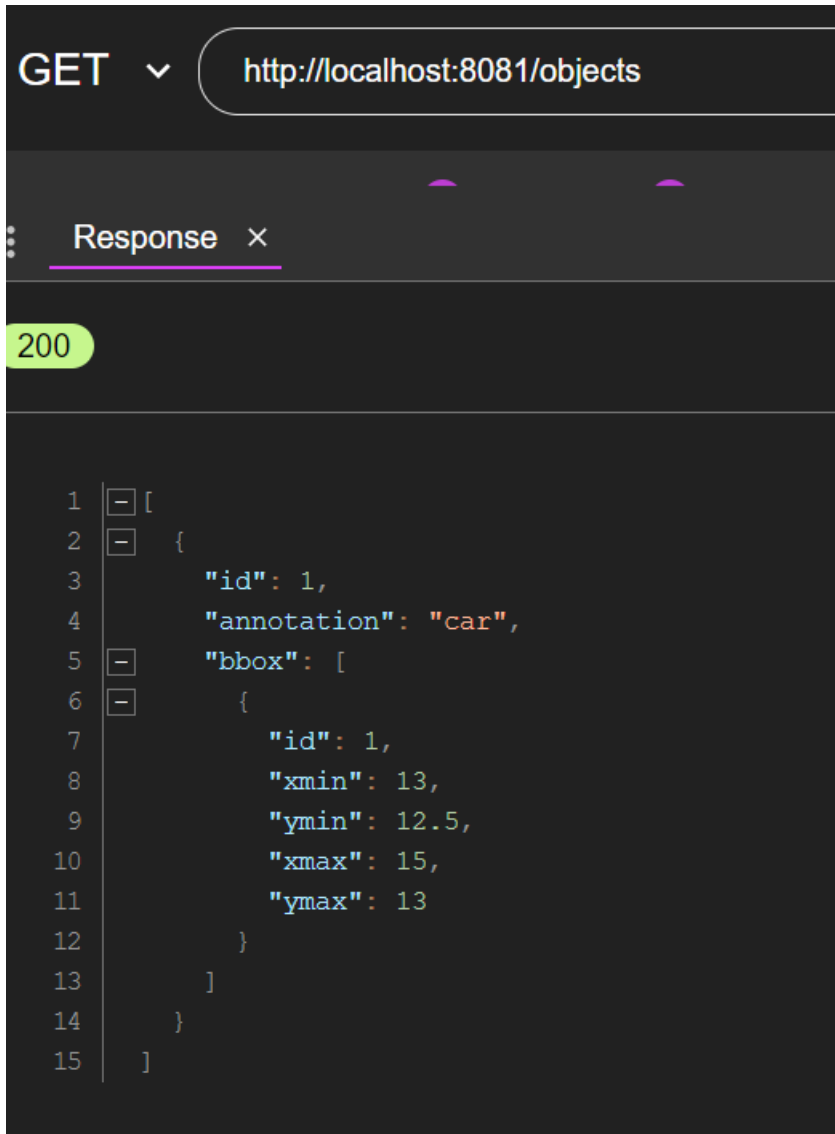
- Ajout d'un bbox :

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- Ajout d'un objet :

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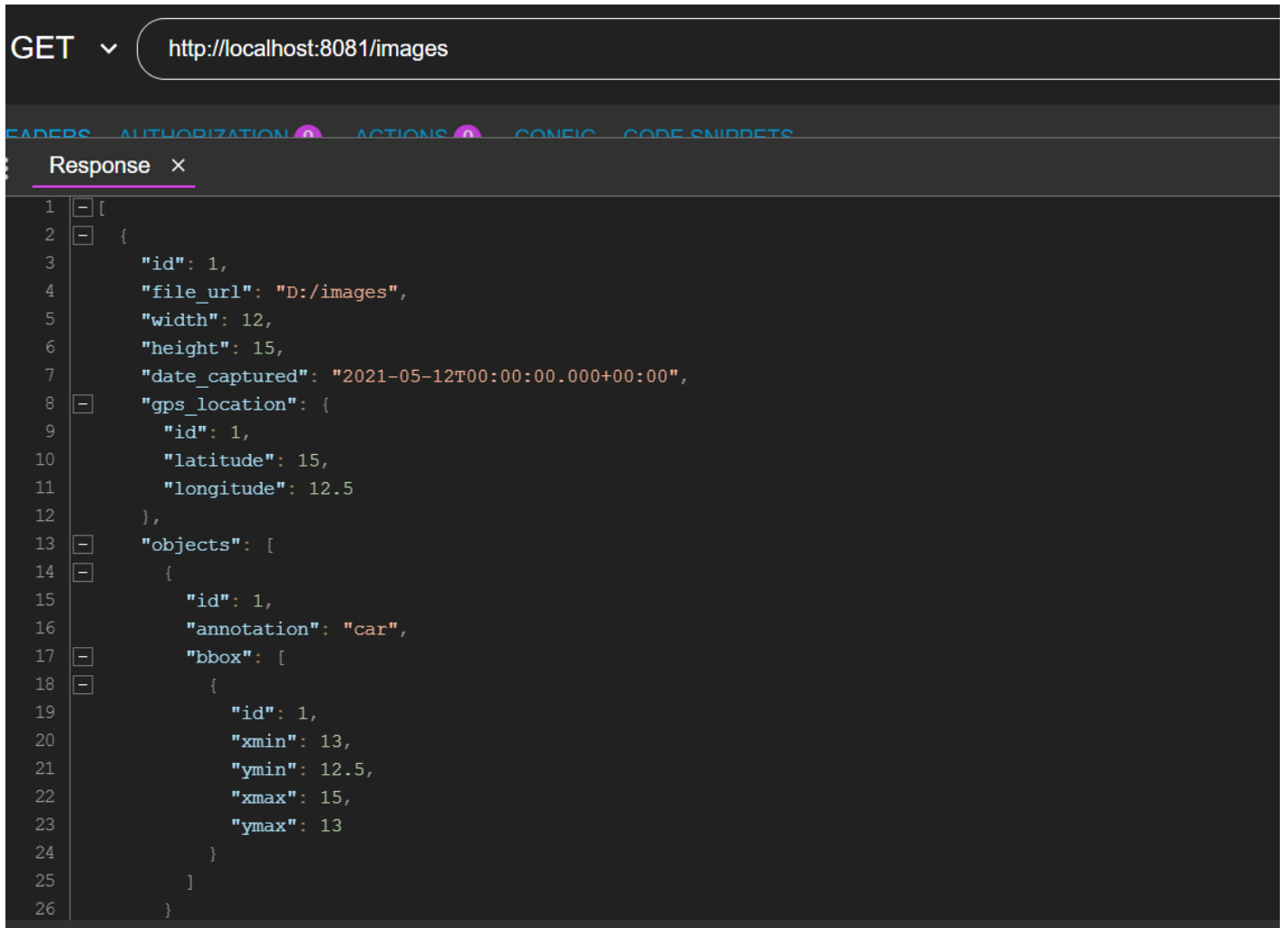


The screenshot shows a web browser interface with a dark theme. At the top, the method 'GET' is selected with a dropdown arrow, and the URL 'http://localhost:8081/objects' is entered in the address bar. Below the address bar, there are two tabs: 'Response' (active) and 'x'. The status bar at the bottom left shows a green circle with the number '200'. The main content area displays a JSON response, which is a list containing one object. The JSON is formatted with line numbers 1 through 15 on the left. The object has three properties: 'id' (1), 'annotation' ('car'), and 'bbox' (a list of four objects). The 'bbox' list contains one object with four properties: 'id' (1), 'xmin' (13), 'ymin' (12.5), and 'xmax' (15).

```
1  [
2  {
3      "id": 1,
4      "annotation": "car",
5      "bbox": [
6          {
7              "id": 1,
8              "xmin": 13,
9              "ymin": 12.5,
10             "xmax": 15,
11             "ymax": 13
12         }
13     ]
14 }
15 ]
```

- Ajout d'une image :

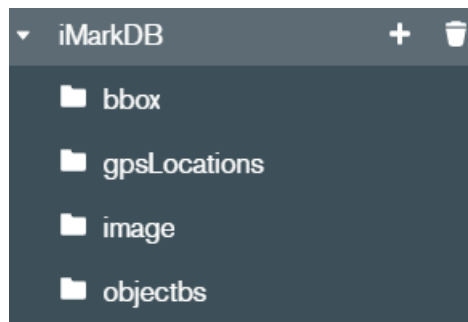
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The screenshot shows a REST client interface with a GET request to `http://localhost:8081/images`. The response is a JSON array containing one object. The object has fields for `id`, `file_url`, `width`, `height`, `date_captured`, `gps_location`, and `objects`. The `gps_location` is an object with `id`, `latitude`, and `longitude`. The `objects` is an array containing one object with `id`, `annotation`, and `bbox`. The `bbox` is an object with `id`, `xmin`, `ymin`, `xmax`, and `ymax`.

```
1 [- [  
2   [- {  
3     "id": 1,  
4     "file_url": "D:/images",  
5     "width": 12,  
6     "height": 15,  
7     "date_captured": "2021-05-12T00:00:00.000+00:00",  
8     "gps_location": {  
9       "id": 1,  
10      "latitude": 15,  
11      "longitude": 12.5  
12    },  
13    "objects": [  
14      {  
15        "id": 1,  
16        "annotation": "car",  
17        "bbox": [  
18          {  
19            "id": 1,  
20            "xmin": 13,  
21            "ymin": 12.5,  
22            "xmax": 15,  
23            "ymax": 13  
24          }  
25        ]  
26      }  
27    ]  
28  }  
29 ]
```

Base de données (iMarkDB) :



Collections :

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bbox				
Storage size: 20.48 kB	Documents: 1	Avg. document size: 107.00 B	Indexes: 1	Total index size: 20.48 kB
gpsLocations				
Storage size: 20.48 kB	Documents: 1	Avg. document size: 95.00 B	Indexes: 1	Total index size: 20.48 kB
image				
Storage size: 20.48 kB	Documents: 1	Avg. document size: 330.00 B	Indexes: 1	Total index size: 20.48 kB
objectbs				
Storage size: 20.48 kB	Documents: 1	Avg. document size: 158.00 B	Indexes: 1	Total index size: 20.48 kB

Documents :

iMarkDB.bbox

Documents

Aggregations

Schema

Explain Plan

Filter { field: 'value' }

ADD DATA

VIEW





```
_id: 1
xmin: 13
ymin: 12.5
xmax: 15
ymax: 13
_class: "ma.emsi.iMark.model.Bbox"
```


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iMarkDB.gpsLocations

Documents Aggregations Schema Explain

FILTER { field: 'value' }





ADD DATA  VIEW   

```
_id: 1
latitude: 15
longitude: 12.5
_class: "ma.emsi.iMark.model.GpsLocation"
```

iMarkDB.objectbs

Documents Aggregations Schema Explain Pla

FILTER { field: 'value' }

ADD DATA  VIEW   

```
_id: 1
annotation: "car"
> bbox: Array
_class: "ma.emsi.iMark.model.ObjectB"
```

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iMarkDB.image

Documents

Aggregations

Schema

Explain Plan

 FILTER

{ field: 'value' }

 ADD DATA ▾



VIEW



```
_id: 1
file_url: "D:/images"
width: 12
height: 15
date_captured: 2021-05-12T00:00:00.000+00:00
> gps_location: Object
> objects: Array
_class: "ma.emsi.iMark.model.Image"
```