

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

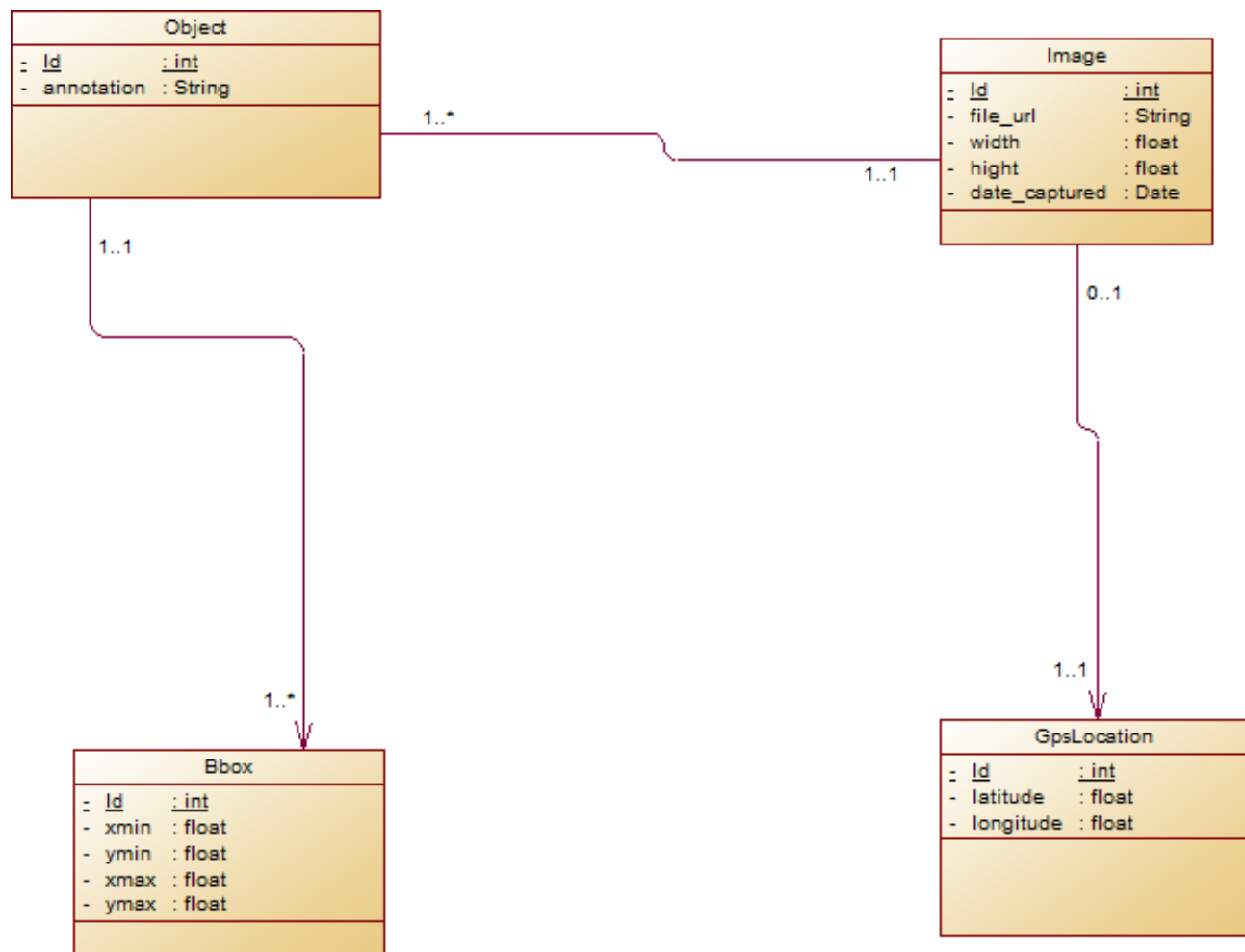
annotation: un tag associé avec l'objet capturé

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 :

✓ Structure de l'application :

- ✓  i-Mark [boot] [devtools]
 - ✓  src/main/java
 - ✓  ma.emsi.iMark
 - >  IMarkApplication.java
 - ✓  ma.emsi.iMark.controller
 - >  BboxController.java
 - >  GpsLocationController.java
 - >  ImageController.java
 - >  ObjectBController.java
 - ✓  ma.emsi.iMark.model
 - >  Bbox.java
 - >  DbSequence.java
 - >  GpsLocation.java
 - >  Image.java
 - >  ObjectB.java
 - ✓  ma.emsi.iMark.repository
 - >  BboxRepository.java
 - >  GpsLocationRepository.java
 - >  ImageRepository.java
 - >  ObjectBRepository.java
 - ✓  ma.emsi.iMark.service
 - >  SequenceGeneratorService.java
 - ✓  src/main/resources
 -  static
 -  templates
 -  application.properties
 - >  src/test/java
 - >  JRE System Library [JavaSE-17]
 - >  Maven Dependencies
 -  target/generated-sources/annotations
 -  target/generated-test-sources/test-annotations
 - >  src
 - >  target
 -  HELP.md
 -  mvnw
 -  mvnw.cmd
 -  pom.xml

✓ Propriétés de l'application :

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```
server.port=8081
```

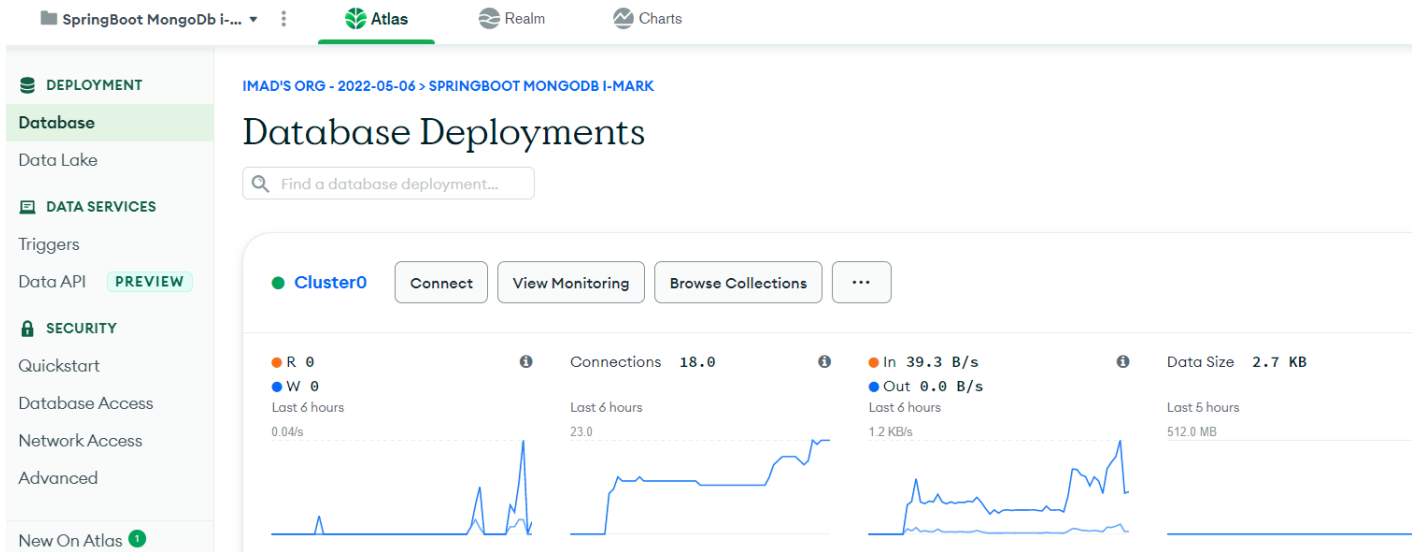
```
#spring.data.mongodb.host=localhost
```

```
#spring.data.mongodb.port=27017
```

```
#spring.data.mongodb.database=iMarkDB
```

```
spring.data.mongodb.uri=mongodb+srv://admin:admin@cluster0.4asdx.mongodb.net/iMarkDB
```

✓ Configuration base de données distante (MongoDB atlas) :



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The screenshot displays the MongoDB Atlas web interface for a cluster named 'cluster0.4asdx.mongodb.net'. The left sidebar shows navigation options: 'My Queries', 'Databases', and a search bar 'Filter your data'. Below the search bar, a list of databases is shown: 'admin', 'config', 'iMarkDB', and 'local'. The main panel on the right provides details for the selected database, 'admin'. It includes a 'Create database' button, the database name 'admin', and its storage size '0 B'. Below this, the 'config' database is listed with a storage size of '0 B'. Further down, the 'iMarkDB' database is shown with a storage size of '110.59 kB'. At the bottom, the 'local' database is listed with a storage size of '0 B'. The top of the main panel shows cluster information: '4 DBS', '3 COLLECTIONS', and a 'FAVORITE' button. The cluster details section lists the hosts: 'cluster0-shard-00-00.4asdx.mongodb.net:27017', 'cluster0-shard-00-01.4asdx.mongodb.net:27017', and 'cluster0-shard-00-02.4asdx.mongodb.net:27017'. It also shows the cluster type as 'Replica Set (atlas-96qnko-shard-0)' with '3 Nodes' and the edition as 'MongoDB 5.0.8 Enterprise'.

cluster0.4asdx.mongodb.net

4 DBS 3 COLLECTIONS

☆ FAVORITE

HOSTS
cluster0-shard-00-00.4asdx.mongodb.net:27017
cluster0-shard-00-01.4asdx.mongodb.net:27017
cluster0-shard-00-02.4asdx.mongodb.net:27017

CLUSTER
Replica Set (atlas-96qnko-shard-0)
3 Nodes

EDITION
MongoDB 5.0.8 Enterprise

{ } My Queries

Databases

Filter your data

- admin
- config
- iMarkDB
- local

My Queries

Create database

admin

Storage size:
0 B

config

Storage size:
0 B

iMarkDB

Storage size:
110.59 kB

local

Storage size:
0 B

- ✓ Lien GitHub : <https://github.com/chraibibadr/i-Mark/tree/main/WEB/BACKEND/i-Mark>
- ✓ Lien d'hébergement de l'application : <https://i-mark.herokuapp.com/>
- ✓ Test Advanced Rest Client :

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- Ajout location GPS :

The screenshot displays a REST client interface with three panels. The top panel shows a POST request to `https://i-mark.herokuapp.com/gpsLocations` with a raw input body of `[{"latitude":12,"longitude":15}]`. The middle panel shows another POST request to the same endpoint with a raw input body of `[{"latitude":8,"longitude":6}]`. The bottom panel shows a GET request to the same endpoint, with a response status of 200 and a JSON array containing two location objects: `[{"id": 1, "latitude": 12, "longitude": 15}, {"id": 2, "latitude": 8, "longitude": 6}]`.

POST `https://i-mark.herokuapp.com/gpsLocations`

HEADERS BODY AUTHORIZATION 0 ACTIONS 0 CONFIG CODE SNIPPET

Raw input

```
1 [{"latitude":12,"longitude":15}]
```

POST `https://i-mark.herokuapp.com/gpsLocations`

HEADERS BODY AUTHORIZATION 0 ACTIONS 0 CONFIG CODE SNIPPET

Raw input

```
1 [{"latitude":8,"longitude":6}]
```

...kuapp.com/gpsLocations × +

GET `https://i-mark.herokuapp.com/gpsLocations`

HEADERS AUTHORIZATION 0 ACTIONS 0 CONFIG CODE SNIPPET

COPY ☐ Text editor

⋮ **Response** ×

200

```
1 [
2   {
3     "id": 1,
4     "latitude": 12,
5     "longitude": 15
6   },
7   {
8     "id": 2,
9     "latitude": 8,
10    "longitude": 6
11  }
12 ]
```

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- Ajout bboxes :

POST ▼ https://i-mark.herokuapp.com/bboxes

HEADERS BODY AUTHORIZATION 0 ACTIONS 0 C

Raw input ▼

1 [{"ymin":1,"ymax":2,"xmin":5,"xmax":8}]

⋮ Response ×

200

The response contains no body.

POST ▼ https://i-mark.herokuapp.com/bboxes

HEADERS BODY AUTHORIZATION 0 ACTIONS 0 C

Raw input ▼

1 [{"ymin":2,"ymax":3,"xmin":6,"xmax":9}]

⋮ Response ×

200

The response contains no body.

Compte rendu

GET ▼ https://i-mark.herokuapp.com/bboxes

HEADERS AUTHORIZATION 0 ACTIONS 0 CONFIG CODE SNIPPETS

COPY ☐ Text editor

⋮ Response ×

200

```
1  [
2    {
3      "id": 1,
4      "xmin": 5,
5      "ymin": 1,
6      "xmax": 8,
7      "ymax": 2
8    },
9    {
10     "id": 2,
11     "xmin": 6,
12     "ymin": 2,
13     "xmax": 9,
14     "ymax": 3
15   }
16 ]
```

- Ajout objets :

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POST

https://i-mark.herokuapp.com/objects

HEADERSBODYAUTHORIZATION 0ACTIONS 0C

Raw input

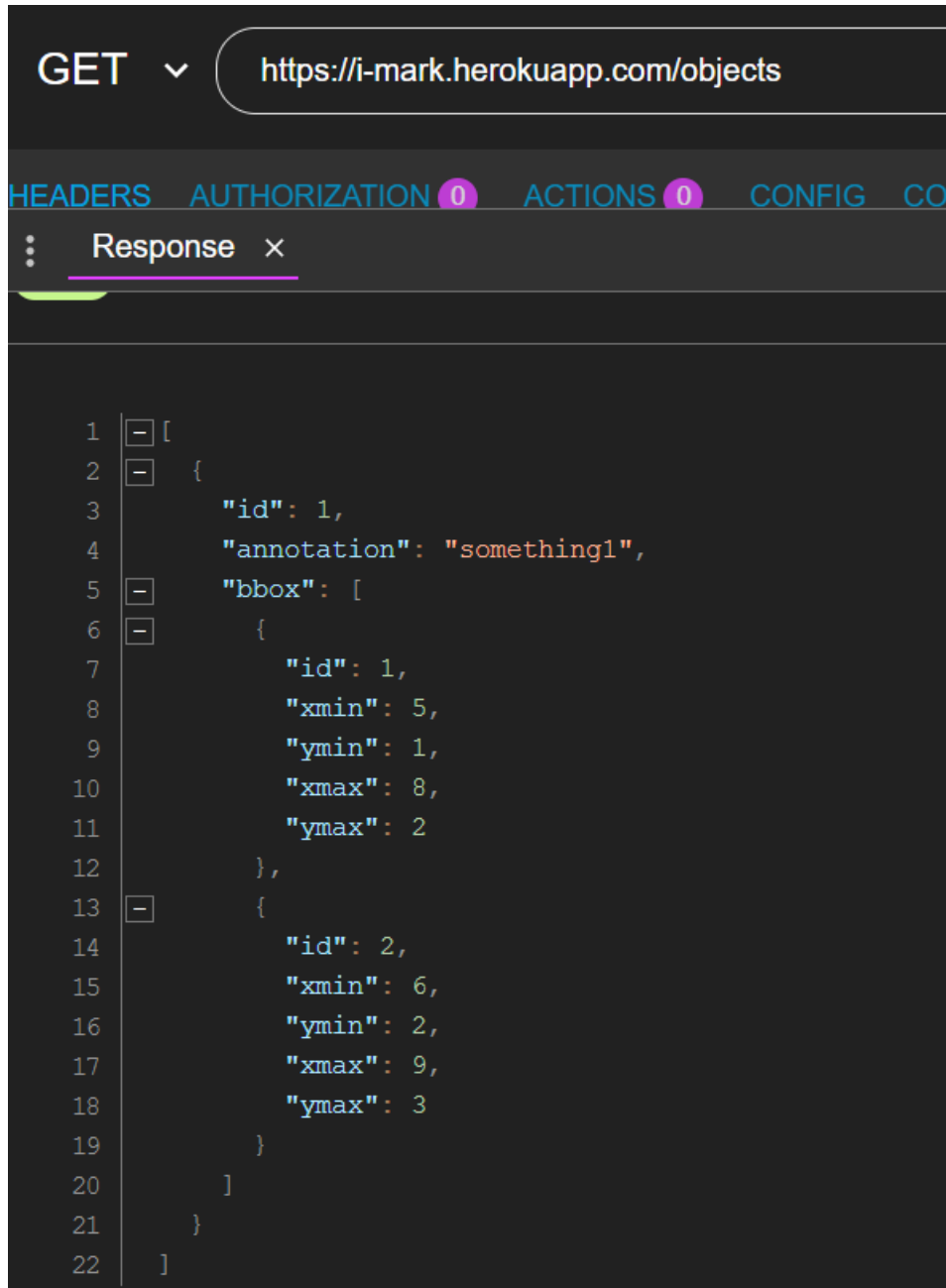
```
1 [{"annotation": "something1",
2   "bbox": [{
3     "id": 1,
4     "xmin": 5,
5     "ymin": 1,
6     "xmax": 8,
7     "ymax": 2
8   },
9   {
10    "id": 2,
11    "xmin": 6,
12    "ymin": 2,
13    "xmax": 9,
14    "ymax": 3
15  }]
16 }]
```

⋮ Response ×

200

The response contains no body.

Compte rendu



```
GET https://i-mark.herokuapp.com/objects

HEADERS AUTHORIZATION 0 ACTIONS 0 CONFIG CO

: Response x

1 [- [
2   [- {
3     "id": 1,
4     "annotation": "something1",
5     "bbox": [
6       [- {
7         "id": 1,
8         "xmin": 5,
9         "ymin": 1,
10        "xmax": 8,
11        "ymax": 2
12      },
13     [- {
14       "id": 2,
15       "xmin": 6,
16       "ymin": 2,
17       "xmax": 9,
18       "ymax": 3
19     }
20   ]
21 }
22 ]
```

- Ajout images :

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POST

https://i-mark.herokuapp.com/images

HEADERSBODYAUTHORIZATION 0ACTIONS 0CONFIGCODE SNIPPETS

Raw input

```
1 {"file_url":"C:/file1.png","width":15,"height":16,"date_captured":"2021-05-12",
2 "gps_location":{"latitude":12,"longitude":15},
3 "objects":[
4   {
5     "id": 1,
6     "annotation": "something1",
7     "bbox": [
8       {
9         "id": 1,
10        "xmin": 5,
11        "ymin": 1,
12        "xmax": 8,
13        "ymax": 2
14      },
15      {
16        "id": 2,
17        "xmin": 6,
18        "ymin": 2,
```

Response

200

The response contains no body.

Compte rendu

GET ▾

https://i-mark.herokuapp.com/images

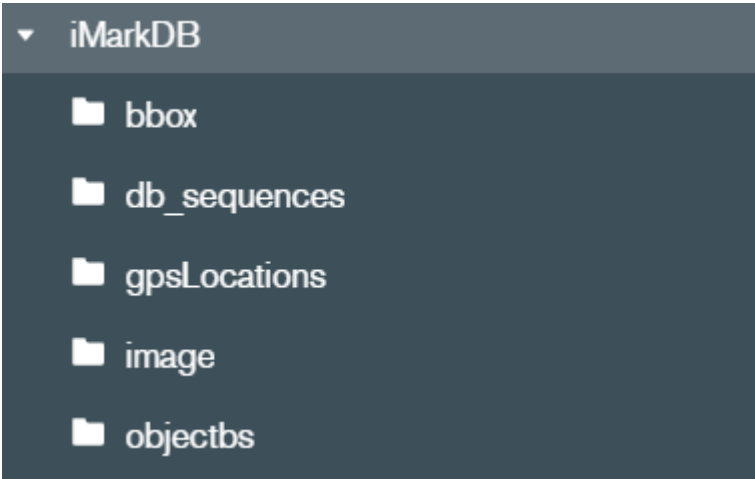
HEADERS AUTHORIZATION 0 ACTIONS 0 CONFIG CODE SNIPPETS

⋮ Response ×

```
1  [-] [
2  [-] {
3      "id": 1,
4      "file_url": "C:/file1.png",
5      "width": 15,
6      "height": 16,
7      "date_captured": "2021-05-12T00:00:00.000+00:00",
8  [-] "gps_location": {
9      "id": 0,
10     "latitude": 12,
11     "longitude": 15
12 },
13 [-] "objects": [
14 [-] {
15     "id": 1,
16     "annotation": "something1",
17 [-] "bbox": [
18 [-] {
19     "id": 1,
20     "xmin": 5,
21     "ymin": 1,
22     "xmax": 8,
23     "ymax": 2
24 },
25 [-] {
26     "id": 2,
27     "xmin": 6,
28     "ymin": 2,
29     "xmax": 9,
30     "ymax": 3
31 }
32 ]
33 }
34 ]
35 }
36 ]
```

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✓ Base de données (iMarkDB) :



Collections :

Collections				
Create collection	View	<div><div></div><div></div></div>	Sort by	Collection Name
bbox				
Storage size: 20.48 kB	Documents: 2	Avg. document size: 107.00 B	Indexes: 1	Total index size: 24.58 kB
db_sequences				
Storage size: 20.48 kB	Documents: 4	Avg. document size: 39.00 B	Indexes: 1	Total index size: 36.86 kB
gpsLocations				
Storage size: 20.48 kB	Documents: 2	Avg. document size: 95.00 B	Indexes: 1	Total index size: 36.86 kB
image				
Storage size: 20.48 kB	Documents: 1	Avg. document size: 413.00 B	Indexes: 1	Total index size: 20.48 kB
objectbs				
Storage size: 20.48 kB	Documents: 1	Avg. document size: 238.00 B	Indexes: 1	Total index size: 20.48 kB

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Documents :

iMarkDB.bbox

DocumentsAggregationsSchema

FILTER

{ field: 'value' }

ADD DATA

VIEW

{ }

_id: 1

xmin: 5

ymin: 1

xmax: 8

ymax: 2

_class: "ma.emsi.iMark.model.Bbox"

_id: 2

xmin: 6

ymin: 2

xmax: 9

ymax: 3





_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: 12
longitude: 15
_class: "ma.emsi.iMark.model.GpsLocation"
```

```
_id: 2
latitude: 8
longitude: 6
_class: "ma.emsi.iMark.model.GpsLocation"
```

iMarkDB.objectbs

Documents Aggregations Schema Explain

FILTER { field: 'value' }

ADD DATA  **VIEW**   

```
_id: 1
annotation: "something1"
bbox: Array
  0: Object
    _id: 1
    xmin: 5
    ymin: 1
    xmax: 8
    ymax: 2
  1: Object
    _id: 2
    xmin: 6
    ymin: 2
    xmax: 9
    ymax: 3
_class: "ma.emsi.iMark.model.ObjectB"
```

Compte rendu

iMarkDB.image

[Documents](#) [Aggregations](#) [Schema](#) [Explain Plan](#) [Indexes](#)

FILTER

{ field: 'value' }

ADD DATA

VIEW

{ }

```
_id: 1
file_url: "C:/file1.png"
width: 15
height: 16
date_captured: 2021-05-12T00:00:00.000+00:00
  gps_location: Object
    _id: 0
    latitude: 12
    longitude: 15
  objects: Array
    0: Object
      _id: 1
      annotation: "something1"
      bbox: Array
        0: Object
          _id: 1
          xmin: 5
          ymin: 1
          xmax: 8
          ymax: 2
        1: Object
          _id: 2
          xmin: 6
          ymin: 2
          xmax: 9
          ymax: 3
      _class: "ma.emsi.iMark.model.Image"
```