

## PUNTO 1

Para ordenar se puede usar Quicksort, Mergesort o Heapsort  $O(n \cdot \log(n))$

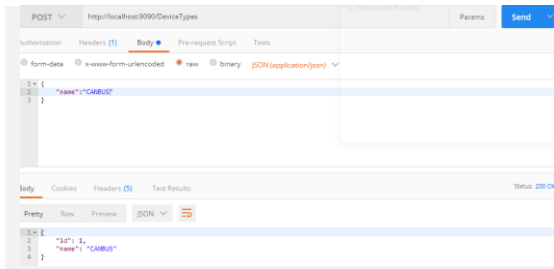
Para filtrar si el patrón es cualquiera se puede hacer recorriendo  $O(n)$

Si se van a hacer múltiples queries sobre el mismo conjunto de strings hay dos casos: si el conjunto no varía usar un array ordenado y filtrar recorriéndolo en orden. sí hay operaciones de inserción y borrado sobre los strings usar un árbol binario y filtrar en orden.

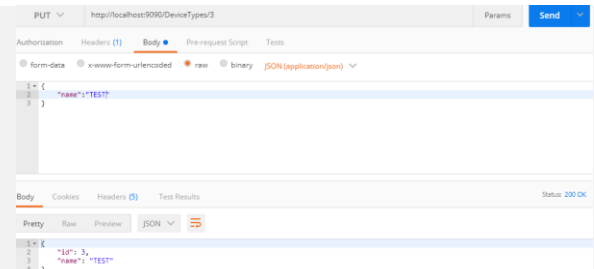
## PUNTO 4

### DeviceType

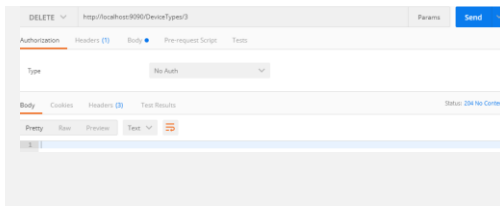
#### POST



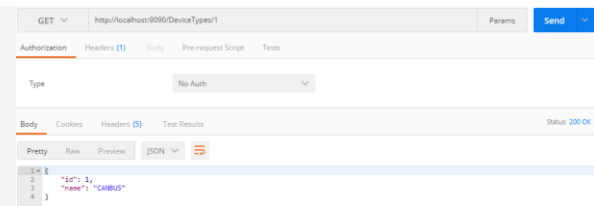
#### PUT



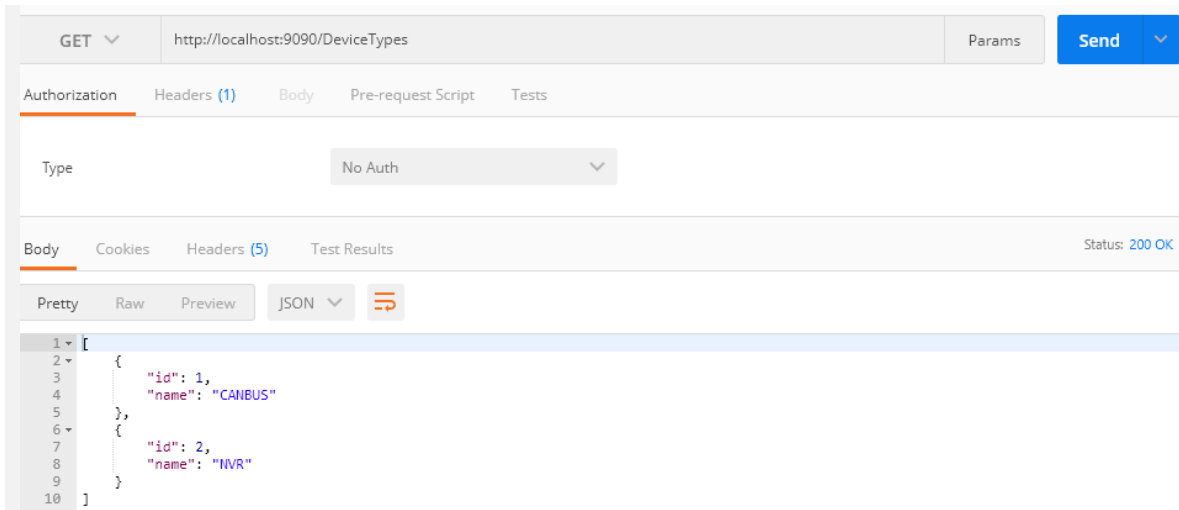
#### DELETE



#### GET



#### GET ALL



# CONCESSIONNAIRE

## POST

POST http://localhost:9090/Concessionnaires Params Send

Authorization Headers (1) Body Pre-request Script Tests

form-data x-www-form-urlencoded raw binary JSON (application/json)

```
1 {
2   "name": "concessionnaire 4"
3 }
```

Body Cookies Headers (5) Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 {
2   "id": 4,
3   "name": "concessionnaire 4"
4 }
```

## PUT

PUT http://localhost:9090/Concessionnaires/3 Params Send

Authorization Headers (5) Body Pre-request Script Tests

form-data x-www-form-urlencoded raw binary JSON (application/json)

```
1 {
2   "name": "concessionnaire 3"
3 }
```

Body Cookies Headers (5) Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 {
2   "id": 3,
3   "name": "concessionnaire 3"
4 }
```

## DELETE

DELETE http://localhost:9090/Concessionnaires/4 Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers (5) Test Results Status: 204 No Content

Pretty Raw Preview Text

```
1 [
2
3 ]
```

## GET

GET http://localhost:9090/Concessionnaires/1 Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers (5) Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 {
2   "id": 1,
3   "name": "concessionnaire 1"
4 }
```

## GET ALL

GET http://localhost:9090/Concessionnaires Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers (5) Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 [
2   {
3     "id": 1,
4     "name": "concessionnaire 1"
5   },
6   {
7     "id": 2,
8     "name": "concessionnaire 2"
9   },
10  {
11    "id": 3,
12    "name": "concessionnaire 3"
13  }
14 ]
```

## BUS

### POST

POST http://localhost:9090/Buses Params Send

Authorization Headers (1) Body Pre-request Script Tests

form-data x-www-form-urlencoded raw binary JSON (application/json)

```
1 {
2   "type": "B1-articulado",
3   "motor": "diesel",
4   "brakes": "hidraulic"
5 }
```

Body Cookies Headers Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 {
2   "id": 1,
3   "type": "B1-articulado",
4   "motor": "diesel",
5   "brakes": "hidraulic",
6   "concessionaire": null
7 }
```

### PUT

PUT http://localhost:9090/Buses/3 Params Send

Authorization Headers (1) Body Pre-request Script Tests

form-data x-www-form-urlencoded raw binary JSON (application/json)

```
1 {
2   "type": "B1-articulado",
3   "motor": "gas",
4   "brakes": "hidraulic"
5 }
```

Body Cookies Headers Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 {
2   "id": 3,
3   "type": "B1-articulado",
4   "motor": "gas",
5   "brakes": "hidraulic",
6   "concessionaire": null
7 }
```

### DELETE

DELETE http://localhost:9090/Buses/3 Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers Test Results Status: 204 No Content

Pretty Raw Preview Text

```
1 |
```

### GET

GET http://localhost:9090/Buses/1 Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 {
2   "id": 1,
3   "type": "B1-articulado",
4   "motor": "diesel",
5   "brakes": "hidraulic",
6   "concessionaire": null
7 }
```

### ASSOCIATE TO A CONCESSIONAIRE

PUT http://localhost:9090/Buses/1/Concessionaires/1 Params Send

Authorization Headers (1) Body Pre-request Script Tests

form-data x-www-form-urlencoded raw binary JSON (application/json)

Body Cookies Headers Test Results Status: 204 No Content

Pretty Raw Preview Text

```
1 |
```

### (get buses of concessionaire)

GET http://localhost:9090/Concessionaires/1/Buses Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 [
2   {
3     "id": 1,
4     "type": "B1-articulado",
5     "motor": "diesel",
6     "brakes": "hidraulic",
7     "concessionaire": {
8       "id": 1,
9       "name": "concessionaire 1"
10    }
11  },
12 ]
```

### DISSOCIATE

DELETE http://localhost:9090/Buses/1/Concessionaires Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers Test Results Status: 204 No Content

Pretty Raw Preview Text

```
1 |
```

### GET ALL

GET http://localhost:9090/Buses Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 [
2   {
3     "id": 1,
4     "type": "B1-articulado",
5     "motor": "diesel",
6     "brakes": "hidraulic",
7     "concessionaire": null
8   },
9   {
10    "id": 1,
11    "type": "B1-articulado",
12    "motor": "diesel",
13    "brakes": "hidraulic",
14    "concessionaire": null
15  }
16 ]
```

## DEVICE

### POST

POST http://localhost:9090/Buses/1/Devices Params Send

Authorization Headers (1) Body Pre-request Script Tests

form-data x-www-form-urlencoded raw binary JSON (application/json)

```
1 {
2   "ip": "198.122.123.3",
3   "status": "ACTIVE",
4 }
```

Body Cookies Headers (3) Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 {
2   "ip": "198.122.123.3",
3   "ip": "198.122.123.3",
4   "ip": "198.122.123.3",
5   "status": "ACTIVE",
6   "bus": {
7     "ip": "198.122.123.3",
8     "type": "BI-articulado",
9     "motor": "diesel",
10    "brakes": "hidraulic",
11    "concessionaire": null
12  },
13   "deviceType": null
14 }
```

### PUT

PUT http://localhost:9090/Buses/1/Devices/3 Params Send

Authorization Headers (1) Body Pre-request Script Tests

form-data x-www-form-urlencoded raw binary JSON (application/json)

```
1 {
2   "ip": "198.122.123.3",
3   "status": "ACTIVE",
4 }
```

Body Cookies Headers (3) Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 {
2   "ip": "198.122.123.3",
3   "ip": "198.122.123.3",
4   "ip": "198.122.123.3",
5   "status": "ACTIVE",
6   "bus": {
7     "ip": "198.122.123.3",
8     "type": "BI-articulado",
9     "motor": "diesel",
10    "brakes": "hidraulic",
11    "concessionaire": null
12  },
13   "deviceType": null
14 }
```

### DELETE

DELETE http://localhost:9090/Buses/1/Devices/3 Params Send

Authorization Headers (1) Body Pre-request Script Tests

form-data x-www-form-urlencoded raw binary JSON (application/json)

```
1 {
2   "ip": "198.122.123.3",
3   "status": "ACTIVE",
4 }
```

Body Cookies Headers (3) Test Results Status: 204 No Content

Pretty Raw Preview Text

```
1 {
```

### GET

GET http://localhost:9090/Buses/1/Devices/1 Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers (3) Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 {
2   "ip": "198.122.123.3",
3   "ip": "198.122.123.3",
4   "ip": "198.122.123.3",
5   "status": "ACTIVE",
6   "bus": {
7     "ip": "198.122.123.3",
8     "type": "BI-articulado",
9     "motor": "diesel",
10    "brakes": "hidraulic",
11    "concessionaire": null
12  },
13   "deviceType": null
14 }
```

## ASSOCIATE TO A DEVICE TYPE

PUT http://localhost:9090/Buses/1/Devices/1/DeviceType/1 Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers (3) Test Results Status: 204 No Content

Pretty Raw Preview Text

```
1 {
```

## (get device of device type)

GET http://localhost:9090/DeviceTypes/1/Devices Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers (3) Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 {
2   "ip": "198.122.123.3",
3   "ip": "198.122.123.3",
4   "ip": "198.122.123.3",
5   "status": "ACTIVE",
6   "bus": {
7     "ip": "198.122.123.3",
8     "type": "BI-articulado",
9     "motor": "diesel",
10    "brakes": "hidraulic",
11    "concessionaire": null
12  },
13   "deviceType": {
14     "ip": "198.122.123.3",
15     "name": "CAMBUS"
16   }
17 }
```

## DISSOCIATE

DELETE http://localhost:9090/Buses/1/Devices/1/DeviceType Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers (3) Test Results Status: 204 No Content

Pretty Raw Preview Text

```
1 {
```

## GET ALL

GET http://localhost:9090/Buses/1/Devices Params Send

Authorization Headers (1) Body Pre-request Script Tests

Type No Auth

Body Cookies Headers (3) Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 {
2   "ip": "198.122.123.3",
3   "ip": "198.122.123.3",
4   "ip": "198.122.123.3",
5   "status": "ACTIVE",
6   "bus": {
7     "ip": "198.122.123.3",
8     "type": "BI-articulado",
9     "motor": "diesel",
10    "brakes": "hidraulic",
11    "concessionaire": null
12  },
13   "deviceType": null
14 },
15 {
16   "ip": "198.122.123.3",
17   "ip": "198.122.123.3",
18   "ip": "198.122.123.3",
19   "status": "ACTIVE",
20   "bus": {
21     "ip": "198.122.123.3",
22     "type": "BI-articulado",
23     "motor": "diesel",
24     "brakes": "hidraulic",
25     "concessionaire": null
26   },
27   "deviceType": null
28 }
```