Portfolio Assignment: API Spec

CS 493
Spring 2022
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App Site: https://final-project-351423.uw.r.appspot.com/
Account Creation: https://final-project-351423.uw.r.appspot.com/

List all Boat

Allows you to get all boats. Has MIME type html and JSON.

GET /boats

Request

Request Parameters

None

Request Body

None

Response

Response Body Format

HTML/JSON

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	406 Not Accepted	Not JSON or HTML

Response Statuses

Success

Status: 200 OK

```json
{
    "boats": [
        {
            "id": 5079418695319552,
            "length": 28,
            "loads": [],
            "name": "Boat with loads",
            "owner": "118077752144679363585",
            "public": true,
            "self": "https://final-project-
351423.uw.r.appspot.com/boats/5079418695319552",
            "type": "Catamaran"
        },
        {
            "id": 5106202648248320,
            "length": 28,
            "loads": [
                {
                    "id": 5706627130851328
                }
            ],
            "name": "Boat with loads",
            "owner": "118077752144679363585",
            "public": true,
            "self": "https://final-project-
351423.uw.r.appspot.com/boats/5106202648248320",
```

```
            "type": "Catamaran"
        }
}
```

<table border="1">
    <tr>
        <th>boats</th>
        <td>
            <table border="1">
                <thead>
                    <tr>
                        <th>name</th>
                        <th>public</th>
                        <th>owner</th>
                        <th>loads</th>
                        <th>length</th>
                        <th>type</th>
                        <th>id</th>
                        <th>self</th>
                    </tr>
                </thead>
                <tbody>
                    <tr>
                        <td>Boat with loads</td>
                        <td>True</td>
                        <td>118077752144679363585</td>
                        <td></td>
                        <td>28</td>
                        <td>Catamaran</td>
                        <td>5079418695319552</td>
                        <td>https://final-project-
351423.uw.r.appspot.com/boats/5079418695319552</td>
                    </tr>
                    <tr>
                        <td>Boat with loads</td>
                        <td>True</td>
                        <td>118077752144679363585</td>
                        <td>
                            <table border="1">
                                <thead>
                                    <tr>
                                        <th>id</th>
                                    </tr>
                                </thead>
                                <tbody>
                                    <tr>
                                        <td>5706627130851328</td>
                                    </tr>
                                </tbody>
                            </table>
                        </td>
                        <td>28</td>
                        <td>Catamaran</td>
                        <td>5106202648248320</td>
                        <td>https://final-project-
351423.uw.r.appspot.com/boats/5106202648248320</td>
                    </tr>
                    <tr>
                        <td>Odyssey II</td>
                        <td>True</td>
                        <td>118077752144679363585</td>
                        <td></td>
                        <td>200</td>
                        <td>Mega Yatch</td>
```

```
                    <td>5117579211309056</td>
                    <td>https://final-project-
351423.uw.r.appspot.com/boats/5117579211309056</td>
                  </tr>
              </tbody>
          </table>
      </td>
  </tr>
  <tr>
      <th>next</th>
      <td>https://final-project-
351423.uw.r.appspot.com/boats?limit=5&amp;offset=5</td>
  </tr>
</table>
```

Failure

Status: 406 Not Acceptable

```
{
    "Error": "This type is not supported, must be JSON or HTML"
}
```

Create a Boat

Allows you to create a new boat with valid JWT.

POST /boats

Request
Request Parameters
Authorization of valid JWT

Request Body
Required

Request Body Format
JSON

Request JSON Attributes

Name	Type	Description	Required?
name	String	Name of the boat	Yes
type	String	Type of boat	Yes
length	Integer	Size of boat	Yes
public	Boolean	True or False	Yes

Request Body Example:

```
{
    "name": "HI Test boat",
    "type": "Catamaran",
    "length": 28,
    "public" : true
}
```

Response
Response Body Format
JSON or HTML

Response Status

Outcome	Status Code	Notes
Success	201 Created	
Failure	400 Bad Request	• Request object is missing at least one of the required attributes
Failure	401 Unauthorized	• JWT is incorrect or not valid

Response Examples
- Datastore will generate an ID and store it with the entity created. This value needs to be sent with the response body in below example.
- 'self' attribute with contain live like to REST resource corresponding to the boat (the url of the boat). The 'self' attribute is not stored in Datastore.

Success

Status: 201 Created

```json
{
    "id": 4858442896375808,
    "length": 28,
    "name": "Sea Food Time",
    "self": "http://34.168.199.118:8000/boats/5646488461901824",
    "type": "Catamaran"
}
```

Failure

400 Bad Request

```json
{
    "Error": "The request object is missing at least one of the required attributes"
}
```

Get a Boat

Allows you to get an existing boat. Return type can be html or JSON.

GET /boats/:boat_id

Request

Request Parameters

Name	Type	Description	Required?
boat_id	String	ID of the boat	Yes

Request Body

None

Response

Response Body Format

HTML or JSON

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404	• No Boat with ID
Failure	406	• Wrong MIME type

Response Statuses

Success

```
Status: 200 OK
{
    "id": "5738709764800512",
    "length": 28,
    "loads": [],
    "name": "HI Test boat",
    "owner": "118077752144679363585",
    "public": true,
    "self": "https://final-project-351423.uw.r.appspot.com/boats/5738709764800512",
    "type": "Catamaran"
}
```
```
<table border="1">
    <tr>
        <th>owner</th>
        <td>118077752144679363585</td>
    </tr>
    <tr>
        <th>type</th>
        <td>Catamaran</td>
    </tr>
    <tr>
        <th>public</th>
        <td>True</td>
    </tr>
```

```
    <tr>
        <th>length</th>
        <td>28</td>
    </tr>
    <tr>
        <th>name</th>
        <td>HI Test boat</td>
    </tr>
    <tr>
        <th>loads</th>
        <td></td>
    </tr>
    <tr>
        <th>id</th>
        <td>5738709764800512</td>
    </tr>
    <tr>
        <th>self</th>
        <td>https://final-project-
351423.uw.r.appspot.com/boats/5738709764800512</td>
    </tr>
</table>
```

Failure

Status: 404 Not Found
{"Error": "No boat with this boat_id exists"}

Failure

Status: 404 Not Found
{"Error": "This type is not supported, must be JSON or HTML"}

Delete a Boat

Allows you to delete existing boat with boat_id.

DELETE /boats/:boat_id

Request

Request Parameters

Name	Type	Description	Required?
boat_id	String	ID of the boat	Yes

Request Body

Valid JWT authorization.

Response

Response Body Format

None

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	401	• JWT is not given or not valid
Failure	403	• No Boat with ID

Response Statuses

Success

Status: 204 No Content

Failure

Status: 401 Unauthorized `Could not verify JWT!`

Failure

Status: 403 Forbidden
`{`
`    "Error": "No boat with this boat_id exists"`
`}`

Update a Boat

Allows you to update existing boat using JSON.

PATCH/PUT /boats/:boat_id

Request

Request Parameters

Name	Type	Description	Required?
boat_id	String	ID of the boat	Yes

Request Body

Valid JWT Authorization

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
name	String	Name of the boat	Yes
type	String	Type of boat	Yes
length	Integer	Size of boat	Yes

Response

Response Body Format

None

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	200 Ok	
Failure	401	• JWT is not given or not valid
Failure	404	• No Boat with ID
Failure	400	• Missing varaible

Response Statuses
Success

Status: 200 Ok
{"owner": "118077752144679363585", "loads": [], "public": true, "length": 200, "type": "Mega Yatch", "name": "Odyssey II", "id": 4868412186558464}

Failure

Status: 401 Unauthorized
Could not verify JWT!

Failure

Status: 403 Forbidden
{"Error": "The request object is missing at least one of the required attributes"}

Get all Users

Get all users that have boats

GET /users

Request Parameters

None

Request Body

None

Request Body Format

None

Response Body Format

JSON

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	

Response Statuses

Success

```
Status: 200 OK
[
    {
        "owner": "118077752144679363585"
    },
    {
        "owner": "118077752144679363585"
    },
    {
        "owner": "118077752144679363585"
    },
    {
        "owner": "118077752144679363585"
    },
    {
        "owner": "118077752144679363585"
    },
    {
        "owner": "118077752144679363585"
    }
]
```

Get Boats from one Owner

Get all boats from one user

GET /users/:owner_id/boats

Request

Request Parameters

Name	Type	Description	Required?
owner_id	String	ID of owner	Yes

Request Body

None

Request Body Format

None

Response

Response Body Format

JSON

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	

Response Statuses

Success

```
Status: 200 OK
[
    {
        "id": 4868412186558464,
        "length": 200,
        "loads": [],
        "name": "Odyssey II",
        "owner": "118077752144679363585",
        "public": true,
        "type": "Mega Yatch"
    },
    {
        "id": 5079418695319552,
        "length": 28,
        "loads": [],
        "name": "Boat with loads",
        "owner": "118077752144679363585",
        "public": true,
        "type": "Catamaran"
    },
    {
        "id": 5106202648248320,
        "length": 28,
```

```
            "loads": [
                {
                    "id": 5706627130851328
                }
            ],
            "name": "Boat with loads",
            "owner": "118077752144679363585",
            "public": true,
            "type": "Catamaran"
        },
        {
            "id": 5117579211309056,
            "length": 200,
            "loads": [],
            "name": "Odyssey II",
            "owner": "118077752144679363585",
            "public": true,
            "type": "Mega Yatch"
        },
        {
            "id": 5137483062837248,
            "length": 28,
            "loads": [],
            "name": "Boat with loads",
            "owner": "118077752144679363585",
            "public": true,
            "type": "Catamaran"
        },
        {
            "id": 5669152601669632,
            "length": 28,
            "loads": [],
            "name": "Boat with loads",
            "owner": "118077752144679363585",
            "public": true,
            "type": "Catamaran"
        },
        {
            "id": 5704568633556992,
            "length": 28,
            "loads": [],
            "name": "Boat with loads",
            "owner": "118077752144679363585",
            "public": true,
            "type": "Catamaran"
        },
        {
            "id": 6273303371055104,
            "length": 28,
            "loads": [],
            "name": "Boat with loads",
            "owner": "118077752144679363585",
            "public": true,
            "type": "Catamaran"
        }
]
```

Put load into boat

Put valid load into a valid boat.

PUT /boats/:boat_id/loads/:load_id

Request

Request Parameters

Name	Type	Description	Required?
boat_id	String	ID of the boat	Yes
load_id	String	ID of the load	Yes

Request Body

None

Request Body Format

None

Response

Response Body Format

JSON

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	404 Not Found	• Load does not exist
Failure	403 Forbidden	• Load already assigned to another boat or there's already a load at the boat

Response Statuses

Success

Status: 204 No Content

Failure

```
Status: 404 Not Found
{
    "Error": "The specified boat and/or load does not exist"
}
```

Failure

```
Status: 403 Forbidden
{
    "Error": "The load is already loaded on another boat"
}
```

Remove load from boat

Delete selected load using load_id from the selected boat using boat_id.

DELETE /boats/:boat_id/loads/:load_id

Request

Request Parameters

Name	Type	Description	Required?
boat_id	String	ID of the boat	Yes
load_id	String	ID of the load	Yes

Request Body

None

Request Body Format

None

Response

Response Body Format

JSON

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	404 Not Found	• Load does not exist • No boat has load

Response Statuses

Success

Status: 204 No Content

Failure

```
Status: 404 Not Found
{
    "Error": "No boat with this boat_id is loaded with the load with this load_id"
}
```

Get the loads from boat

View the loads from a boat.

GET /boats/:boat_id/loads

Request

Request Parameters

Name	Type	Description	Required?
boat_id	String	ID of the boat	Yes

Request Body

None

Request Body Format

None

Response

Response Body Format

JSON

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	200 Ok	
Failure	404 Not Found	• No boat • Not valid load

Response Statuses

Success

```
Status: 200 Ok
{
    "carrier": {
        "id": 4868412186558464,
        "name": "Odyssey II"
    },
    "creation_date": "5/27/2022",
    "current": "https://final-project-
351423.uw.r.appspot.com/boats/4868412186558464/loads",
    "id": 5743670015819776,
    "item": "Mini LEGO Blocks",
    "self": "https://final-project-351423.uw.r.appspot.com/loads/5743670015819776",
    "volume": 15
}
```

Failure

```
Status: 404 Not Found
{"Error": "No boat with this boat_id exists"}
```

Get all the loads

View all the loads that have been created.

GET /loads

Request

Request Parameters

None

Request Body

None

Request Body Format

None

Response

Response Body Format

JSON

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	200 Ok	

Response Statuses

Success

```
Status: 200 Ok
{
    "loads": [
        {
            "carrier": null,
            "creation_date": "5/27/2022",
            "id": 5102723456303104,
            "item": "Mini LEGO Blocks",
            "self": "https://final-project-
351423.uw.r.appspot.com/loads/5102723456303104",
            "volume": 15
        },
        {
            "carrier": null,
            "creation_date": "10/18/2021",
            "id": 5147403464212480,
            "item": "Giant LEGO Blocks",
            "self": "https://final-project-
351423.uw.r.appspot.com/loads/5147403464212480",
            "volume": 5
        },
        {
            "carrier": null,
            "creation_date": "5/27/2022",
```

```json
            "id": 5149887163269120,
            "item": "Mini LEGO Blocks",
            "self": "https://final-project-
351423.uw.r.appspot.com/loads/5149887163269120",
            "volume": 15
        },
        {
            "carrier": null,
            "creation_date": "5/27/2022",
            "id": 5172860540682240,
            "item": "Mini LEGO Blocks",
            "self": "https://final-project-
351423.uw.r.appspot.com/loads/5172860540682240",
            "volume": 15
        },
        {
            "carrier": null,
            "creation_date": "10/18/2021",
            "id": 5631671361601536,
            "item": "Giant LEGO Blocks",
            "self": "https://final-project-
351423.uw.r.appspot.com/loads/5631671361601536",
            "volume": 5
        }
    ],
    "next": "https://final-project-351423.uw.r.appspot.com/loads?limit=5&offset=5"
}
```

Create a load

Create a load that can be used.

POST /loads

Request

Request Parameters

None

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
volume	integer	Number of item	Yes
item	string	Item name	Yes
creation_date	string	Date created	Yes

Request Body Example:

```
{
  "volume": 5,
  "item": "Giant LEGO Blocks",
  "creation_date": "10/18/2021"
}
```

Response

Response Body Format

JSON

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	400	• Missing required variable

Response Statuses

Success

```
Status: 201 Created
{
    "carrier": null,
    "creation_date": "10/18/2021",
    "id": 5721207605297152,
    "item": "Giant LEGO Blocks",
```

```
    "self": "https://final-project-351423.uw.r.appspot.com/loads/5721207605297152",
    "volume": 5
}
```

Failure

```
Status: 400 Bad Request
{
    "Error": "The request object is missing at least one of the required attributes"
}
```

Delete a load

Delete load given the load_id.

DELETE /loads/:load_id

Request

Request Parameters

Name	Type	Description	Required?
load_id	String	ID of the load	Yes

Request Body

None

Request Body Format

None

Request JSON Attributes

None

Request Body Example:

None

Response

Response Body Format

JSON

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	404 Not Found	• Load_id is not there

Response Statuses

Success

Status: 204 No Content

Failure

```
Status: 404 Not Found
{
    "Error": "No load with this load_id exists"
}
```

Get a load

Get load information for load at load_id.

GET /loads/:load_id

Request

Request Parameters

Name	Type	Description	Required?
load_id	String	ID of the load	Yes

Request Body

None

Request Body Format

None

Request JSON Attributes

Request Body Example:

Response

Response Body Format

JSON

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	200 Ok	
Failure	404 Not Found	• The load_id is wrong

Response Statuses

Success

```
Status: 200 Ok
{
    "carrier": null,
    "creation_date": "10/18/2021",
    "id": "5087502092206080",
    "item": "Giant LEGO Blocks",
    "self": "https://final-project-351423.uw.r.appspot.com/loads/5087502092206080",
    "volume": 5
}
```

Failure

```
Status: 404 Not Found
{"Error": "No load with this load_id exists"}
```

Create a load

Update the loads information given the load_id.

PUT/PATCH /loads/:load_id

Request

Request Parameters

None

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
volume	integer	Number of item	Yes
item	string	Item name	Yes
creation_date	string	Date created	Yes

Request Body Example:

```
{
  "volume": 5,
  "item": "Giant LEGO Blocks",
  "creation_date": "10/18/2021"
}
```

Response

Response Body Format

JSON

Response Body Example

None

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	400	• Missing required variable
Failure	404	• No load with load_id exists

Response Statuses

Success

```
Status: 200 OK
{
    "Message": "Success"
}
```

Failure

Status: 400 Bad Request
{"Error": "The request object is missing at least one of the required attributes"}

Failure

Status: 404 Not Found
{"Error": "No load with this load_id exists"}