

# Assignment 3: API Spec

CS 493: Cloud Application Development

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## Site URL

[CS 496 - HW6 \(cs493project-314219.uc.r.appspot.com\)](https://cs493project-314219.uc.r.appspot.com) - for homepage and login

## Change log

Version	Change	Date
1.0	Initial version.	May 25 <sup>th</sup> , 2021

## Models

### Boat Model

Name	Type	Valid Values	Description
id	Integer		Unique identifier. Created by datastore
name	String	Letters and spaces only, less than 20 characters	The name of the boat.
type	String	Letters and spaces only, less than 20 characters	The type of the boat. E.g., Sailboat
length	Integer	0<length<10000	Length of the boat in feet.
owner	Integer	sub property of existing User entity	Sub property of User entity. Relates Boat to User
loads	Array[Load Id]	List of existing Id property of Load Entity	List of id properties of Load entities. Relates Loads assigned to Boat

The Boat Entity is a protected resource. The user must use authentication to access any boat methods.

### Load Model

Name	Type	Valid Values	Description
id	String		Unique identifier. Created by datastore
content	String	Letters and spaces only, less than 20 characters	What the load is.
creation_date	Date	mm/dd/yyyy	Date load was created. Initialized by backend
volume	Integer	0<volume<10000	Size of load
carrier	Boat Id	Id property of existing boat entity	Boat Id that the load is assigned to. Relates Boats and Loads

### User Model

Name	Type	Valid Values	Description
id	String		Unique identifier. Created by datastore
fname	String	Letters and spaces only, less than 20 characters	First name of user
lname	String	Letters and spaces only, less than 20 characters	Last name of user
created_date	Date	mm/dd/yyyy	Date user entity was created in datastore. Initialized by backend
sub	String		Unique user identifier. Created by Google Auth0.

The User Entity is a protected resource. The user must use authentication to access any user methods.

For this project, the User and Boat are related through the Boat's owner property. This owner property is equivalent to the User's sub property for which it's related. The sub property comes from the Authorization Token from google Auth0. After it is verified, the app will assign the Boat's owner through the Authorization header. You should not include the sub property in any requests bodies.

The Load and Boat entities are related as well. A Boat can have multiple Loads but the Load can only be assigned to one Boat. This is implemented through the Boat's loads property and the Load's carrier property.

Users and Loads are not related.

## Create a Boat

Allows you to create a new boat

POST /boats

Request

Path Parameters

None

Authentication

Required – Bearer Token

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
name	String	The name of the boat.	Yes
type	String	The type of the boat. E.g., Sailboat	Yes
length	Integer	Length of the boat in feet.	Yes

Request Body Example

```
{
  "name": "Odyssey",
  "type": "Yacht",
  "length": 300
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	401 Unauthorized	Not authorized to access resource
Failure	406 Not Acceptable	The client does not accept a json response
Failure	415 Unsupported Media Type	The server does not support the content-type of the client's request.

Response Examples

- Datastore will automatically generate an ID and store it with the entity being created. The app must send back this value in the response body as shown in the example.
- The `self` attribute will contain the live link to the REST resource corresponding to this boat.

### Success

#### Status: 201 Created

```
{
  "id": "5696855140728832",
  "self": "http://localhost:8081/boats/5696855140728832",
  "name": "Odyssey",
  "type": "Yacht",
  "length": 300,
  "owner": "115557898288473422145",
  "loads": null
}
```

### Failure

#### Status: 401 Unauthorized

```
{
  "Error": {
    "detail": "Invalid authentication credentials",
    "title": "Unauthorized",
    "status": 401,
    "message": "Client failed to authenticate with the server"
  }
}
```

#### Status: 406 Not Acceptable

```
{
  "Error": {
    "detail": "Client must accept application/json data",
    "title": "Not Acceptable",
    "status": 406,
    "message": "Server does not have a current representation that would be acceptable to the Client"
  }
}
```

#### Status: 415 Unsupported Media Type

```
{
  "Error": {
    "detail": "Server only accepts application/json data",
    "title": "Unsupported Media Type",
    "status": 415,
    "message": "Server cannot support the format of the payload"
  }
}
```

## Get a Boat

Allows you to get an existing boat – Authentication Required

GET /boats/:boat\_id

Request

Path Parameters

Name	Type	Description
boat_id	String	ID of the boat

Authentication

Required – Bearer Token

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	401 Unauthorized	Not authorized to access resource
Failure	403 Forbidden	Boat with boat_id does not exist, or user is not the owner of the boat
Failure	406 Not Acceptable	The client does not accept an application/json

Response Examples

- The `self` attribute will contain the live link to the REST resource corresponding to this boat.

*Success*

Status: 200 OK
<pre>{   "id": "5696855140728832",   "self": "http://localhost:8081/boats/5696855140728832",   "name": "Odyssey",   "type": "Yacht",   "length": 300,   "owner": "115557898288473422145",   "loads": null }</pre>

*Failure*

Status: 401 Unauthorized
<pre>{   "Error": {     "detail": "Invalid authentication credentials",   } }</pre>

```
    "title": "Unauthorized",
    "status": 401,
    "message": "Client failed to authenticate with the server"
  }
}
```

#### Status: 403 Forbidden

```
{
  "Error": {
    "detail": "Boat with id 5696855140728832 with owner 102780385520908279106 does
not exist",
    "title": "Forbidden",
    "status": 403,
    "message": "Client authenticated but does not have permission to access the re
quested resource"
  }
}
```

#### Status: 406 Not Acceptable

```
{
  "Error": {
    "detail": "Client must accept application/json data",
    "title": "Not Acceptable",
    "status": 406,
    "message": "Server does not have a current representation that would be accept
able to the Client"
  }
}
```



## Get Boats

Allows you to get an existing boat

GET /boats

Request

Path Parameters

Name	Type	Description
boat_id	String	ID of the boat

Authentication

None or Bearer Token

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	If user is authorized, only their boats. Otherwise all boats. Listed as pagination
Failure	406 Not Acceptable	The client does not accept an application/json

Response Examples

- The `self` attribute will contain the live link to the REST resource corresponding to this boat.

Success

Status: 200 OK - Authorized

```
{
  "items": [
    {
      "id": "4815461883576320",
      "self": "http://localhost:8081/boats/4815461883576320",
      "name": "The Black Pearl",
      "type": "Pirate Ship",
      "length": 100,
      "owner": "115557898288473422145",
      "loads": null
    },
    {
      "id": "5067028654194688",
      "self": "http://localhost:8081/boats/5067028654194688",
      "name": "The Titanic",
```

```

        "type": "Cruise Ship",
        "length": 300,
        "owner": "115557898288473422145",
        "loads": null
    },
    {
        "id": "5109928196833280",
        "self": "http://localhost:8081/boats/5109928196833280",
        "name": "Odyssey",
        "type": "Yacht",
        "length": 300,
        "owner": "115557898288473422145",
        "loads": null
    },
    {
        "id": "5127824721575936",
        "self": "http://localhost:8081/boats/5127824721575936",
        "name": "The Black Pearl 2",
        "type": "Pirate Ship",
        "length": 105,
        "owner": "115557898288473422145",
        "loads": null
    },
    {
        "id": "5138035536560128",
        "self": "http://localhost:8081/boats/5138035536560128",
        "name": "Odyssey",
        "type": "Yacht",
        "length": 300,
        "owner": "115557898288473422145",
        "loads": null
    }
],
    "next": "http://localhost:8081/boats?cursor=CjASKmoVc35jczQ5M3Byb2plY3QtMzE0MjE5chELEgRCb2F0GICAgPjBoJAJDBoAIAA="
}

```

Status: 200 Not Authorized

```

{
    "items": [
        {
            "id": "5201568437633024",
            "self": "http://localhost:8081/boats/5201568437633024",
            "name": "The Jenny",
            "type": "Shrimping Boat",
            "length": 150,
            "owner": "115557898288473422145",

```

```

        "loads": null
    },
    {
        "id": "5631821081477120",
        "self": "http://localhost:8081/boats/5631821081477120",
        "name": "The Black Pearl",
        "type": "Pirate Ship",
        "length": 100,
        "owner": "115557898288473422145",
        "loads": null
    },
    {
        "id": "5633286537740288",
        "self": "http://localhost:8081/boats/5633286537740288",
        "name": "The Black Pearl 2",
        "type": "Pirate Ship",
        "length": 105,
        "owner": "102780385520908279106",
        "loads": null
    },
    {
        "id": "5633679661465600",
        "self": "http://localhost:8081/boats/5633679661465600",
        "name": "Kayak1",
        "type": "Kayak",
        "length": 10,
        "owner": "115557898288473422145",
        "loads": null
    },
    {
        "id": "5636762709786624",
        "self": "http://localhost:8081/boats/5636762709786624",
        "name": "The Jenny",
        "type": "Shrimping Boat",
        "length": 150,
        "owner": "115557898288473422145",
        "loads": null
    }
],
"next": "http://localhost:8081/boats?cursor=CjASKmoVc35jczQ5M3Byb2plY3QtMzE0MjE5chELEgRCb2F0GICAgLix04EKDBgAIAA="
}

```

#### Failure

Status: 406 Not Acceptable

```

{
  "Error": {
    "detail": "Client must accept application/json data",

```

```
    "title": "Not Acceptable",  
    "status": 406,  
    "message": "Server does not have a current representation that would be accept  
able to the Client"  
  }  
}
```

## Edit a Boat

Allows you to edit a boat.

PATCH /boats/:boat\_id

### Request

#### Path Parameters

Name	Type	Description
boat_id	String	ID of the boat

#### Request Body

Required

#### Authentication

Required – Bearer Token

#### Request Body Format

JSON

#### Request JSON Attributes

Atleast one of the following attributes must be listed in the Request Body

Name	Type	Description	Required?
name	String	The name of the boat.	No
type	String	The type of the boat. E.g., Sailboat, Catamaran, etc.	No
length	Integer	Length of the boat in feet.	No

#### Request Body Example

```
{
  "name": "First Modified Boat",
  "length": 400
}
```

### Response

#### Response Body Format

JSON

#### Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	401 Unauthorized	Not authorized to access resource
Failure	403 Forbidden	Boat with boat_id does not exist, or user is not the owner of the boat
Failure	406 Not Acceptable	The client does not accept a json response
Failure	415 Unsupported Media Type	The server does not support the content-type of the client's request.

#### Response Examples

- The `self` attribute will contain the live link to the REST resource corresponding to this boat.

### Success

Status: 200 OK

```
{
  "id": "5696855140728832",
  "self": "http://localhost:8081/boats/5696855140728832",
  "name": "Modified Boat",
  "type": "Yacht",
  "length": 200,
  "owner": "115557898288473422145",
  "loads": null
}
```

### Failure

Status: 401 Unauthorized

```
{
  "Error": {
    "detail": "Invalid authentication credentials",
    "title": "Unauthorized",
    "status": 401,
    "message": "Client failed to authenticate with the server"
  }
}
```

Status: 403 Forbidden

```
{
  "Error": {
    "detail": "Boat with id 5696855140728832 with owner 102780385520908279106 does not exist",
    "title": "Forbidden",
    "status": 403,
    "message": "Client authenticated but does not have permission to access the requested resource"
  }
}
```

Status: 406 Not Acceptable

```
{
  "Error": {
    "detail": "Client must accept application/json data",
    "title": "Not Acceptable",
    "status": 406,
    "message": "Server does not have a current representation that would be acceptable to the Client"
  }
}
```

Status: 415 Unsupported Media Type

```
{
```

```
"Error": {  
  "detail": "Server only accepts application/json data",  
  "title": "Unsupported Media Type",  
  "status": 415,  
  "message": "Server cannot support the format of the payload"  
}  
}
```

## Update a Boat

Allows you to edit a boat.

PUT/boats/:boat\_id

### Request

#### Path Parameters

Name	Type	Description
boat_id	String	ID of the boat

#### Request Body

Required

#### Authentication

Required – Bearer Token

#### Request Body Format

JSON

#### Request JSON Attributes

Name	Type	Description	Required?
name	String	The name of the boat.	Yes
type	String	The type of the boat. E.g., Sailboat, Catamaran, etc.	Yes
length	Integer	Length of the boat in feet.	Yes

#### Request Body Example

```
{
  "name": "Modified Boat",
  "length": 200,
  "type": "Yacht"
}
```

### Response

#### Response Body Format

JSON

#### Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	401 Unauthorized	Not authorized to access resource
Failure	403 Forbidden	Boat with boat_id does not exist, or user is not the owner of the boat
Failure	415 Unsupported Media Type	The server does not support the content-type of the client's request.

#### Response Examples

##### Success

Status: 204 No Content



## Failure

### Status: 401 Unauthorized

```
{
  "Error": {
    "detail": "Invalid authentication credentials",
    "title": "Unauthorized",
    "status": 401,
    "message": "Client failed to authenticate with the server"
  }
}
```

### Status: 403 Forbidden

```
{
  "Error": {
    "detail": "Boat with id 5696855140728832 with owner 102780385520908279106 does not exist",
    "title": "Forbidden",
    "status": 403,
    "message": "Client authenticated but does not have permission to access the requested resource"
  }
}
```

### Status: 415 Unsupported Media Type

```
{
  "Error": {
    "detail": "Server only accepts application/json data",
    "title": "Unsupported Media Type",
    "status": 415,
    "message": "Server cannot support the format of the payload"
  }
}
```

## Delete a Boat

Allows you to delete a boat. Note that if the boat is currently in a slip, deleting the boat makes the slip empty.

DELETE /boats/:boat\_id

### Request

#### Path Parameters

Name	Type	Description
boat_id	String	ID of the boat

### Request Body

None

### Authentication

Required – Bearer Token

### Response

No body

### Response Body Format

Success: No body

Failure: JSON

### Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	401 Unauthorized	Not authorized to access resource
Failure	403 Forbidden	Boat with boat_id does not exist, or user is not the owner of the boat

### Response Examples

#### Success

Status: 204 No Content

#### Failure

Status: 401 Unauthorized

```
{
  "Error": {
    "detail": "Invalid authentication credentials",
    "title": "Unauthorized",
    "status": 401,
    "message": "Client failed to authenticate with the server"
  }
}
```

Status: 403 Forbidden

```
{
  "Error": {
    "detail": "Boat with id 5696855140728832 with owner 102780385520908279106 does
not exist",
    "title": "Forbidden",
    "status": 403,
    "message": "Client authenticated but does not have permission to access the re
quested resource"
  }
}
```

## Delete Boats

DELETE /boats

Request

Path Parameters

None

Request Body

None

Response

No body

Response Body Format

Success: No body

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not Allowed	Requested Resource is not supported

Response Examples

*Failure*

```
{
  "Error": {
    "detail": "DELETE http://localhost:8081/boats is not an acceptable request",
    "title": "Method Not Allowed",
    "status": 405,
    "message": "The requested resource is not supported"
  }
}
```

## Update Boats

PUT /boats

Request

Path Parameters

None

Request Body

None

Response

No body

Response Body Format

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not Allowed	Requested Resource is not supported

Response Examples

*Failure*

```
{
  "Error": {
    "detail": "PUT http://localhost:8081/boats is not an acceptable request",
    "title": "Method Not Allowed",
    "status": 405,
    "message": "The requested resource is not supported"
  }
}
```

## Edit Boats

PATCH /boats

Request

Path Parameters

None

Request Body

None

Response

No body

Response Body Format

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not Allowed	Requested Resource is not supported

Response Examples

*Failure*

```
{
  "Error": {
    "detail": "PATCH http://localhost:8081/boats is not an acceptable request",
    "title": "Method Not Allowed",
    "status": 405,
    "message": "The requested resource is not supported"
  }
}
```

## Create a Load

Allows you to create a new load

POST /loads

Request

Path Parameters

None

Authentication

None

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
content	String	What the load is made up of	Yes
volume	integer	The size of the load	Yes

Request Body Example

```
{
  "volume": 1,
  "content": "kittens"
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	406 Not Acceptable	The client does not accept an application/json
Failure	415 Unsupported Media Type	The server does not support the content-type of the client's request.

Response Examples

- Datastore will automatically generate an ID and store it with the entity being created. The app sends back this value in the response body as shown in the example.
- Creation date is calculated by the app service.
- Carrier is defaulted to null.
- The `self` attribute will contain the live link to the REST resource corresponding to this load.

Success

Status: 201 Created

```
{
  "id": "5177927461240832",
  "self": "http://localhost:8081/loads/5177927461240832",
  "volume": 1,
  "carrier": null,
  "content": "kittens",
  "creation_date": "05/25/2021"
}
```

#### *Failure*

##### **Status: 406 Not Acceptable**

```
{
  "Error": {
    "detail": "Client must accept application/json data",
    "title": "Not Acceptable",
    "status": 406,
    "message": "Server does not have a current representation that would be acceptable to the Client"
  }
}
```

##### **Status: 415 Unsupported Media Type**

```
{
  "Error": {
    "detail": "Server only accepts application/json data",
    "title": "Unsupported Media Type",
    "status": 415,
    "message": "Server cannot support the format of the payload"
  }
}
```



## Get a Load

Allows you to get an existing load

GET /loads/:load\_id

Request

Path Parameters

Name	Type	Description
load_id	String	ID of the load

Authentication

None

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	Load with load_id does not exist
Failure	406 Unsupported Media Type	The client does not accept an application/json

Response Examples

- The `self` attribute will contain the live link to the REST resource corresponding to this load.

*Success*

Status: 200 OK

```
{
  "id": "5669937037180928",
  "self": "http://localhost:8081/loads/5669937037180928",
  "volume": 5,
  "carrier": null,
  "content": "LEGO Blocks",
  "creation_date": "05/25/2021"
}
```

*Failure*

Status: 404 Not Found

```
{
  "Error": {
    "detail": "Load with id 1 does not exist",
    "title": "Not_Found",
  }
}
```

```
    "status": 404,  
    "message": "The requested resource does not exist"  
  }  
}
```

#### Status: 406 Not Acceptable

```
{  
  "Error": {  
    "detail": "Client must accept application/json data",  
    "title": "Not Acceptable",  
    "status": 406,  
    "message": "Server does not have a current representation that would be acceptable to the Client"  
  }  
}
```

## Get Loads

Allows you to get an existing load

GET /loads

Request

Path Parameters

Name	Type	Description
load_id	String	ID of the load

Authentication

None

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	All loads listed with pagination
Failure	406 Not Acceptable	The client does not accept an application/json

Response Examples

- The `self` attribute will contain the live link to the REST resource corresponding to this load.

*Success*

Status: 200 OK - Authorized

```
{
  "items": [
    {
      "id": "5177927461240832",
      "self": "http://localhost:8081/loads/5177927461240832",
      "volume": 1,
      "carrier": null,
      "content": "kittens",
      "creation_date": "05/25/2021"
    },
    {
      "id": "5641570657239040",
      "self": "http://localhost:8081/loads/5641570657239040",
      "volume": 7,
      "carrier": null,
      "content": "silverware",
      "creation_date": "05/25/2021"
    }
  ]
}
```

```

    },
    {
      "id": "5669937037180928",
      "self": "http://localhost:8081/loads/5669937037180928",
      "volume": 5,
      "carrier": null,
      "content": "LEGO Blocks",
      "creation_date": "05/25/2021"
    },
    {
      "id": "5697673499770880",
      "self": "http://localhost:8081/loads/5697673499770880",
      "volume": 1,
      "carrier": null,
      "content": "kittens",
      "creation_date": "05/25/2021"
    },
    {
      "id": "5759630718271488",
      "self": "http://localhost:8081/loads/5759630718271488",
      "volume": 3,
      "carrier": null,
      "content": "shirts",
      "creation_date": "05/25/2021"
    }
  ],
  "next": "http://localhost:8081/loads?cursor=CjASKmoVc35jczQ5M3Byb2plY3QtMzE0MjE5chELEgRMb2FkGICAgLi0y50KDBgAIAA="
}

```

### Failure

#### Status: 406 Not Acceptable

```

{
  "Error": {
    "detail": "Client must accept application/json data",
    "title": "Not Acceptable",
    "status": 406,
    "message": "Server does not have a current representation that would be acceptable to the Client"
  }
}

```

## Edit a Load

Allows you to edit a load.

PATCH /loads/:load\_id

### Request

#### Path Parameters

Name	Type	Description
load_id	String	ID of the load

#### Request Body

Required

#### Authentication

Required – Bearer Token

#### Request Body Format

JSON

#### Request JSON Attributes

Atleast one of the following attributes must be listed in the Request Body

Name	Type	Description	Required?
content	String	What the load is made up of	No
volume	integer	The size of the load	No

#### Request Body Example

```
{
  "content": "Blocks"
}
```

### Response

#### Response Body Format

JSON

#### Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	Load with load_id does not exist
Failure	406 Not Acceptable	The client does not accept a json response
Failure	415 Unsupported Media Type	The server does not support the content-type of the client's request.

#### Response Examples

- The `self` attribute will contain the live link to the REST resource corresponding to this load.

#### Success

Status: 200 OK

```
{
  "id": "5669937037180928",
```

```
    "self": "http://localhost:8081/loads/5669937037180928",
    "volume": 5,
    "carrier": null,
    "content": "Blocks",
    "creation_date": "05/25/2021"
}
```

#### *Failure*

##### Status: 404 Forbidden

```
{
  "Error": {
    "detail": "Load with id 1 does not exist",
    "title": "Not_Found",
    "status": 404,
    "message": "The requested resource does not exist"
  }
}
```

##### Status: 406 Not Acceptable

```
{
  "Error": {
    "detail": "Client must accept application/json data",
    "title": "Not Acceptable",
    "status": 406,
    "message": "Server does not have a current representation that would be acceptable to the Client"
  }
}
```

##### Status: 415 Unsupported Media Type

```
{
  "Error": {
    "detail": "Server only accepts application/json data",
    "title": "Unsupported Media Type",
    "status": 415,
    "message": "Server cannot support the format of the payload"
  }
}
```

## Update a Load

Allows you to edit a load.

PUT/loads/:load\_id

### Request

#### Path Parameters

Name	Type	Description
load_id	String	ID of the load

#### Request Body

Required

#### Authentication

None

#### Request Body Format

JSON

#### Request JSON Attributes

Name	Type	Description	Required?
volume	Integer	size of the load	Yes
content	String	what the load is made up of	Yes

#### Request Body Example

```
{
  "volume": 5,
  "content": "LEGO Blocks"
}
```

### Response

#### Response Body Format

JSON

#### Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	404 Not Found	Load with load_id does not exist
Failure	415 Unsupported Media Type	The server does not support the content-type of the client's request.

#### Response Examples

##### Success

Status: 204 No Content

##### Failure

Status: 404 Not Found

```
{
```

```
"Error": {  
  "detail": "Load with id 1 does not exist",  
  "title": "Not_Found",  
  "status": 404,  
  "message": "The requested resource does not exist"  
}  
}
```

#### Status: 415 Unsupported Media Type

```
{  
  "Error": {  
    "detail": "Server only accepts application/json data",  
    "title": "Unsupported Media Type",  
    "status": 415,  
    "message": "Server cannot support the format of the payload"  
  }  
}
```



## Delete a Load

Allows you to delete a load. Note that if the load is currently assigned to a boat, deleting the load removes the load from boat loads.

DELETE /loads/:load\_id

### Request

#### Path Parameters

Name	Type	Description
load_id	String	ID of the load

### Request Body

None

### Authentication

None

### Response

No body

### Response Body Format

Success: No body

Failure: JSON

### Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	404 Not Found	Load with load_id does not exist

### Response Examples

#### Success

Status: 204 No Content

#### Failure

Status: 404 Not Found

```
{
  "Error": {
    "detail": "Load with id 1 does not exist",
    "title": "Not_Found",
    "status": 404,
    "message": "The requested resource does not exist"
  }
}
```

## Delete Loads

DELETE /loads

Request

Path Parameters

None

Request Body

None

Response

No body

Response Body Format

Success: No body

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not Allowed	Requested Resource is not supported

Response Examples

*Failure*

```
{
  "Error": {
    "detail": "DELETE http://localhost:8081/loads is not an acceptable request",
    "title": "Method Not Allowed",
    "status": 405,
    "message": "The requested resource is not supported"
  }
}
```

## Update Load

PUT /loads

Request

Path Parameters

None

Request Body

None

Response

No body

Response Body Format

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not Allowed	Requested Resource is not supported

Response Examples

*Failure*

```
{
  "Error": {
    "detail": "PUT http://localhost:8081/loads is not an acceptable request",
    "title": "Method Not Allowed",
    "status": 405,
    "message": "The requested resource is not supported"
  }
}
```

## Edit Loads

PATCH /loads

Request

Path Parameters

None

Request Body

None

Response

No body

## Response Body Format

Failure: JSON

## Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not Allowed	Requested Resource is not supported

## Response Examples

### Failure

```
{
  "Error": {
    "detail": "PATCH http://localhost:8081/loads is not an acceptable request",
    "title": "Method Not Allowed",
    "status": 405,
    "message": "The requested resource is not supported"
  }
}
```

## Assign a Load to a Boat

Allows you to assign a load to a boat.

PUT/boats/:boat\_id/loads/load\_id

### Request

#### Path Parameters

Name	Type	Description
load_id	String	ID of the load
boat_id	String	ID of the boat

### Request Body

None

### Authentication

Required – Bearer Token

### Request Body Format

None

### Response

#### Response Body Format

None

#### Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	401 Unauthorized	Not authorized to access resource
Failure	403 Forbidden	Boat with boat_id does not exist, user is not the owner of the boat, load with load_id does not exist, or load is already assigned.

### Response Examples

#### Success

Status: 204 No Content

#### Failure

Status: 401 Unauthorized

```
{
  "Error": {
    "detail": "Invalid authentication credentials",
    "title": "Unauthorized",
    "status": 401,
    "message": "Client failed to authenticate with the server"
  }
}
```

### Status: 403 Forbidden

```
{  
  "Error": {  
    "detail": "Load 5669937037180928 is already assigned",  
    "title": "Forbidden",  
    "status": 403,  
    "message": "Client authenticated but does not have permission to access the re  
quested resource"  
  }  
}
```

## Remove a Load from a Boat

Allows you to edit a boat.

DELETE /boats/:boat\_id/loads/load\_id

### Request

#### Path Parameters

Name	Type	Description
load_id	String	ID of the load
boat_id	String	ID of the boat

### Request Body

None

### Authentication

Required – Bearer Token

### Request Body Format

None

### Response

### Response Body Format

None

### Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	401 Unauthorized	Not authorized to access resource
Failure	403 Forbidden	Boat with boat_id does not exist, user is not the owner of the boat, load with load_id does not exist, or load is not assigned to this boat.

### Response Examples

#### Success

Status: 204 No Content

#### Failure

Status: 401 Unauthorized

```
{
  "Error": {
    "detail": "Invalid authentication credentials",
    "title": "Unauthorized",
    "status": 401,
    "message": "Client failed to authenticate with the server"
  }
}
```

### Status: 403 Forbidden

```
{
  "Error": {
    "detail": "Boat with id 5696855140728832 with owner 115557898288473422145 and
load 5669937037180928 does not exist",
    "title": "Forbidden",
    "status": 403,
    "message": "Client authenticated but does not have permission to access the re
quested resource"
  }
}
```



## Get Users

Allows you to get an existing user

GET /users

Request

Path Parameters

Name	Type	Description
user_id	String	ID of the user

Authentication

None or Bearer Token

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	If user is authorized, only their user information. Otherwise, all users. Listed as pagination
Failure	406 Not Acceptable	The client does not accept an application/json

Response Examples

Success

Status: 200 OK - Authorized

```
[
  {
    "id": "5746980898734080",
    "fname": "Holly",
    "lname": "Murray",
    "sub": "115557898288473422145",
    "created_date": "05/24/2021"
  }
]
```

Status: 200 Not Authorized

```
[
  {
    "id": "5668756323827712",
    "fname": "Holly",
    "lname": "Murray",
    "sub": 1293810298310,
  }
]
```

```
    "created_date": "05/24/2021"
  },
  {
    "id": "5734159817375744",
    "fname": "Holly",
    "lname": "Murray",
    "sub": "102780385520908279106",
    "created_date": "05/24/2021"
  },
  {
    "id": "5746980898734080",
    "fname": "Holly",
    "lname": "Murray",
    "sub": "115557898288473422145",
    "created_date": "05/24/2021"
  }
]
```

#### *Failure*

##### **Status: 406 Not Acceptable**

```
{
  "Error": {
    "detail": "Client must accept application/json data",
    "title": "Not Acceptable",
    "status": 406,
    "message": "Server does not have a current representation that would be acceptable to the Client"
  }
}
```

## Create a User

Allows you to create a new boat

POST /users

Request

Path Parameters

None

Authentication

Required – Bearer Token

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
fname	String	user's first name	Yes
lname	String	user's last name	Yes

Request Body Example

```
{
  "fname": "Holly",
  "lname": "Murray"
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	401 Unauthorized	Not authorized to access resource
Failure	406 Not Acceptable	The client does not accept a json response
Failure	415 Unsupported Media Type	The server does not support the content-type of the client's request.

Response Examples

- Datastore will automatically generate an ID and store it with the entity being created. The app sends back this value in the response body as shown in the example.
- The app service will calculate the created\_date.
- The sub is the property of the authentication sub. The app will generate this.

### Success

#### Status: 201 Created

```
{
  "id": "5746980898734080",
  "fname": "Holly",
  "lname": "Murray",
  "sub": "115557898288473422145",
  "created_date": "05/24/2021"
}
```

### Failure

#### Status: 401 Unauthorized

```
{
  "Error": {
    "detail": "Invalid authentication credentials",
    "title": "Unauthorized",
    "status": 401,
    "message": "Client failed to authenticate with the server"
  }
}
```

#### Status: 406 Not Acceptable

```
{
  "Error": {
    "detail": "Client must accept application/json data",
    "title": "Not Acceptable",
    "status": 406,
    "message": "Server does not have a current representation that would be acceptable to the Client"
  }
}
```

#### Status: 415 Unsupported Media Type

```
{
  "Error": {
    "detail": "Server only accepts application/json data",
    "title": "Unsupported Media Type",
    "status": 415,
    "message": "Server cannot support the format of the payload"
  }
}
```