Final Project: API Spec

CS 493: Cloud Application Development

Fall 2020

Oregon State University

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Change log

Page	Change	Date
	Initial version.	M, Dec 7

API URL

https://adamsrya-assignment-final.wl.r.appspot.com

Signup/Login URL

https://adamsrya-assignment-final.wl.r.appspot.com

Get all Users

Allows you to get all existing Users.

GET /users

Request

Request Parameters

None

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	406 Not Acceptable	Unsupported response content type requested by client

Response Examples

Success

```
Status: 200 OK

{
  "id": "abc123",
  "owner": 12345,
  "loads": [],
  "name": "Sea Witch",
  "type": "Catamaran",
  "length": 28,
  "self": "https://<your-app>/boats/abc123"
}
```

Failure

```
Status: 406 Not Acceptable

{
"Error":  " Unsupported response content type requested by client  "
}
```

Create a Boat

Allows you to create a new boat. Authorization required.

POST /boats

Request

Request Parameters

None

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, Catamaran, etc.	Yes
length	Integer	Length of the boat in feet.	Yes

Request Body Example

```
{
  "name": "Sea Witch",
  "type": "Catamaran",
  "length": 28
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	201 Created	Extraneous attributes will be ignored.
Failure	401 Unauthorized Request	If the request is missing a valid jwt for authorization, the boat must not be created, and the 401 status code must be returned.
Failure	406 Not Acceptable	If the client only accepts unsupported content types for the response, the boat must not be created, and 406 status code must be returned.

Response Examples

Success

```
Status: 201 Created

{
  "id": "abc123",
  "owner": 12345,
  "loads": [],
  "name": "Sea Witch",
  "type": "Catamaran",
  "length": 28,
  "self": "https://<your-app>/boats/abc123"
}
```

Failure

```
Status: 401 Unauthorized Request

{
"Error":  "Unauthorized request"
}
```

```
Status: 406 Not Acceptable

{
"Error":  "Unsupported response content type requested by client"
}
```

```
Status: 415 Unsupported Media Type

{
"Error":  "Unsupported content type in request"
}
```

Get a Boat

Allows you to get an existing boat. Authorization required.

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

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	401 Unauthorized Request	If the request is missing a valid jwt for authorization, the boat must not be created, and the 401 status code must be returned.
Failure	403 Forbidden Request	If the request has a valid jwt but for the wrong user, the boat must not be created, and the 403 status code must be returned.
Failure	404 Not Found	No boat with this boat_id exists
Failure	406 Not Acceptable	Unsupported response content type requested by client

Response Examples

Success

```
Status: 200 OK

{
  "id": "abc123",
  "owner": 12345,
  "loads": [],
  "name": "Sea Witch",
  "type": "Catamaran",
  "length": 28,
  "self": "https://<your-app>/boats/abc123"
}
```

Failure

```
Status: 401 Unauthorized Request

{
"Error": "Unauthorized request"
}
```

Status: 403 Forbidden Request
 	
{
`"Error":  "Forbidden request"`
}

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

Status: 406 Not Acceptable
 	
{
`"Error":   " Unsupported response content type requested by client  "`
}

Get all Boats for a User

Allows you to get all existing boats for a user. Authorization required.

GET /boats

Request

Request Parameters

None

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	401 Unauthorized Request	If the request is missing a valid jwt for authorization, the boat must not be created, and the 401 status code must be returned.
Failure	406 Not Acceptable	Unsupported response content type requested by client

Response Examples

Success

```
Status: 200 OK

[{
  "id": "abc123",
  "owner": 12345,
  "loads": [],
  "name": "Sea Witch",
  "type": "Catamaran",
  "length": 28,
  "self": "https://<your-app>/boats/abc123"
}]
```

Failure

```
Status: 401 Unauthorized Request

{
"Error":  "Unauthorized request"
}
```

```
Status: 406 Not Acceptable

{
"Error":   " Unsupported response content type requested by client  "
}
```

Put Edit a Boat

Allows you edit all attributes of a boat. Authorization Required.

PUT /boats/:boat_id

Request Parameters

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

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, Catamaran, etc.	Yes
length	Integer	Length of the boat in feet.	Yes

Request Body Example

```
{
  "name": "Sea Witch",
  "type": "Catamaran",
  "length": 28
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	303 See Other	Response will have location header key that contains URL to edited boat. Extraneous attributes will be ignored. **NOTE**: Be sure to not auto-redirect in Postman.
Failure	401 Unauthorized Request	If the request is missing a valid jwt for authorization, the boat must not be edited, and the 401 status code must be returned.
Failure	403 Forbidden Request	If the request has a valid jwt but for the wrong user, the boat must not be edited, and the 403 status code must be returned.
Failure	404 Not Found	No boat with this boat_id exists
Failure	406 Not Acceptable	Unsupported response content type requested by client

Response Examples

Success

Status: 303 Created Header: Location: URL to edited boat No Body Content

Failure

Status: 401 Unauthorized Request
 	
{
"Error": "Unauthorized request"
}

Status: 403 Forbidden Request
 	
{
"Error": "Forbidden request"
}

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

Status: 406 Not Acceptable
 	
{
"Error": "Unsupported response content type requested by client"
}

Patch Edit a Boat

Allows you edit any number of attributes of a boat. Authorization Required.

PATCH /boats/:boat_id

Request

Request Parameters

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

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

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": "Sea Witch"
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	303 See Other	Response will have location header key that contains URL to edited boat. Extraneous attributes will be ignored. **NOTE**: Be sure to not auto-redirect in Postman.
Failure	401 Unauthorized Request	If the request is missing a valid jwt for authorization, the boat must not be edited, and the 401 status code must be returned.
Failure	403 Forbidden Request	If the request has a valid jwt but for the wrong user, the boat must not be edited, and the 403 status code must be returned.
Failure	404 Not Found	No boat with this boat_id exists
Failure	406 Not Acceptable	Unsupported response content type requested by client

Response Examples

Success

Status: 303 Created Header: Location: URL to edited boat No Body Content

Failure

Status: 401 Unauthorized Request
 	
{
"Error": "Unauthorized request"
}

Status: 403 Forbidden Request
 	
{
"Error": "Forbidden request"
}

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

Status: 406 Not Acceptable
 	
{
"Error": "Unsupported response content type requested by client"
}

Delete a Boat

Allows you to delete a boat. Authorization required.

DELETE /boats/:boat_id

Request

Request Parameters

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

Request Body

None

Response

No body

Response Body Format

Success: No body

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	401 Unauthorized Request	If the request is missing a valid jwt for authorization, the boat must not be deleted, and the 401 status code must be returned.
Failure	403 Forbidden Request	If the request has a valid jwt but for the wrong user, the boat must not be deleted, and the 403 status code must be returned.
Failure	404 Not Found	No boat with this boat_id exists

Response Examples

Success

Status: 204 No Content

Failure

Status: 401 Unauthorized Request

{
"Error": "Unauthorized request"
}

Status: 403 Forbidden Request
 	
{
"Error": "Forbidden request"
}

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

Put Edit all Boats

Erroneous attempt to edit all boats.

PUT /boats

Request

Request Parameters

None

Request Body

None

Response

No body

Response Body Format

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not Allowed	API does not support editing the entire list of boats

Response Examples

Failure

Status: 405 Method Not Allowed
 	
{
"Error": " API does not support editing the entire list of boats"
}

Patch Edit all Boats

Erroneous attempt to delete all boats.

PATCH /boats

Request

Request Parameters

None

Request Body

None

Response

No body

Response Body Format

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not Allowed	API does not support editing the entire list of boats

Response Examples

Failure

```
Status: 405 Method Not Allowed


{
"Error":  " API does not support editing the entire list of boats"
}
```

Delete all Boats

Erroneous attempt to delete all boats.

DELETE /boats

Request

Request Parameters

None

Request Body

None

Response

No body

Response Body Format

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not Allowed	API does not support deleting the entire list of boats

Response Examples

Failure

```
Status: 405 Method Not Allowed

{
"Error":  "API does not support deleting the entire list of boats"
}
```

Create a Load

Allows you to create a new load.

POST /loads

Request

Request Parameters

None

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
content	String	The content of the load.	Yes
delivery_date	String	The delivery date of the load.	Yes
weight	Integer	The weight of the load.	Yes

Request Body Example

```
{
  "content": "treasure",
  "delivery_date": "1/1/2020",
  "weight": 28
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	201 Created	Extraneous attributes will be ignored.
Failure	406 Not Acceptable	If the client only accepts unsupported content types for the response, the load must not be created, and 406 status code must be returned.

Response Examples

Success

Status: 201 Created {

```
  "id": "abc123",
  "carrier": null,
  "content": "treasure",
  "delivery_date": "1/1/2020",
  "weight": 28,
  "self": "https://<your-app>/loads/abc123"
}
```

Failure

```
Status: 406 Not Acceptable


{
"Error":  "Unsupported response content type requested by client"
}
```

Get a Load

Allows you to get an existing load.

GET /loads/:load_id

Request

Request Parameters

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

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No boat with this load_id exists
Failure	406 Not Acceptable	Unsupported response content type requested by client

Response Examples

Success

```
Status: 200 Ok

{
  "id": "abc123",
  "carrier": null,
  "content": "treasure",
  "delivery_date": "1/1/2020",
  "weight": 28,
  "self": "https://<your-app>/loads/abc123"
}
```

Failure

```
Status: 404 Not Found

{
"Error":  "No boat with this load_id exists"
}
```
```
Status: 406 Not Acceptable

{
"Error":  " Unsupported response content type requested by client  "
}
```

Get all Loads

Allows you to get all existing Loads.

GET /loads

Request

Request Parameters

None

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	406 Not Acceptable	Unsupported response content type requested by client

Response Examples

Success

Status: 200 OK

```
[{
  "id": "abc123",
  "carrier": null,
  "content": "treasure",
  "delivery_date": "1/1/2020",
  "weight": 28,
  "self": "https://<your-app>/loads/abc123"
}]
```

Failure

Status: 401 Unauthorized Request

```
{
"Error":  "Unauthorized request"
}
```

Status: 406 Not Acceptable

```
{
"Error":   " Unsupported response content type requested by client  "
}
```

Put Edit a Load

Allows you edit all attributes of a load.

PUT /loads/:load_id

Request

Request Parameters

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

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
content	String	The content of the load.	Yes
delivery_date	String	The delivery date of the load.	Yes
weight	Integer	The weight of the load.	Yes

Request Body Example

```
{
  "content": "treasure",
  "delivery_date": "1/1/2020",
  "weight": 28
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	303 See Other	Response will have location header key that contains URL to edited load. Extraneous attributes will be ignored. **NOTE**: Be sure to not auto-redirect in Postman.
Failure	404 Not Found	No boat with this load_id exists
Failure	406 Not Acceptable	Unsupported response content type requested by client

Response Examples

Success

Status: 303 Created
Header:

Location: URL to edited load
No Body Content

Failure

Status: 404 Not Found

```
{
"Error":  "No boat with this load_id exists"
}
```

Status: 406 Not Acceptable

```
{
"Error":  "Unsupported response content type requested by client"
}
```

Put Edit a Load

Allows you edit any attributes of a load.

PUT /loads/:load_id

Request

Request Parameters

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

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
content	String	The content of the load.	No
delivery_date	String	The delivery date of the load.	No
weight	Integer	The weight of the load.	No

Request Body Example

```
{
  "content": "treasure"
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	303 See Other	Response will have location header key that contains URL to edited load. Extraneous attributes will be ignored. **NOTE**: Be sure to not auto-redirect in Postman.
Failure	404 Not Found	No boat with this load_id exists
Failure	406 Not Acceptable	Unsupported response content type requested by client

Response Examples

Success

Status: 303 Created Header: Location: URL to edited load No Body Content

Failure

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

Status: 406 Not Acceptable
 	
{
"Error": "Unsupported response content type requested by client"
}

Delete a Load

Allows you to delete a load.

DELETE /loads/:load_id

Request

Request Parameters

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

Request Body

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	No boat with this boat_id exists

Response Examples

Success

Status: 204 No Content

Failure

Status: 404 Not Found

{
"Error": "No boat with this boat_id exists"
}

Put Edit all Loads

Erroneous attempt to edit all loads.

PUT /loads

Request

Request Parameters

None

Request Body

None

Response

No body

Response Body Format

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not Allowed	API does not support editing the entire list of loads

Response Examples

Failure

Status: 405 Method Not Allowed

{
"Error": "API does not support editing the entire list of loads"
}

Patch Edit all Loads

Erroneous attempt to delete all loads.

PATCH /loads

Request

Request Parameters

None

Request Body

None

Response

No body

Response Body Format

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not Allowed	API does not support editing the entire list of loads

Response Examples

Failure

```
Status: 405 Method Not Allowed


{
"Error":  " API does not support editing the entire list of loads"
}
```

Delete all Boats

Erroneous attempt to delete all loads.

DELETE /loads

Request

Request Parameters

None

Request Body

None

Response

No body

Response Body Format

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Failure	405 Method Not Allowed	API does not support deleting the entire list of loads

Response Examples

Failure

Status: 405 Method Not Allowed

```
{
"Error":  "API does not support deleting the entire list of loads"
}
```

Put Load on Boat

Load is put on a boat.

PUT /boats/:boat_id/loads/:load_id

Request

Request Parameters

None

Request Body

None

Note: Set Content-Length to 0 in your request when calling out to this endpoint.

Response

No body

Response Body Format

Success: No body

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	Succeeds only if a boat exists with this boat_id, a load exists with this load_id and the load is not already "loaded".
Failure	403 Forbidden	The load is already "loaded".
Failure	404 Not Found	No boat with this boat_id exists, and/or no load with this load_id exits.

Response Examples

Success

Status: 204 No Content

Failure

Status: 403 Forbidden

```
{
"Error":  "The load already on another boat "
}
```

Status: 404 Not Found

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

Remove Load from Boat

A load is removed from a boat.

DELETE /boats/:boat_id/loads/:load_id

Request

Request Parameters

None

Request Body

None

Response

No body

Response Body Format

Success: No body

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	Succeeds only if a boat exists with this boat_id, a load exists with this load_id and this load is on this boat.
Failure	404 Not Found	No boat with this boat_id is at the load with this load_id.

Response Examples

Success

Status: 204 No Content

Failure

Status: 404 Not Found

```
{
"Error":  "No boat with this boat_id has a load with this load_id"
}
```

Data Model

User

Property Name	Notes
id	The id of the user. Determined by sub property of jwt.
fname	String. First name of user.
lname	String. Last name of user.
locale	String. Locale of user.

Boat

Property Name	Notes
id	The id of the boat. Datastore automatically generates it.
name	String. Name of the boat.
type	String. Type of the boat. E.g., Sailboat, Catamaran, etc.
length	Integer. The length of the boat in feet
loads	List of Loads. The loads currently on the boat.

Load

Property Name	Notes
id	The id of the load. Datastore automatically generates it.
content	String. Content in the load.
Delivery_date	String. Date of delivery for the load.
weight	Integer. The weight of the load.
carrier	Integer. The id of the boat that is carrying the load.