

# Documentation

URL: <http://hw4-robinree.ue.r.appspot.com>

## Create a Boat

Allows you to create a new boat.

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	
Failure	400 Bad Request	<p>If the request is missing any of the 3 required attributes, the boat must not be created, and 400 status code must be returned.</p> <p>You don't need to validate the values of the attributes and can assume that if the request contains any of the listed attributes that attribute's value is valid.</p>

		You can also assume that the request will not contain any extraneous attribute (i.e., the request JSON will never contain attribute other than the ones that are listed).
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## Response Examples

### *Success*

Status: 201 Created

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

### *Failure*

Status: 400 Bad Request

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

## Get a Boat

Allows you to get an existing boat

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	404 Not Found	No boat with this boat_id exists

#### Response Examples

##### Success

Status: 200 OK

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

##### Failure

Status: 404 Not Found

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

## List all Boats

List all the boats. Uses pagination to limit results to three boats per page.

GET /boats

### Request

Request Parameters

None

Request Body

None

### Response

Response Body Format

JSON

### Response Statuses

Outcome	Status Code	Notes
Success	200 OK	

### Response Examples

#### Success

Status: 200 OK

```
{
  "next": https://<your-app>/boats?curser=GwfjkewfWfewfe,
  "items": [
    {
      "id": "abc123",
      "name": "Sea Witch",
      "type": "Catamaran",
      "length": 28,
      "self": "https://<your-app>/boats/abc123"
    },
    {
      "id": "def456",
      "name": "Adventure",
      "type": "Sailboat",
      "length": 50,
      "self": "https://<your-app>/boats/def456"
    },
    {
      "id": "xyz123",
      "name": "Hocus Pocus",
      "type": "Sailboat",
      "length": 100,
      "self": "https://<your-app>/boats/xyz123"
    }
  ]
}
```

## 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

#### 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	
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"
}
```

## Create a Load

Allows you to create a new load. All loads are created without a carrier.

POST /loads

### Request

Request Parameters

None

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
weight	Integer	Weight of load	Yes
content	String	Contents of the load	Yes
delivery_date	String	Date the load is set to be delivered	Yes

### Request Body Example

```
{
  "weight": 55,
  "content": "My laundry",
  "delivery_date": "11/01/2020"
}
```

### Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	400 Bad Request	<p>If the request is missing the number attribute, the load must not be created, and 400 status code must be returned.</p> <p>You don't need to validate the values of this attribute and can assume that if the number attribute is specified, then its value is valid.</p> <p>You can also assume that the request will not contain any extraneous attribute (i.e., the request JSON will never contain any attribute other than number).</p>

## Response Examples

### *Success*

Status: 201 Created

```
{
  "id": "123abc",
  "weight": 55,
  "content": "My laundry",
  "delivery_date": "11/01/2020"
  "self": "https://<your-app>/loads/123abc"
}
```

### *Failure*

Status: 400 Bad Request

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

## 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 load with this load_id exists

#### Response Examples

##### *Success*

Status: 200 OK

```
{
  "id": "123",
  "weight": "5",
  "content": "Toys",
  "delivery_date": "11/02/2020",
  "self": "https://<your-app>/loads/123"
}
```

##### *Failure*

Status: 404 Not Found

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



## List all Loads

List all the loads. Uses pagination to limit results to three loads per page.

GET /loads

### Request

Request Parameters

None

Request Body

None

### Response

Response Body Format

JSON

### Response Statuses

Outcome	Status Code	Notes
Success	200 OK	

### Response Examples

#### Success

Status: 200 OK

```
{
  "next": "https://<your-app>/loads?curser=GwfjkewfWfewfe",
  "items": [
    {
      "id": "abc123",
      "content": "Toys",
      "weight": 5,
      "delivery_date": "11/01/2020",
      "self": "https://<your-app>/loads/abc123"
    },
    {
      "id": "def456",
      "content": "Clothes",
      "weight": 100,
      "delivery_date": "12/02/2020",
      "self": "https://<your-app>/loads/def456"
    },
    {
      "id": "xyz123",
      "content": "Books",
      "weight": 75,
      "delivery_date": "10/20/2020",
      "self": "https://<your-app>/loads/xyz123"
    }
  ]
}
```

## Delete a Load

Allows you to delete a load. Note that if the load is currently being carried by a boat, deleting the load will remove the load from the boat.

```
DELETE /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	
Failure	404 Not Found	No load with this load_id exists

#### Response Examples

##### *Success*

```
Status: 204 No Content
```

##### *Failure*

```
Status: 404 Not Found
```

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

## Add a Load to a Boat

Allows you to add a load to a boat. By adding a load to a boat, the load gets added to the boat's load attribute. Also, the boat gets added to the load's carrier attribute. If the load already has a carrier, nothing gets updated and a 403 error gets sent.

PUT /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	
Failure	404 Not Found	Invalid boat or load id
Failure	403 Load Has Carrier	Load already has a carrier

#### Response Examples

##### Success

Status: 204 No Content

##### Failure

Status: 404 Not Found

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

##### Failure

Status: 403 Load Has Carrier

```
{
  "Error": "Load already has a carrier"
}
```

## Remove a Load from a Boat

Allows you to remove a load from a boat. Load must be assigned to Boat for successful request.

```
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	
Failure	404 Not Found	Invalid boat or load id
Failure	403 Load Not On Boat	Load is not being carried by boat

#### Response Examples

##### *Success*

Status: 204 No Content

##### *Failure*

Status: 404 Not Found

```
{
  "Error": "No load with this load_id is on the boat with this boat_id"
}
```

##### *Failure*

Status: 403 Load Not on Boat

```
{
  "Error": "Boat is not carrying this load"
}
```

## Data Model

### Boat

Property Name	Description
Id	Integer. ID of the boat. Automatically generated by Datastore
Name	String. Name of the boat
Type	String. Kind of boat
Length	Integer. Length of boat (ft)
Loads	Array of loads that the boat is carrying. Null if boat is not carrying any loads

### Load

Property Name	Description
Id	Integer. ID of the load. Automatically generated by Datastore
Content	String. Contents of the load
Weight	Integer. Weight of the load (lbs)
Delivery date	String. Date that load is set to be delivered. String format: MM/DD/YYYY
Carrier	Object. ID and name of the boat that is carrying the load. Null if load is not on a boat. A load can have at most one carrier.