Assignment 5: API Spec

CS 493: Cloud Application Development

Fall 2020

Oregon State University

Last Update: Nov 2, 2020. 6:00 pm Pacific

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**https://hartwelg-hw5-gae.wl.r.appspot.com/**

# Change log

|  |  |  |
| --- | --- | --- |
| **Page** | **Change** | **Date** |
|  | Initial version. | M, Oct 12 |
|  | Update for HW5 | M, Nov 2 |

# Create a Boat

Allows you to create a new boat. Only accepts application/json mimetype and only responds with application/json mimetype.

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 | If the request is missing any of the 3 required attributes, the boat must not be created, and 400 status code must be returned.    Values within the request will be validated upon arrival at endpoint.   * Boat name must not exceed 15 characters and must contain only alphanumeric characters or spaces. * Boat length cannot exceed 500 feet. * Boat can be of any type (a boat in this system is defined as “anything that floats” * Boat name must be unique * A request to create or update a boat must always have the required fields listed above; no more, no less. |
| Failure | 403 Forbidden | Boat name is not unique |
| Failure | 415 Unsupported Media Type | Server does not support mime type sent by client |

Response Examples

* Datastore will automatically generate an ID and store it with the entity being created. This value needs to be sent 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. In other words, this is the URL to get this newly created boat. You must not store the self attribute in Datastore

*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"

}

Or

{

"Error": "Boat length cannot exceed 500"

}

Or

{

"Error": "Extraneous field(s) in request"

}

Or

{

"Error": "Boat name is too long or contains non-alphanumeric characters"

}

*Failure*

Status: 403 Forbidden

{

"Error": "Boat name is not unique"

}

*Failure*

Status: 415 Unsupported Media Type

# Get a Boat

Allows you to get an existing boat. Endpoint accepts text/html and application/json mimetypes and responds with only text/html or application/json mimetypes.

|  |  |  |  |
| --- | --- | --- | --- |
| 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 |
| Failure | 406 Not Acceptable | Client sent unsupported mime type |

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"

}

*Failure*

Status: 406 Not Acceptable

# List all Boats

List all the boats. Endpoint accepts any mimetype, but only responds with application/json mimetype.

|  |  |  |
| --- | --- | --- |
| 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

[

{

"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"

}

]

# Edit a Boat

Allows you to edit a boat. Endpoint only accepts application/json mimetype and will only respond with application/json mimetype.

|  |  |  |  |
| --- | --- | --- | --- |
| 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. | 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": 99

}

## Response

Response Body Format

JSON

Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK |  |
| Failure | 400 Bad Request | If the request is missing any of the 3 required attributes, the boat must not be updated, and 400 status code must be returned.    Values within the request will be validated upon arrival at endpoint.   * Boat name must not exceed 15 characters and must contain only alphanumeric characters or spaces. * Boat length cannot exceed 500 feet. * Boat can be of any type (a boat in this system is defined as “anything that floats” * Boat name must be unique * A request to create or update a boat must always have the required fields listed above; no more, no less. |
| Failure | 404 Not Found | No boat with this boat\_id exists |
| Failure | 406 Not Acceptable | Client sent unsupported mime type |
| Failure | 415 Unsupported Media Type | Client accepts unsupported media type |

Response Examples

• The self attribute will contain the live link to the REST resource corresponding to this boat. You must not store this attribute in Datastore.

*Success*

Status: 200 OK

{

"id": "abc123",

"name": "Sea Witch",

"type": "Catamaran",

"length": 99,

"self": "https://<your-app>/boats/abc123"

}

*Failure*

Status: 400 Bad Request

{

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

}

Or

{

"Error": "Boat length cannot exceed 500"

}

Or

{

"Error": "Extraneous field(s) in request"

}

Or

{

"Error": "Boat name is too long or contains non-alphanumeric characters"

}

Status: 404 Not Found

{

"Error": "No boat with this boat\_id exists"

}

Status: 406 Not Acceptable

Status: 415 Unsupported Media Type

# Delete a Boat

Allows you to delete a boat. Endpoint will accept any mimetype, but only respond with text/html or application/json mimetypes.

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"

}

# Edit a Boat

Allows you to edit a boat. Endpoint only accepts application/json mimetype and will only respond with application/json mimetype.

|  |  |  |  |
| --- | --- | --- | --- |
| PUT /boats/:boat\_id | |  |  |
| Request  Request Parameters  N  Request Body Required  Request Body Format  JSON  Request JSON Attributes | | |  |
| **Name** | **Type** | **Description** | **Required?** |
| name | String | The name of the boat. | Yes |
| Type | String | Type of the boat | Yes |
| Length | Integer | Length of the boat | Yes |
| Request Body Example | | |  |
| {    "name": "Odyssey III",    "type": "Mega Yatch",    "length": 200  } | | |  |

## Response

Response Body Format

JSON

Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 303 See Other | Boat is updated and a link to the updated boat will be given in the Location header |
| Failure | 400 Bad Request | If the request is missing the number attribute, the slip must not be created, and 400 status code must be returned.    Values within the request will be validated upon arrival at endpoint.   * Boat name must not exceed 15 characters and must contain only alphanumeric characters or spaces. * Boat length cannot exceed 500 feet. * Boat can be of any type (a boat in this system is defined as “anything that floats” * Boat name must be unique * A request to create or update a boat must always have the required fields listed above; no more, no less. |
| Failure | 406 Not Acceptable | Client requests content type not supported by server |
| Failure | 415 Unsupported Media Type | Client sent mime type not supported by server |

Response Examples

* Datastore will automatically generate an ID and store it with the entity being created. This value needs to be sent in the response body as shown in the example.
* The value of the attribute self is a live link to the REST resource corresponding to this slip. In other words, this is the URL to get this newly created slip. You must not store this attribute in Datastore

*Success*

Status: 303 See Other

*Failure*

Status: 400 Bad Request

{

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

}

Or

{

"Error": "Boat length cannot exceed 500"

}

Or

{

"Error": "Extraneous field(s) in request"

}

Or

{

"Error": "Boat name is too long or contains non-alphanumeric characters"

}

Status: 406 Not Acceptable

Status: 415 Unsupported Media Type

# Delete all Boats

Attempt to delete all boats. Endpoint accepts any mimetype, but only responds with application/json mimetype.

DELETE /boats

## Request

Request Parameters

None

Request Body

None

## Response No body

Response Body Format Success: None

Failure: JSON

Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Failure | 405 Method Not Allowed | Cannot delete all boats at once |

Response Examples

*Failure*

Status: 405 Method Not Allowed

# Edit all Boats

Attempt to Edit all boats. Endpoint accepts any mimetype, but only responds with application/json mimetype.

PUT /boats

## Request

Request Parameters

None

Request Body

None

## Response No body

Response Body Format Success: None

Failure: JSON

Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Failure | 405 Method Not Allowed | Cannot edit all boats at once |

Response Examples

*Failure*

Status: 405 Method Not Allowed