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**Assignment 5: Advanced REST Features**

Link: <https://hw5-rajamong.wl.r.appspot.com/>

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**Data Model**

The app stores only one kind of entity in the Datastore, Boats.

**Boats:**

|  |  |  |
| --- | --- | --- |
| **Property** | **Data Type** | **Notes** |
| id | integer | The Datastore automatically generates this. |
| name | string | The name of the boat. (Titanic, Odyssey, etc.) |
| type | string | The type of the boat. (Sailing, Yatch, etc.) |
| length | integer | The length of the boat in feet. |
| self | url | The link to the boat. |

**Create a Boat**

Allows you to create a new boat.

|  |
| --- |
| POST /boats |

**Request**

Path Parameters:

None

Request Body:

Required

Request Body Format:

JSON

**Request JSON Attributes:**

|  |  |
| --- | --- |
| **Name** | **Description** |
| name | The name of the boat. (Titanic, Odyssey, etc.) |
| type | The type of the boat. (Sailing, Yatch, etc.) |
| length | The length of the boat in feet. |

**Response**

Response Body Format:

JSON

**Request Body Example:**

|  |
| --- |
| {  “name”: “Odyssey”,  “type”: “Yatch”,  “length”: 99  } |

**Response Statuses:**

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 201 Created | The boat was successfully created. |
| Failure | 400 Bad Request | If the request is missing any of the 3 required attributes, the boat must not be created, and a 400 status code must be returned. |
| Failure | 400 Bad Request | If the request contains an extra attribute that isn’t real, a 400 status code must be returned. |
| Failure | 400 Bad Request | If length of the name attribute is larger than 20. |
| Failure | 400 Bad Request | If the name attribute contains any numbers. |
| Failure | 400 Bad Request | If length of the type attribute is larger than 20. |
| Failure | 400 Bad Request | If the name attribute contains any numbers. |
| Failure | 406 Not Acceptable | If the client requests a media type that the server can not offer, then a 406 status code will be returned. |
| Failure | 415 Unsupported Media Type | If the client sends an unsupported media type to the server, the server will send a 415 status code. |
| Failure | 403 Forbidden | If the client attempts to change the id of the boat, a 403 status code will be returned. |

**Response Examples:**

**Success:**

|  |
| --- |
| Status: 201 Created  {  “id”: 123456754321234512,  “name”: “Odyssey”,  “type”: “Yatch”,  “length”: 99,  “self”: “<https://hw4-rajamong.wl.r.appspot.com/>boats/123456754321234512  } |

**Failure:**

|  |
| --- |
| Status: 400 Bad Request  {  “error”: “missing one or more of the required attributes”  } |

|  |
| --- |
| Status: 400 Bad Request  {  “error”: “added unnecessary additional attributes”  } |

|  |
| --- |
| Status: 400 Bad Request  {  “error”: “the name is too long”  } |

|  |
| --- |
| Status: 400 Bad Request  {  “error”: “the name contains numbers”  } |

|  |
| --- |
| Status: 400 Bad Request  {  “error”: “the type is too long”  } |

|  |
| --- |
| Status: 400 Bad Request  {  “error”: “the type contains numbers”  } |

|  |
| --- |
| Status: 406 Not Acceptable  {  “error”: “requested MIME type not supported”  } |

|  |
| --- |
| Status: 415 Unsupported Media Type  {  “error”: “sent MIME type not supported”  } |

|  |
| --- |
| Status: 403 Forbidden  {  “error”: “cannot change the id of the boat”  } |

**Delete a Boat**

Allows you to delete an existing boat.

|  |
| --- |
| GET /boats/:boat\_id |

**Request**

Path Parameters:

|  |  |
| --- | --- |
| **Name** | **Description** |
| boat\_id | The ID of the boat. |

Request Body:

None

Request Body Format:

Success: No Body

Failure: JSON

**Response**

Response Body Format:

JSON

**Response Statuses:**

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 204 No Content |  |
| Failure | 404 Not Found | No boat with this boat\_id exists. |
| Failure | 406 Not Acceptable | If the client requests a media type that the server can not offer, then a 406 status code will be returned. |

**Response Examples:**

**Success:**

|  |
| --- |
| Status: 204 No Content |

**Failure:**

|  |
| --- |
| Status: 404 Not Found  {  “error”: “no boat with this id exists”  } |

|  |
| --- |
| Status: 406 Not Acceptable  {  “error”: “requested MIME type not supported”  } |

**Edit a Boat (PATCH)**

Allows you to edit a boat.

|  |
| --- |
| PATCH /boats/:boat\_id |

**Request**

Path Parameters:

|  |  |
| --- | --- |
| **Name** | **Description** |
| boat\_id | The ID of the boat. |

Request Body:

Required

Request Body Format:

JSON

**Request JSON Attributes:**

|  |  |
| --- | --- |
| **Name** | **Description** |
| name | The name of the boat. (Titanic, Odyssey, etc.) |
| type | The type of the boat. (Sailing, Yatch, etc.) |
| length | The length of the boat in feet. |

**Response**

Response Body Format:

JSON

**Request Body Example:**

|  |
| --- |
| {  “name”: “Odyssey”,  “type”: “Yatch”  } |

**Response Statuses:**

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 201 Created | The boat was successfully created. |
| Failure | 404 Not Found | If the request is contains a boat id that does not exist a 404 status code must be returned. |
| Failure | 406 Not Acceptable | If the client requests a media type that the server can not offer, then a 406 status code will be returned. |
| Failure | 415 Unsupported Media Type | If the client sends an unsupported media type to the server, the server will send a 415 status code. |
| Failure | 403 Forbidden | If the client attempts to change the id of the boat, a 403 status code will be returned. |

**Response Examples:**

**Success:**

|  |
| --- |
| Status: 200 OK  {  “id”: 123456754321234512,  “name”: “Odyssey”,  “type”: “Yatch”,  “length”: 99,  “self”: “<https://hw4-rajamong.wl.r.appspot.com/>boats/123456754321234512  } |

**Failure:**

|  |
| --- |
| Status: 404 Not Found  {  “error”: “no boat with this id exists”  } |

|  |
| --- |
| Status: 406 Not Acceptable  {  “error”: “requested MIME type not supported”  } |

|  |
| --- |
| Status: 415 Unsupported Media Type  {  “error”: “sent MIME type not supported”  } |

|  |
| --- |
| Status: 403 Forbidden  {  “error”: “cannot change the id of the boat”  } |

**Edit a Boat (PUT)**

Allows you to edit a boat.

|  |
| --- |
| PUT /boats/:boat\_id |

**Request**

Path Parameters:

|  |  |
| --- | --- |
| **Name** | **Description** |
| boat\_id | The ID of the boat. |

Request Body:

Required

Request Body Format:

JSON

**Request JSON Attributes:**

|  |  |
| --- | --- |
| **Name** | **Description** |
| name | The name of the boat. (Titanic, Odyssey, etc.) |
| type | The type of the boat. (Sailing, Yatch, etc.) |
| length | The length of the boat in feet. |

**Response**

Response Body Format:

JSON

**Request Body Example:**

|  |
| --- |
| {  “name”: “Odyssey”,  “type”: “Yatch”,  “length”: 300  } |

**Response Statuses:**

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 303 See Other | The boat was successfully modified. |
| Failure | 404 Not Found | If the request is contains a boat id that does not exist a 404 status code must be returned. |
| Failure | 406 Not Acceptable | If the client requests a media type that the server can not offer, then a 406 status code will be returned. |
| Failure | 415 Unsupported Media Type | If the client sends an unsupported media type to the server, the server will send a 415 status code. |
| Failure | 403 Forbidden | If the client attempts to change the id of the boat, a 403 status code will be returned. |

**Response Examples:**

**Success:**

|  |
| --- |
| Status: 303 See Other  {  “id”: 123456754321234512,  “name”: “Odyssey”,  “type”: “Yatch”,  “length”: 99,  “self”: “<https://hw4-rajamong.wl.r.appspot.com/>boats/123456754321234512  } |

**Failure:**

|  |
| --- |
| Status: 404 Not Found  {  “error”: “no boat with this id exists”  } |

|  |
| --- |
| Status: 406 Not Acceptable  {  “error”: “requested MIME type not supported”  } |

|  |
| --- |
| Status: 415 Unsupported Media Type  {  “error”: “sent MIME type not supported”  } |

|  |
| --- |
| Status: 403 Forbidden  {  “error”: “cannot change the id of the boat”  } |

**View a Boat**

Allows you to view an existing boat.

|  |
| --- |
| GET /boats/:boat\_id |

**Request**

Path Parameters:

|  |  |
| --- | --- |
| **Name** | **Description** |
| boat\_id | The ID of the boat. |

Request Body:

None

Request Body Format:

JSON or HTML

**Response**

Response Body Format:

JSON or HTML

**Response Statuses:**

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK |  |
| Failure | 404 Not Found | No boat with this boat\_id exists. |

**Response Examples:**

**Success (JSON):**

|  |
| --- |
| Status: 200 OK  {  “id”: 123456754321234512,  “name”: “Odyssey”,  “type”: “Yatch”,  “length”: 99,  “self”: “<https://hw4-rajamong.wl.r.appspot.com/>boats/123456754321234512  } |

**Success (HTML):**

|  |
| --- |
| Status: 200 OK  "<table border=\"1\">      <tr>          <th>id</th>          <td>6517507594649600</td>      </tr>      <tr>          <th>name</th>          <td>Odyssey</td>      </tr>      <tr>          <th>type</th>          <td>Yatch</td>      </tr>      <tr>          <th>length</th>          <td>99</td>      </tr>      <tr>          <th>self</th>          <td>https://hw5-rajamong.wl.r.appspot.com/boats/6517507594649600</td>      </tr>  </table>" |

**Failure:**

|  |
| --- |
| Status: 404 Not Found  {  “error”: “no boat with this id exists”  } |