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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:

<pre>{ "name": "Odyssey", "type": "Yatch", "length": 99 }</pre>

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:

<pre>{ "name": "Odyssey", "type": "Yatch", "length": 300 }</pre>
--

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"
}
```