

Assignment 5: API Spec

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CS 493: Cloud Application Development

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Endpoint: <http://assignment5-arf.uc.r.appspot.com>

Change log

Version	Change	Date
1.0	Initial version.	5/8/23

Data Model

The API stores one type in Datastore:

Boat

Property	Data Type	Notes
id	Integer	The id of the boat. Datastore automatically generates it. Don't add it yourself as a property of the entity.
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.
self	String	A link to to the get request of the entity's self

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	Required?
name	The name of the boat.	Yes
type	The type of the boat. E.g., Sailboat, Catamaran, etc.	Yes
length	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 new boat
Failure	400	Missing attribute
Failure	403	Another boat exists with name already
Failure	406	Bad content-type

Response Examples

- Datastore will automatically generate an ID and store it with the entity being created. Success

```
Status: 201 Created
{
  "name": "Sea Witch",
  "length": 28,
  "self": "http://assignment5-arf.uc.r.appspot.com/boats/5632139873746944",
  "type": "Catamaran",
  "id": "5632139873746944"
}
```

```
}
```

Failure

Status: 400 Bad Request

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

Failure

Status: 403 Forbidden

```
{  
  "Error": "Error! Name must be unique"  
}
```

Failure

Status: 406 Not Acceptable

```
{  
  "Error": "The Content-Type needs to be set to 'application/json'"  
}
```

Delete a Boat

Allows you to delete a boat by specified id

DELETE /boats/:id

Request

Path Parameters

Name	Description	Required?
Id	The id of the boat.	Yes

Request Body

Not Required

Request Body Format

JSON

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	204	No Content
Failure	404	Not Found

Response Examples

Success

Status: 204 No Content

Failure

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

Patch a Boat

Allows you to patch a boat.

PATCH /boats/:id

Request

Path Parameters

Name	Description	Required?
id	The id of the boat	Yes

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Description	Required?
name	The name of the boat.	NO
type	The type of the boat. E.g., Sailboat, Catamaran, etc.	NO
length	Length of the boat in feet.	NO

Request Body Example

```
{
  "name": "Sea Witch III",
  "type": "Rocket's Fast Boat",
  "length": 28910
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200	OK
Failure	403	Another boat has that name
Failure	404	Id not found Not Found
Failure	406	Bad Content-Type

Response Examples

- Datastore will automatically generate an ID and store it with the entity being created. Success

```
Status: 200 OK
{
  "name": "Sea Witch II",
  "length": 289,
```

```
"self": "http://assignment5-arf.uc.r.appspot.com/boats/5705188677517312",  
"type": "Rocket Boat"  
}
```

Failure

Status: 403 Forbidden

```
{  
  "Error": "Error! Name must be unique!"  
}
```

Failure

Status: 404 Not Found

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

Failure

Status: 406 Not Acceptable

```
{  
  "Error": "The Content-Type needs to be set to 'application/json'"  
}
```

PUT a Boat

Allows you to update a boat.

PUT /boats/:id

Request

Path Parameters

Name	Description	Required?
id	The id of the boat	Yes

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Description	Required?
name	The name of the boat.	Yes
type	The type of the boat. E.g., Sailboat, Catamaran, etc.	Yes
length	Length of the boat in feet.	Yes

Request Body Example

```
{
  "name": "Sea Witch III",
  "type": "Rocket's Fast Boat",
  "length": 28910
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	303	OK Location header set
Failure	400	Missing attribute
Failure	403	Another boat has that name
Failure	404	Id not found Not Found
Failure	406	Bad Content-Type

Response Examples

- Datastore will automatically generate an ID and store it with the entity being created. Success

```
Status: 303 See Other
{
  "name": "Sea Witch II",
```



```
"length": 289,  
"self": "http://assignment5-arf.uc.r.appspot.com/boats/5705188677517312",  
"type": "Rocket Boat"  
}
```

Failure

Status: 400 Bad Request

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

Failure

Status: 403 Forbidden

```
{  
  "Error": "Error! Name must be unique!"  
}
```

Failure

Status: 404 Not Found

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

Failure

Status: 406 Not Acceptable

```
{  
  "Error": "The Content-Type needs to be set to 'application/json'"  
}
```

View a Boat

Allows you to patch a boat.

PUT /boats/:id

Request

Path Parameters

Name	Description	Required?
id	The id of the boat	Yes

Supported Accept headers

JSON, HTML

Request Body

Not required

Request Body Format

none

Response Statuses

Outcome	Status Code	Notes
Success	200	OK
Failure	404	No boat with this boat_id exists
Failure	415	Content-type is not supported

Response Examples

- Datastore will automatically generate an ID and store it with the entity being created.

Success

Status: 200 OK: JSON { "name": "Sea Witch I", "length": 28, "self": "http://assignment5-arf.uc.r.appspot.com/boats/5731076903272448", "type": "Catamaran", "id": "5731076903272448" }
--

Success

Status: 200 OK: HTML { "name": "Sea Witch I", "length": 28, "self": "http://assignment5-arf.uc.r.appspot.com/boats/5731076903272448", "type": "Catamaran", "id": "5731076903272448" }

```
}
```

Failure

Status: 404 Not Found

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

Failure

Status: 415 Unsupported Media Type

```
{  
  "Error": "Unsupported Media Type: server only accepts JSON or HTML"  
}
```