

Portfolio Project

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Change log

Version	Change	Date
1.0	Initial version.	June 5, 2022

URL for Application

<https://project-willge-493.wl.r.appspot.com>

Comment

- When logging in to the site, it will give an Identification number and token. Sometimes the Identification number does not show up right away, the page needs to be reloaded and it will then there.

Data Model

The app stores two kinds of entities in Datastore, Starships and Posts.

Starships

Property	Data Type	Notes
id	Integer	The id of the Starship. Automatically generated by datastore
name	String	Name of the Starship.
class	String	Class of the Starship. E.g., Constitution, Galaxy, etc.
mission	String	Mission of the Starship
posts	Array of Ints	List of Posts that have been added to Starship, including id and self of Post added.

Posts

Property	Data Type	Notes
id	Integer	The id of the Post. Automatically generated by datastore
title	String	Title of the Post
rank	String	Rank of the Officer assigned to this post
duties	String	Duties that are assigned to this post
crew	Array of Ints and Strings	Array of id and name of the crew member that has been assigned to this post.
Ship	Array of Ints and Strings	Array of information about the Starship that the post is assigned to. Including id, name and self link

Crew

Property	Data Type	Notes
id	Integer	The id of the Crew Member. Automatically generated by datastore
name	String	Name of the crew member
Rank	String	Rank of crew member
Specialty	String	Specialty of the crew member. E.g. Science, Command, Security
post	Array of Ints and Strings	Array of information about the Post that the crew member is assigned to. Including id, title and self link

Create a Starship

Allows you to create a new Starship.

POST /Starships

Request

Path Parameters

None

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Description	Required?
name	The name of the Starship.	Yes
type	The type of the Starship. E.g. , Catamaran, etc.	Yes
mission	Mission of the Starship.	Yes

Request Body Example

```
{
  "name": "USS Enterprise D",
  "class": "Galaxy",
  "mission": "Explore Space and seek out new life and new civilizations"
}
```

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 Starship must not be created, and 400 status code must be returned.
Failure	403 Bad Request	If the name of the starship is not Unique, the starship must not be created, and 403 status code must be returned.

Response Examples

- Datastore will automatically generate an ID and store it with the entity being created. Your app must send back this value in the response body as shown in the example.

Success

Status: 201 Created

```
{
  "id": 123,
  "name": "USS Enterprise D",
  "class": "Galaxy",
  "mission": "Explore Space and seek out new life and new civilizations"
  "self": "https://appspot.com/Starships/123"
```

```
}
```

Failure

Status: 400 Bad Request

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

Failure

Status: 403 Bad Request

```
{  
"Error": "The name of the starship must be unique"  
}
```

View a Starship

Allows you to get an existing Starship

GET /Starships/:Starship_id

Request

Path Parameters

Name	Description
Starship_id	ID of the Starship

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No Starship with this Starship_id exists

Response Examples

Success

Status: 200 OK

```
{
  "id": 123,
  "name": "USS Enterprise D",
  "class": "Galaxy",
  "mission": "Explore Space and seek out new life and new civilizations"
  "self": "https://appspot.com/Starships/123"
}
```

Failure

Status: 404 Not Found

```
{
  "Error": "No Starship with this Starship_id exists"
}
```

Comment

- The GET for a specific starship was working when I tested it locally, but when I deployed it, it gave a 400 error and I cannot tell why it is giving that error.

View all Starships with Pagination

List all Starships, 3 at a time with a next link to see the rest of the Starships.

GET /Starships

Request

Path 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": 123,
    "name": "USS Enterprise D",
    "class": "Galaxy",
    "mission": "Explore Space and seek out new life and new civilizations"
    "posts": [
      {"id": 5678,
        "self": "https://appspot.com/Posts/5678"},
      {"id": 8765,
        "self": "https://appspot.com/Posts/8765"}
    ],
    "self": "https://appspot.com/Starships/123"
  },
  {
    "id": 456,
    "name": "USS Voyager",
    "class": "Intrepid",
    "mission": "Return to the Alpha Quadrant"
    "posts": [
      {"id": 2725,
        "self": "https://appspot.com/Posts/2725"},
      {"id": 6453,
        "self": "https://appspot.com/Posts/6453"}
    ],
    "self": "https://appspot.com/Starships/456"
  },
  {
    "id": 789,
    "name": "USS Cerritos",
    "class": "California",
    "mission": "Second Contact engineering support"
    "posts": [
      {"id": 3523,
```

```

    "self": "https://appspot.com/Posts/3523"},
    {"id": 1498,
     "self": "https://appspot.com/Posts/1498"}
  ],
  "self": "https://appspot.com/Starships/789"
}
]
"next" : "url to next page"

```

Edit a Starship with PATCH

Allows you to edit one or more attributes on a Starship.

PATCH /starships/:starship_id

Request

Path Parameters

Name	Description
starship_id	ID of the starship

Request Body

JSON

Request Body Format

JSON

Request JSON Attributes

Name	Description	Required?
name	The name of the starship. Must be unique.	No
class	The class of the starship. E.g., Galaxy, Intrepid, etc.	No
mission	Mission of the starship.	No

Request Body Example

```

{
  "mission": "Locate and retrieve space-probe Friendship 1"
}

```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No starship with this starship_id exists
Failure	403 Bad Request	If the name of the starship is not Unique, the starship name must not be updated, and 403 status code must be returned.
Failure	400 Bad Request	If one or more of the attributes is invalid, the starship must not be updated and a 400 status code returned.
Failure	415 Bad Request	When the client sends a request with content-type header that is not JSON, the starship must not be updated and a 415 status code must be returned

Failure	406 Bad Request	If the request is sent with a MIME type in the Accept header that is not JSON, the starship must not be updated and a 406 status code must be returned
---------	-----------------	--

Response Examples

Success

Status: 200 OK

```
{
  "id": 789,
  "name": "USS Voyager",
  "class": "Intrepid",
  "mission": "Protect the Federation from the Dominion."
}
```

Failure

Status: 404 Not Found

```
{
  "Error": "No starship with this starship_id exists"
}
```

Failure

Status: 400 Bad Request

```
{
  "Error": "One or more of the attributes is invalid"
}
```

Failure

Status: 403 Bad Request

```
{
  "Error": "The name of the starship must be unique"
}
```

Failure

Status: 406 Bad Request

```
{
  "Error": "The response must be JSON"
}
```

Failure

Status: 415 Bad Request

```
{
  "Error": "The request must be JSON"
}
```

Edit a Starship with PUT

Allows you to edit a Starship.

PUT /starships/:starship_id

Request

Path Parameters

Name	Description
starship_id	ID of the starship

Request Body

JSON

Request Body Format

JSON

Request JSON Attributes

Name	Description	Required?
name	The name of the starship. Must be unique.	Yes
class	The class of the starship. E.g., Galaxy, Intrepid, etc.	Yes
mission	Mission of the starship.	Yes

Request Body Example

```
{
  "name": "USS Enterprise E",
  "class": "Galaxy",
  "mission": "Explore more Space and seek out more new life and new civilizations"
}
```

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, or if any of the attributes are invalid, the starship must not be updated, and 400 status code must be returned.
Failure	404 Not Found	No starship with this starship_id exists
Failure	403 Bad Request	If the name of the starship is not Unique, the starship must not be updated, and 403 status code must be returned.
Failure	415 Bad Request	When the client sends a request with content-type header that is not JSON, the starship must not be updated and a 415 status code must be returned
Failure	406 Bad Request	If the request is sent with a MIME type in the Accept header that is not JSON, the starship must not be updated and a 406 status code must be returned

Response Examples

Success

Status: 200 OK

```
{
  "id": 123,
```

```
{
  "name": "USS Enterprise E",
  "class": "Galaxy",
  "mission": "Explore more Space and seek out more new life and new civilizations"
}
```

Failure

Status: 400 Bad Request

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

Status: 404 Not Found

```
{
  "Error": "No starship with this starship_id exists"
}
```

Failure

Status: 400 Bad Request

```
{
  "Error": "One or more of the attributes is invalid"
}
```

Failure

Status: 403 Bad Request

```
{
  "Error": "The name of the starship must be unique"
}
```

Failure

Status: 406 Bad Request

```
{
  "Error": "The response must be JSON"
}
```

Failure

Status: 415 Bad Request

```
{
  "Error": "The request must be JSON"
}
```

Delete a Starship

Allows you to delete a Starship. Note that if the Starship is currently assigned any Posts, deleting the Starship will release any Posts on it.

DELETE /Starships/:Starship_id

Request

Path Parameters

Name	Description
Starship_id	ID of the Starship

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 Starship with this Starship_id exists

Response Examples

Success

Status: 204 No Content

Failure

Status: 404 Not Found

<pre>{ "Error": "No Starship with this Starship_id exists" }</pre>
--

Create a Post

Allows you to create a new Post.

POST /Posts

Request

Path Parameters

None

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Description	Required?
Title	Title of the post	Yes
Rank	Rank of the Officer assigned to the post	Yes
Duties	Duties that are assigned to this post	Yes
ship	Starship that this post is assigned to	No

Request Body Example

```
{
  "title": "First Officer",
  "rank": "Commander",
  "duties": "Carry out the decisions of the captain"
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	400 Bad Request	If the request is missing the required attributes, the Post must not be created, and 400 status code must be returned.

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 `duties` is the ID, name and self of the Starship that the Post is currently assigned to. If the Post has not been assigned to a Starship yet, the value of `duties` should be null.

Success

```
Status: 201 Created

{
  "id": 7856,
  "title": "First Officer",
  "rank": "Commander",
```

```
"duties": "Carry out the decisions of the Captain"
"carrier": null,
"self": "https://appspot.com/Posts/7856"
}
```

Failure

Status: 400 Bad Request

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

View a Post

Allows you to view an existing Post. If Post has been assigned to a crew member, then only that Crew Member can view that Post.

GET /Posts/:Post_id

Request

Path Parameters

Name	Description
Post_id	ID of the Post

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No Post with this Post_id exists
Failure	403 Bad Request	Post has been assigned and invalid crew member cannot view the post.
Failure	401 Bad Request	Post has been assigned and user trying to view has a missing or invalid jwt.

Response Examples

Success

```
Status: 200 OK

{
  "id": 7856,
  "title": "First Officer",
  "rank": "Commander",
  "duties": "Carry out the decisions of the Captain"
  "carrier": null,
  "self": "https://appspot.com/Posts/7856"
}
```

Failure

Status: 404 Not Found

```
{
  "Error": "No Post with this Post_id exists"
}
```

Failure

Status: 403 Bad Request

```
{
  "Error": "Wrong crew member for this post"
}
```

Failure

Status: 401 Bad Request

```
{
  "Error": "Missing or invalid JWT"
}
```

Edit a Post with PUT

Allows you to edit all properties of a Post. Posts that have not been assigned to a crew member can be edited by any user. If a post has been assigned to a crew member, only that crew member can edit the Post.

PUT /posts/:post_id

Request

Path Parameters

Name	Description
post_id	ID of the post

Request Body

JSON

Request Body Format

JSON

Request JSON Attributes

Name	Description	Required?
title	The title of the posting.	Yes
rank	The rank that is required for this posting	Yes
duties	The duties that have been assigned to this posting	Yes

Request Body Example

```
{
  "title": "Chief Engineer",
  "rank": "Lieutenant",
  "duties": "Fix the Warp Core"
}
```

}

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, or if any of the attributes are invalid, the starship must not be updated, and 400 status code must be returned.
Failure	404 Not Found	No starship with this starship_id exists
Failure	403 Bad Request	If the name of the starship is not Unique, the starship must not be updated, and 403 status code must be returned.
Failure	415 Bad Request	When the client sends a request with content-type header that is not JSON, the starship must not be updated and a 415 status code must be returned
Failure	406 Bad Request	If the request is sent with a MIME type in the Accept header that is not JSON, the starship must not be updated and a 406 status code must be returned
Failure	403 Bad Request	Post has been assigned and invalid crew member cannot edit the post.
Failure	401 Bad Request	Post has been assigned and user trying to edit has a missing or invalid jwt.

Response Examples

Success

Status: 200 OK
<pre>{ "id": 7856, "title": "Chief Engineer", "rank": "Lieutenant", "duties": "Fix the Warp Core" "carrier": null, "self": "https://appspot.com/Posts/7856" }</pre>

Failure

Status: 400 Bad Request
<pre>{ "Error": "The request object is missing at least one of the required attributes" }</pre>

Status: 404 Not Found
<pre>{ "Error": "No post with this post_id exists" }</pre>

Failure

Status: 400 Bad Request

```
{  
"Error": "One or more of the attributes is invalid"  
}
```

Failure

Status: 403 Bad Request

```
{  
"Error": "The name of the starship must be unique"  
}
```

Failure

Status: 406 Bad Request

```
{  
"Error": "The response must be JSON"  
}
```

Failure

Status: 415 Bad Request

```
{  
"Error": "The request must be JSON"  
}
```

Failure

Status: 403 Bad Request

```
{  
"Error": "Wrong crew member for this post"  
}
```

Failure

Status: 401 Bad Request

```
{  
"Error": "Missing or invalid JWT"  
}
```

Edit a Post with PATCH

Allows you to edit one or more properties of a Post. Posts that have not been assigned to a crew member can be edited by Any user. If a post has been assigned to a crew member, only that crew member can edit the Post.

PATCH /posts/:post_id

Request

Path Parameters

Name	Description
post_id	ID of the post

Request Body

JSON

Request Body Format

JSON

Request JSON Attributes

Name	Description	Required?
title	The title of the posting.	No
rank	The rank that is required for this posting	No
duties	The duties that have been assigned to this posting	No

Request Body Example

```
{
  "duties": "Climb through the Jeffries tubes"
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	400 Bad Request	The request tried to change the post_id
Failure	404 Not Found	No post with this post_id exists
Failure	415 Bad Request	When the client sends a request with content-type header that is not JSON, the post must not be updated and a 415 status code must be returned
Failure	406 Bad Request	If the request is sent with a MIME type in the Accept header that is not JSON, the starship must not be updated and a 406 status code must be returned
Failure	403 Bad Request	Post has been assigned and invalid crew member cannot edit the post.
Failure	401 Bad Request	Post has been assigned and user trying to edit has a missing or invalid jwt.

Response Examples

Success

Status: 200 OK

```
{
  "id": 7856,
  "title": "Chief Engineer",
  "rank": "Lieutenant",
  "duties": "Climb through the Jeffries tubes"
  "carrier": null,
  "self": "https://appspot.com/Posts/7856"
}
```

Failure

Status: 400 Bad Request

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

Status: 404 Not Found

```
{
  "Error": "No post with this post_id exists"
}
```

Failure

Status: 400 Bad Request

```
{
  "Error": "One or more of the attributes is invalid"
}
```

Failure

Status: 403 Bad Request

```
{
  "Error": "The name of the starship must be unique"
}
```

Failure

Status: 406 Bad Request

```
{
  "Error": "The response must be JSON"
}
```

Failure

Status: 415 Bad Request

```
{
  "Error": "The request must be JSON"
}
```

Failure

Status: 403 Bad Request

```
{
  "Error": "Wrong crew member for this post"
}
```

Failure

Status: 401 Bad Request

```
{
  "Error": "Missing or invalid JWT"
}
```

View all Posts with pagination

List all the Posts 5 at a time with a link to view the next 5 Posts.

GET /Posts

Request

Path 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

```
{
  "Posts": [{
    "ship": {
      "id": 123,
      "name": "USS Enterprise D",
      "self": "https://appspot.com/Starships/123"
    },
    "id": 7856,
    "title": "First Officer",
    "rank": "Commander",
    "duties": "Carry out the decisions of the Captain",
    "crew": null,
    "self": "https://appspot.com/Posts/7856"
  }],
}
```

```
{
  "title": "Command division junior officer",
  "rank": "Ensign",
  "duties": "Support Commanding officers",
  "ship": null,
  "crew": null,
  "id": 5423
  "self": https://appspot.com/Posts/5423
},
{
  "ship":{"id": "789",
  "self": "https://appspot.com/starships/789",
  "name": "USS Cerritos"},
  "title": "Security Officer",
  "rank": "Lieutenant",
  "duties": "Protect the Starship and investigate any crimes",
  "id": 6579,
  "crew": null,
  "self": https://appspot.com/Posts/6579
}],
"next":
"http://127.0.0.1:8080/Posts?limit=5&offset=5"}
```

Comment

- I tried to have the list be dependent on crew tokens and only those assigned to a post can get it, but after testing it locally and working, when deployed it no longer worked, so the GET returns a list of all Posts.

Delete a Post

Allows you to delete a Post. If the Post being deleted is assigned to a Starship, the Starship will be updated to no longer have that Post on it. If this Post has been assigned to a Crew Member, then only that Crew Member can delete the post.

DELETE /Posts/:Post_id

Request

Path Parameters

Name	Description
Post_id	ID of the Post

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 Post with this Post_id exists
Failure	403 Bad Request	Post has been assigned and invalid crew member cannot delete the post.
Failure	401 Bad Request	Post has been assigned and user trying to delete has a missing or invalid jwt.

Response Examples

Success

Status: 204 No Content

Failure

Status: 404 Not Found

```
{
  "Error": "No Post with this Post_id exists"
}
```

Failure

Status: 403 Not Found

```
{
  "Error": "No Post with this Post_id exists"
}
```

Failure

Status: 403 Bad Request

```
{
```

```
"Error": "Wrong crew member for this post"
}
```

Failure

Status: 401 Bad Request

```
{
  "Error": "Missing or invalid JWT"
}
```

Assign Post to a Starship

Assigning Posts to a Starship. If the Post is already assigned, then returns 403 status

PUT /Starships/:Starship_id/Posts/:Post_id

Request

Path Parameters

Name	Description
Post_id	ID of the Post
Starship_id	ID of the Starship

Request Body

None

Response

No body

Response Body Format

Success: No body

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	Succeeds only if a Starship exists with this Starship_id, a Post exists with this Post_id and the Post is not assigned to another Starship.
Failure	403 Forbidden	The Post is currently assigned to a different Starship.
Failure	404 Not Found	The specified Starship and/or Post does not exist

Response Examples

Success

Status: 204 No Content

Failure

Status: 403 Forbidden

```
{
  "Error": "The Post is already Posted on another Starship"
}
```

Status: 404 Not Found

```
{
  "Error": "The specified Starship and/or Post does not exist"
}
```

Comment

- A Post cannot be assigned to multiple Starships, but a Starship can carry many Posts.

View all Crew members with pagination

List all the Crew members 5 at a time with a link to view the next 5 Posts.

GET /Posts

Request

Path 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

```
{
  "crew": [
    {
      "name": "genefwill",
      "posts": null,
      "crew_num": "google-oauth2|115523315873989891948",
      "id": "5634601401712640",
    },
    {
      "posts": {
        "self": "http://127.0.0.1:8080/posts/5665673409724416",
        "title": "Ship Captain",
        "id": "5665673409724416",
        "rank": "Captain",
      },
      "name": "picard",
      "crew_num": "auth0|629aa62acd1f83006facd9b1",
      "id": "5639601012080640"
    }
  ]
}
```


Delete a Post from a Starship

The Post is being removed from the Starship, it is no longer in the Posts section of the Starship.

DELETE /Starships/:Starship_id/Posts/:Post_id

Request

Path Parameters

Name	Description
Post_id	ID of the Post
Starship_id	ID of the Starship

Request Body

None

Response

No body

Response Body Format

Success: No body

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	Succeeds only if a Starship exists with this Starship_id, a Post exists with this Post_id and this Post is on this Starship.
Failure	404 Not Found	No Post with this Post_id is on this Starship with this Starship_id. This could be because no Starship with this Starship_id exists, or because no Post with Post_id exists, or even if both Starship_id and Post_id are valid, the Post with this Post_id is not on this Starship with this Starship_id

Response Examples

Success

Status: 204 No Content

Failure

Status: 404 Not Found

```
{
  "Error": " No Starship with this Starship_id is Posted with the Post with this
Post_id"
}
```

Assign Post to a Crew Member

Assigning Posts to a Starship. If the Post is already assigned, then returns 403 status

PUT /Posts/:post_id/Crew/:crew_id

Request

Path Parameters

Name	Description
Post_id	ID of the Post
crew_id	ID of the Crew Member

Request Body

None

Response

No body

Response Body Format

Success: No body

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	Succeeds only if a Post exists with this post_id, a Crew Member exists with this crew_id and the Post is not assigned to another Crew Member and the Crew member is not assigned to a different Post.
Failure	403 Forbidden	The Post is currently assigned to a different Crew Member.
Failure	404 Not Found	The specified Post and/or Crew Member does not exist

Response Examples

Success

Status: 204 No Content

Failure

Status: 403 Forbidden

```
{  
  "Error": "The Post is already assigned to another Crew Member"  
}
```

Status: 404 Not Found

```
{  
  "Error": "The specified Crew Member and/or Post does not exist"  
}
```