Final Project: API Spec

CS 493: Cloud Application Development

Fall 2023

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User needs to have both jwt1 and jwt2 before running the test collection

URL of application login:

https://finalproject-407803.uw.r.appspot.com/login

Data Model

Cats

Property	Data Type	Notes
id	Integer	Automatically generated, One of the Unique Identifiers
owner	String	Owner can have multiple cats, the owner is the user. The owner is the only one that can edit and delete the cat they own. This is the users sub.
preys	Array	List of prey IDs
eyeColor	String	Eye color of the cat
name	String	Name of the cat, One of the Unique Identifiers
weight	Integer	Weight of the cat in pounds
type	String	Type or breed of the cat
self	String	URL of the cat resource

Prey

Property	Data Type	Notes
id	Integer	Automatically generated, One of the Unique Identifiers
animal	String	Type or species of the prey, One of the Unique Identifiers.
protein	String	Protein content of the prey
avgWeight	Integer	Average weight of the prey
mostFearedCat	Object	Most feared cat by the prey, it will be the first cat that adds it to its prey list.
self	String	URL of the prey resource

Users

Property	Data Type	Notes
Sub	string	Automatically generated, a unique identifier

Create a Cat (protected)

Allows you to create a new cat.

```
POST /cats
```

Needs JWT

Request

Path Parameters
None

Request Body
Required

Request Body Format
JSON

Request JSON Attributes

Name	Description	Required?
name	The name of the cat.	Yes
type	The type, color, or breed of the cat.	Yes
weight	Weight of cat in pounds	Yes
eyeColor	Eye Color of the cat	yes

Request Body Example

```
{
 "name": "Whiskers",
 "type": "Siamese",
 "weight": 12,
 "eyeColor": "blue"
}
```

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 cat must not be created, and the 400 status code must be returned.
Failure	401 Unauthorized	No JWT, there is no bearer token
Failure	403 Forbidden	Name is not unique

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": "5718125026738176",
    "name": "Uki",
    "type": "orange tabby"
}
```

Failure

```
Status: 400 Bad Request

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

Status: 403 Forbidden
{
   "Error": "Please enter a unique name"
```

```
    }

    Status 401 Unauthorized

    <!DOCTYPE html>

    <html lang="en">


    <head>

      <meta charset="utf-8">

      <title>Error</title>

    </head>


    <body>

      <pre>Unauthorized</pre>

    </body>


    </html>
```

Update Patch a Cat (protected)

Allows you to create a new cat.

```
PATCH /cats/:cat_id
```

You need a JWT with the same sub as the cats owner

Request

Path Parameters

Name	Description
cat_id	ID of the cat

Request Body
Required

Request Body Format
JSON

Request JSON Attributes

Name	Description	Required?
name	The name of the cat.	no
type	The type, color, or breed of the cat.	no
weight	Weight of cat in pounds	no
eyeColor	Eye Color of the cat	no

Request Body Example

```json
{
  "weight": 13,
  "eyeColor": "green and yellow"
}
```

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 cat must not be created, and the 400 status code must be returned.
Failure	401 Unauthorized	No JWT, there is no bearer token
Failure	404 Not Found	No cat exist with this cat_id

Failure	403 Forbidden	Name is not unique

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": "5351903567282176",
    "name": "Uki",
    "type": "orange tabby",
    "weight": 13,
    "eyeColor": "green and yellow",
    "self": "http://finalproject-407803.uw.r.appspot.com/cats/5351903567282176"
}
```

Failure

```
Status: 400 Bad Request

{
"Error": "The request has invalid data, check the attributes again" }

Status: 403  Forbidden
{
   "Error": "Please enter a unique name"
}


Status 403

{ "Error": "You do not have access to this cat"}
```

```
Status 404 Not Found

{ "Error": "No cat with this cat_id exists"}


Status 401 Unauthorized

<!DOCTYPE html>

<html lang="en">


<head>

    <meta charset="utf-8">

    <title>Error</title>

</head>


<body>

    <pre>Unauthorized</pre>

</body>


</html>
```

Update (PUT) a Cat (protected)

Allows you to edit a cat.

```
PUT /cats/:cat_id
```

You need a JWT with the same sub as the cats owner

Request

Path Parameters

Name	Description
cat_id	ID of the cat

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Description	Required?
name	The name of the cat.	yes
type	The type, color, or breed of the cat.	yes
weight	Weight of cat in pounds	yes
eyeColor	Eye Color of the cat	yes

Request Body Example

```json
{
  "name": "Nico",
  "type": "Black Tabby",
  "weight": 12,
  "eyeColor": "light green"
}
```

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 cat must not be created, and the 400 status code must be returned.
Failure	401 Unauthorized	No JWT, there is no bearer token

Failure	403 Forbidden	Name is not unique
Failure	404 Not Found	No cat exist

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

{
    "name": "Nico",
    "type": "Black Tabby",
    "weight": 12,
    "eyeColor": "light green",
    "self": "http://finalproject-407803.uw.r.appspot.com/cats/4899724712738816"
}
```

Failure

```
Status: 400 Bad Request

{
"Error": "The request has invalid data, check the attributes again" }

Status: 400 Bad Request

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

```
attributes" }

Status: 403  Forbidden
{
    "Error": "Please enter a unique name"
}


Status 403
{ "Error": "You do not have access to this cat"}


Status 404 Not Found
{ "Error": "No cat with this cat_id exists"}



Status 401 Unauthorized
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="utf-8">
    <title>Error</title>
</head>

<body>
    <pre>Unauthorized</pre>
</body>

</html>
```

Get a Cat (protected)

Allows you to get an existing cat

```
GET /cats/:cat_id
```

You need a JWT with the same sub as the cats owner

Request

Path Parameters

Name	Description
cat_id	ID of the cat

Request Body
None

Response

Response Body Format

`application/json`

esponse Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	403 Forbidden	User id and sub/owner do not match, current user does not own the cat so it cannot see it.
Failure	404 Not Found	No cat with this cat_id exists
Failure	406	Not Acceptable

Response Examples

Success

```
Status: 200 OK
[
  {
    "owner": "auth0|655bdc7587cb3003c86fe9e0",
    "preys": [],
    "eyeColor": "green",
    "name": "Uki",
    "weight": 11,
    "self": "http://finalproject-407803.uw.r.appspot.com/cats/5351903567282176",
    "type": "orange tabby"
  }
]
```

Failure

Status: 404 Not Found

```
{
"Error": "No cat with this cat_id exists"
}
```

Status: 403 Forbidden
```
{

    "Error": "You do not have access to this cat"

}
```
Status: 404 Not Found
```
{

   "Error": "No cat with this cat_id exists"

}
```

```
status :406 Not Acceptable
{ "Error": "Not Acceptable"}
```

Get all Users cats (protected)

Allows you to get an existing cat

GET /cats

You need a JWT with the same sub as the cats owner

Request

Path Parameters

Request Body

None

Response

Response Body Format

`application/json`

response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	403 Forbidden	User id and sub/owner do not match, current user does not own the cat so it cannot see it.
Failure	404 Not Found	No cats exists for this user
Failure	406	Not Acceptable

Response Examples

Success

```
Status: 200 OK
{
  "data": [
    {
      "owner": "auth0|655bdc7587cb3003c86fe9e0",
      "id": "4899724712738816",
      "name": "Nico",
      "type": "Black Tabby",
      "weight": 12,
      "eyeColor": "light green",
      "self": "http://finalproject-407803.uw.r.appspot.com/cats/4899724712738816",
      "preys": []
    },
    {
      "owner": "auth0|655bdc7587cb3003c86fe9e0",
      "id": "5351903567282176",
      "name": "Uki",
      "type": "orange tabby",
      "weight": 13,
      "eyeColor": "green and yellow",
      "self": "http://finalproject-407803.uw.r.appspot.com/cats/5351903567282176",
      "preys": []
    }
  ],
  "Search_results": 2,
```

```
    "next": "no more cats"

}
```

Failure

```
Status: 404 Not Found

{
"Error":  "No cats exists for this user"
}

Status: 403 Forbidden
{
    "Error": "You do not have access to this cat"

}
Status: 404 Not Found

{
   "Error": "No cat with this cat_id exists"

}


status :406 Not Acceptable
{ "Error": "Not Acceptable"}
```

Delete cat (protected)

Allows you to get an existing cat

DELETE /cats/:cat_id

You need a JWT with the same sub as the cats owner

Request

Path Parameters
Request Body
None

Response

Response Body Format

application/json

response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	403 Forbidden	User id and sub/owner do not match, current user does not own the cat so it cannot delete it.
Failure	404 Not Found	No cat with this cat_id exists
Failure	401 Unauthorized	Not logged in with a JWT, Unauthorized, or you have the wrong JWT

Response Examples

Success

Status: 204 OK

Failure

Status: 404 Not Found

```
{
"Error":  "No cat with this cat_id exists"
}
```

```
Status: 403 Forbidden
{
    "Error": "You do not have access to this cat"
}
```

```
Status: 404 Not Found
{
    "Error": "No cat with this cat_id exists"

}
```

```
status :406 Not Acceptable
{ "Error": "You must be logged in with a jwt as the bearer token, you can do this by
logging in and then putting the access token in the jwt variables"}
```

Create a prey (protected)

Allows you to create a new prey.

POST /prey

You need a JWT

Request

Path Parameters
None

Request Body
Required

Request Body Format
JSON

Request JSON Attributes

Name	Description	Required?
animal	Type of animal that a cat would eat	Yes
avgWeight	Weight of prey in pounds	Yes
protein	Protein content of prey	yes

Request Body Example

```
{
    "animal": "mouse",
    "avgWeight": 1,
    "protein": "10 grams"
}
```

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 prey must not be created, and the 400 status code must be returned.
Failure	401 Unauthorized	No JWT, there is no bearer token
Failure	403 Forbidden	Name is not unique

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": "4839356061712384",
    "animal": "mouse"
}
```

Failure

```
 Status: 400 Bad Request

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

 Status: 403  Forbidden
```

```
{
  "Error": "Please enter a unique animal"
}
```

Status 401 Unauthorized
```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <title>Error</title>
</head>

<body>
  <pre>Unauthorized</pre>
</body>

</html>
```

Update Patch a prey (protected)

Allows you to create a new prey.

PATCH /preys/:prey_id

You need a JWT, but it does not have to be the same user as the one who created it.

Request

Path Parameters

Name	Description
prey_id	ID of the prey

Request Body
Required

Request Body Format

JSON

Request JSON Attributes

Name	Description	Required?
animal	Type of animal that a cat would eat	no
avgWeight	Weight of prey in pounds	no
protein	Protein content of prey	no

Request Body Example

```
{
  "avgWeight": 13,
  "protein": "400 grams"
}
```

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 prey must not be created, and the 400 status code must be returned.
Failure	401 Unauthorized	No JWT, there is no bearer token

Failure	404 Not Found	No prey exist with this prey_id
Failure	403 Forbidden	Animal is not unique

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": "5138716758638592",
    "animal": "mouse",
    "avgWeight": 13,
    "protein": "400 grams",
    "self": "http://finalproject-407803.uw.r.appspot.com/prey/5138716758638592"
}
```

Failure

```
Status: 400 Bad Request

{
"Error": "The request has invalid data, check the attributes again" }

Status: 403  Forbidden
{
   "Error": "Please enter a unique name"

}
```

Status 403

{ "Error": "You do not have access to this prey"}

Status 404 Not Found

{ "Error": "No prey with this prey_id exists"}

Status 401 Unauthorized

```html
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <title>Error</title>
</head>

<body>
  <pre>Unauthorized</pre>
</body>

</html>
```

Update (PUT) a prey (protected)

Allows you to edit a prey.

```
PUT /preys/:prey_id
```

You need a JWT, but it does not have to be the same user as the one who created it.

Request

Path Parameters

Name	Description
prey_id	ID of the prey

Request Body
Required

Request Body Format
JSON

Request JSON Attributes

Name	Description	Required?
animal	Type of animal that a cat would eat	Yes
avgWeight	Weight of prey in pounds	Yes
protein	Protein content of prey	yes

Request Body Example

```
{
   "animal": "mouse",
   "avgWeight": 2,
   "protein": "20 grams"
}
```

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 prey must not be created, and the 400 status code must be returned.

Failure	401 Unauthorized	No JWT, there is no bearer token
Failure	403 Forbidden	Name is not unique
Failure	404 Not Found	No prey exist

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": "5138716758638592",
    "animal": "mouse",
    "avgWeight": 2,
    "protein": "20 grams",
    "self": "http://finalproject-407803.uw.r.appspot.com/prey/5138716758638592"
}
```

Failure

Status: 400 Bad Request

```
{
"Error": "The request has invalid data, check the attributes again" }
```

Status: 400 Bad Request

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

Status: 403 Forbidden
```
{
   "Error": "Please enter a unique name"
}
```

Status 403

{ "Error": "You do not have access to this prey"}

Status 404 Not Found

{ "Error": "No prey with this prey_id exists"}

Status 401 Unauthorized

```html
<!DOCTYPE html>
<html lang="en">

<head>
   <meta charset="utf-8">
   <title>Error</title>
</head>

<body>
   <pre>Unauthorized</pre>
</body>

</html>
```

Get a prey (protected)

Allows you to get an existing prey

```
GET /prey/:prey_id
```

You need a JWT, but it does not have to be the same user as the one who created it.

Request

Path Parameters

Name	Description
prey_id	ID of the prey

Request Body

None

Response

Response Body Format

`applipreyion/json`

esponse Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	403 Forbidden	User id and sub/owner do not match, current user does not own the prey so it cannot see it.
Failure	404 Not Found	No prey with this prey_id exists
Failure	406	Not Acceptable

Response Examples

Success

```
Status: 200 OK
{
    "protein": "20 grams",

    "mostFearedCat": null,

    "animal": "mouse",

    "self": "http://finalproject-407803.uw.r.appspot.com/prey/5138716758638592",

    "avgWeight": 2

}
```

Failure

```
Status: 404 Not Found

{
"Error": "No prey with this prey_id exists"
}

Status: 403 Forbidden
{
    "Error": "You do not have access to this prey"

}


status :406 Not Acceptable
{ "Error": "Not Acceptable"}
```

Get preys (protected)

Allows you to get all of the prey

```
GET /prey
```

You need a JWT, but it does not have to be the same user as the one who created it.

Request

Path Parameters

Request Body

None

Response

Response Body Format

`applipreyion/json`

response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	403 Forbidden	User id and sub/owner do not match, current user does not own the prey so it cannot see it.
Failure	404 Not Found	No preys exists for this user
Failure	406	Not Acceptable

Response Examples

Success

```
Status: 200 OK
{
    "data": [
        {
            "protein": "20 grams",
            "mostFearedCat": null,
            "animal": "mouse",
            "self": "http://finalproject-407803.uw.r.appspot.com/prey/5138716758638592",
            "avgWeight": 2,
            "id": "5138716758638592"
        },
        {
            "protein": "40 grams",
            "mostFearedCat": null,
            "animal": "rat",
            "self": "http://finalproject-407803.uw.r.appspot.com/prey/5672878150254592",
            "avgWeight": 3,
            "id": "5672878150254592"
        },
```

```
    {
        "protein": "13 grams",
        "mostFearedCat": null,
        "animal": "Bird",
        "self": "http://finalproject-407803.uw.r.appspot.com/prey/6264616665481216",
        "avgWeight": 1,
        "id": "6264616665481216"
    }
  ],
  "Search_results": 3,
  "next": "no more prey"
}
```

Failure

```
Status: 404 Not Found

{
"Error":  "No preys exists for this user"
}

Status: 403 Forbidden
{
     "Error": "You do not have access to this prey"
}
Status: 404 Not Found
{
    "Error": "No prey with this prey_id exists"
}


status :406 Not Acceptable
{ "Error": "Not Acceptable"}
```

Delete prey (protected)

Allows you to get an existing prey

DELETE /prey/:prey_id

You need a JWT, but it does not have to be the same user as the one who created it.

Request

Path Parameters

Request Body

None

Response

Response Body Format

`applipreyion/json`

response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	403 Forbidden	User id and sub/owner do not match, current user does not own the prey so it cannot delete it.
Failure	404 Not Found	No prey with this prey_id exists
Failure	401 Unauthorized	Not logged in with a JWT, Unauthorized, or you have the wrong JWT

Response Examples

Success

```
Status: 204 OK
```

Failure

```
Status: 404 Not Found

{
"Error": "No prey with this prey_id exists"
}

Status: 403 Forbidden
{
    "Error": "You do not have access to this prey"

}
```

```
Status: 404 Not Found

{

    "Error": "No prey with this prey_id exists"

}


status :406 Not Acceptable

{ "Error": "You must be logged in with a jwt as the bearer token, you can do this by

logging in and then putting the access token in the jwt variables"}
```

Pair a Prey with a Cat (protected)

PUT /cats/:cat_id/prey/:prey_id

You need a JWT with the same sub as the cats owner

Request

Path Parameters

Name	Description
prey_id	ID of the prey
cat_id	ID of Cat

Request Body
Required

Request Body Format
JSON

Request Body Example
Response

Response Body Format
JSON

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	400 Bad Request	If the request is missing any of the 3 required attributes, the prey must not be created, and the 400 status code must be returned.
Failure	401 Unauthorized	No JWT, there is no bearer token
Failure	403 Forbidden	Name is not unique
Failure	404 Not Found	No prey/cat exist

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: 204 No Content
```

Failure

```
Status 403
  { "Error": "You do not have access to this cat"}


  Status 404 Not Found
```

```
{ "Error": " The specified cat and/or prey does not exist"}



Status 401 Unauthorized
<!DOCTYPE html>
<html lang="en">


<head>
    <meta charset="utf-8">
    <title>Error</title>
</head>


<body>
    <pre>Unauthorized</pre>
</body>


</html>
```

DELETE Prey with a Cat relationship (protected)

```
DELETE /cats/:cat_id/prey/:prey_id
```

You need a JWT with the same sub as the cats owner

Request

Path Parameters

Name	Description
prey_id	ID of the prey
cat_id	ID of Cat

Request Body
Required

Request Body Format

JSON

Request Body Example
Response

Response Body Format
JSON

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	401 Unauthorized	No JWT, there is no bearer token
Failure	403 Forbidden	You do not have access to the cat
Failure	404 Not Found	No prey/cat exist

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: 204 No Content
```

Failure

Status 403

{ "Error": "You do not have access to this cat"}

Status 404 Not Found

{ "Error": " The specified cat and/or prey does not exist"}

Status 401 Unauthorized

```html
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <title>Error</title>
</head>

<body>
  <pre>Unauthorized</pre>
</body>

</html>
```


Get Users (Unprotected)

Allows you to get an existing prey

GET /users

You do not need a JWT to view this information

Request

Path Parameters

Request Body

None

Response

Response Body Format

`applipreyion/json`

response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	406	Not Acceptable

Response Examples

Success

```
Status: 200 OK
  [
{
    "user_id": "auth0|655bdc7587cb3003c86fe9e0"
  },
  {
    "user_id": "auth0|657726d4ef593280157d4f4a"
  },
  {
    "user_id": "auth0|655d89d817b4bdb5010f175e"
  }
]
```

Failure

```
status :406 Not Acceptable
 { "Error": "Not Acceptable"}
```