Final Project: API Spec

CS 493: Cloud Application Development

GCP URL: https://final-project-314821.wm.r.appspot.com

Spring 2021

Oregon State University

Last Update: May 27, 2021. 4:00 pm PST

Change log

Version	Change	Date
1.0	Initial version.	June 6th, 2021

Overview

-All endpoints are protected. You must be logged in to interact with the API.

-You can create a new user by navigating to the URL above.

Create an Order

Allows you to create a new order.

POST /orders

Request

Path Parameters

None

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
has_shipped	Boolean	Indicates whether an order has been shipped or not.	Yes
date	String	Date when the order was placed.	Yes
location	String	Location where the order will be shipped.	Yes

Request Body Example

```
{
  "has_shipped": true,
  "date": "01/01/2021",
  "location": "Seattle"
}
```

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 order will not be created, and 400 status code will be returned.
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.

Response Examples

- The `self` attribute will contain the live link to the REST resource corresponding to this order. In other words, this is the URL to get this newly created order. The `self` attribute is not stored in Datastore.
- The owner_id attribute will also be added, which contains the user who owns the order's unique id.

Success

```
Status: 201 Created

{
  "id": "abc123",
  "has_shipped": true,
  "date": "01/01/2021",
  "location": "Seattle",
  "self": ": "https://final-project-314821.wm.r.appspot.com/orders/abc123"
  "owner_id": owner1
}
```

Failure

```
Status: 400 Bad Request

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

Failure

```
Status: 406 Not Acceptable

{
"Error":  "Please make sure the accept is json"
}
```

Failure

```
Status: 401 Unauthorized

{
"Error":  "Missing auth credentials"
}
```

Get an Order

Allows you to get an existing order

GET /orders/:order_id

Request

Path Parameters

Name	Type	Description
order_id	String	ID of the order

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No order with this order_id exists
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.
Failure	403 Forbidden	The request was received, but the credentials are not authorized to view the entity.

Response Examples

Success

```
Status: 200 OK

{
  "id": "abc123",
  "has_shipped": true,
  "date": "01/01/2021",
  "location": "Seattle",
  "self": ": "https://final-project-314821.wm.r.appspot.com/orders/abc123"
  "owner_id": owner1
}
```

Failure

```
Status: 404 Not Found

{
"Error": "No order with this order_id exists"
}
```

Failure

```
Status: 406 Not Acceptable
```

```
{
"Error": "Please make sure the accept is json"
}
```

Failure

```
Status: 401 Unauthorized

{
"Error": "Missing auth credentials"
}
```

Failure

```
Status: 403 Forbidden

{
"Error": "You are unauthorized to view this."
}
```

Patch an Order

Allows you to edit parts of an existing order.

PATCH /orders/:order_id

Request

Path Parameters

Name	Type	Description
order_id	String	ID of the order

Request Body - Required

Name	Type	Description	Required?
has_shipped	Boolean	Indicates whether an order has been shipped or not.	No
date	String	Date when the order was placed.	No
location	String	Location where the order will be shipped.	No

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No order with this order_id exists
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.
Failure	403 Forbidden	The request was received, but the credentials are not authorized to view the entity.

Response Examples

Success

Status: 200 OK
 	
{
  "id": "abc123",
  "has_shipped": false,
  "date": "01/01/2021",
  "location": "Seattle",
  "self": ": "https://final-project-314821.wm.r.appspot.com/orders/abc123"
  "owner_id": owner1
}

Failure

Status: 404 Not Found
 	
{
"Error": "No order with this order_id exists"
}

Failure

```
Status: 406 Not Acceptable


{
"Error":  "Please make sure the accept is json"
}
```

Failure

```
Status: 401 Unauthorized


{
"Error":  "Missing auth credentials"
}
```

Failure

```
Status: 403 Forbidden


{
"Error":  "You are unauthorized to view this."
}
```

Put an Order

Allows you to edit all parts of an existing order at once.

PUT /orders/:order_id

Request

Path Parameters

Name	Type	Description
order_id	String	ID of the order

Request Body - Required

Name	Type	Description	Required?
has_shipped	Boolean	Indicates whether an order has been shipped or not.	Yes
date	String	Date when the order was placed.	Yes
location	String	Location where the order will be shipped.	Yes

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No order exists with this id.
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.
Failure	403 Forbidden	The request was received, but the credentials are not authorized to view the entity.

Response Examples

Success

Status: 200 OK

```
{
  "id": "abc123",
  "has_shipped": true,
  "date": "01/02/2021",
  "location": "Kirkland",
  "self": ": "https://final-project-314821.wm.r.appspot.com/orders/abc123"
  "owner_id": owner1
}
```

Failure

Status: 404 Not Found

```
{
"Error":  "No order with this order_id exists"
}
```

Failure

```
Status: 406 Not Acceptable

{
"Error":  "Please make sure the accept is json"
}
```

Failure

```
Status: 401 Unauthorized

{
"Error":  "Missing auth credentials"
}
```

Failure

```
Status: 403 Forbidden

{
"Error":  "You are unauthorized to view this."
}
```

List all Orders

List all the orders.

GET /orders

Request

Path Parameters

None

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.

Response Examples

- The id and self with be appended to the request that is returned. These attributes are not stored in Datastore.
- The results will be paginated, showing 5 results per page. If there are more than 5 results, a "next" property will exist with the URL to the next page and rest of the results.

Success

```
Status: 200 OK

[
{
  "id": "abc123",
  "has_shipped": true,
  "date": "01/01/2021",
  "location": "Seattle",
  "self": ": "https://final-project-314821.wm.r.appspot.com/orders/abc123"
  "owner_id": owner1
},
{
  "id": "def456",
  "has_shipped": true,
  "date": "01/01/2021",
  "location": "Seattle",
  "self": ": "https://final-project-314821.wm.r.appspot.com/orders/def456"
  "owner_id": owner1
```

```
},
{
  "id": "xyz123",
  "has_shipped": false,
  "date": "01/01/2021",
  "location": "Seattle",
  "self": ": "https://final-project-314821.wm.r.appspot.com/orders/xyz123"
  "owner_id": owner1
},
{
  "id": "ghi123",
  "has_shipped": true,
  "date": "01/01/2021",
  "location": "Seattle",
  "self": ": "https://final-project-314821.wm.r.appspot.com/orders/ghi123"
  "owner_id": owner1
},
{
  "id": "jkl456",
  "has_shipped": false,
  "date": "01/01/2021",
  "location": "Seattle",
  "self": ": "https://final-project-314821.wm.r.appspot.com/orders/jkl456"
  "owner_id": owner1
}
],
"next": "https://final-project-314821.wm.r.appspot.com/orders?limit=5&offset=5"
}
```

Failure

```
Status: 401 Unauthorized

{
"Error":  "Missing auth credentials"
}
```

Failure

```
Status: 403 Forbidden

{
"Error":  "You are unauthorized to view this."
}
```

View all Items for a Specific Order

Allows you to see all items a specific order is carrying.

GET /orders/:order_id/items

Request

Path Parameters

Name	Type	Description
order_id	String	ID of the order

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
No Content	204 No Content	The order has no items currently. An empty list will be returned.
Failure	404 Not Found	No order exists with this id.
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.
Failure	403 Forbidden	The request was received, but the credentials are not authorized to view the entity.

Response Examples

Success

```
Status: 200 OK

{
  "id": "abc123",
  "has_shipped": true,
  "date": "01/01/2021",
  "location": Seattle,
  "items": [
      {
          "id": def456
          "self": https://final-project-314821.wm.r.appspot.com/items/def456
      }
  ],
  "self": "https://final-project-314821.wm.r.appspot.com/orders/abc123"
  "owner_id": owner1
}
```

Failure

```
Status: 404 Not Found


{
"Error":  "No order exists with this id."
}
```

Failure

```
Status: 406 Not Acceptable


{
"Error":  "Please make sure the accept is json"
}
```

Failure

```
Status: 401 Unauthorized


{
"Error":  "Missing auth credentials"
}
```

Failure

```
Status: 403 Forbidden


{
"Error":  "You are unauthorized to view this."
}
```

Delete an Order

Allows you to delete a order. Note that if the order is currently in a slip, deleting the order makes the slip empty.

```
DELETE /orders/:order_id
```

Request

Path Parameters

Name	Type	Description
order_id	String	ID of the order

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 order with this order_id exists
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.
Failure	403 Forbidden	The request was received, but the credentials are not authorized to view the entity.

Response Examples

Success

```
Status: 204 No Content
```

Failure

```
Status: 404 Not Found

{
"Error": "No order with this order_id exists"
}
```

Failure

```
Status: 406 Not Acceptable

{
"Error": "Please make sure the accept is json"
}
```

Failure

```
Status: 401 Unauthorized

{
"Error":  "Missing auth credentials"
}
```

Failure

```
Status: 403 Forbidden

{
"Error":  "You are unauthorized to view this."
}
```

Create an Item

Allows you to create a new item.

POST /items

Request

Path Parameters

None

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Type	Description	Required?
item_name	string	Name of item	Yes
quantity	integer	How many of the item	Yes
Item_description	string	Details about the item	Yes

Request Body Example

```
{
  "item_name": keychain,
  "quantity": 2,
  "item_description": "acrylic, double-sided, with clip"
}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	201 Created	
Failure	400 Bad Request	If the request is missing an attribute, the item will not be created and this error will return.
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.

Response Examples

- The id and self with be appended to the request that is returned. These attributes are not stored in Datastore.
- The owner_id attribute will also be added, which contains the user who owns the item's unique id.

Success

Status: 201 Created

```
{
  "id": "123abc",
  "item_name": keychain,
  "quantity": 2,
  "item_description": "acrylic, double-sided, with clip"
  "self": "https://final-project-314821.wm.r.appspot.com/items/123abc"
  "owner_id": owner1
}
```

Failure

Status: 400 Bad Request

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

Failure

Status: 406 Not Acceptable

```
{
"Error":  "Please make sure the accept is json"
}
```

Failure

Status: 401 Unauthorized

```
{
"Error":  "Missing auth credentials"
}
```

Get an Item

Allows you view an existing item.

GET /items/:item_id

Request

Path Parameters

Name	Type	Description
item_id	String	ID of the item

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No item with this item_id exists
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.
Failure	403 Forbidden	The request was received, but the credentials are not authorized to view the entity.

Response Examples

Success

Status: 200 OK
 	
{
  "id": "123abc",
  "item_name": keychain,
  "quantity": 2,
  "item_description": "acrylic, double-sided, with clip"
  "self": "https://final-project-314821.wm.r.appspot.com/items/123abc"
  "owner_id": owner1
}

Failure

Status: 404 Not Found
 	
{
"Error": "No item with this item_id exists"
}

Failure

Status: 406 Not Acceptable

```
{
"Error": "Please make sure the accept is json"
}
```

Failure

```
Status: 401 Unauthorized

{
"Error": "Missing auth credentials"
}
```

Failure

```
Status: 403 Forbidden

{
"Error": "You are unauthorized to view this."
}
```

Patch an Item

Allows you to edit parts of an existing Item.

PATCH /items/:item_id

Request

Path Parameters

Name	Type	Description
item_id	String	ID of the item

Request Body - Required

Name	Type	Description	Required?
item_name	string	Name of item	No
quantity	integer	How many of the item	No
Item_description	string	Details about the item	No

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No order with this item_id exists
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.
Failure	403 Forbidden	The request was received, but the credentials are not authorized to view the entity.

Response Examples

Success

```
Status: 200 OK

{
  "id": "123abc",
  "item_name": pin,
  "quantity": 2,
  "item_description": "acrylic, single-sided"
  "self": "https://final-project-314821.wm.r.appspot.com/items/123abc"
  "owner_id": owner1
}
```

Failure

```
Status: 404 Not Found

{
"Error":  "No order with this item_id exists"
```

```
}
```

Failure

```
Status: 406 Not Acceptable


{
"Error":  "Please make sure the accept is json"
}
```

Failure

```
Status: 401 Unauthorized


{
"Error":  "Missing auth credentials"
}
```

Failure

```
Status: 403 Forbidden


{
"Error":  "You are unauthorized to view this."
}
```

Put an Item

Allows you to edit all parts of an existing item at once.

PUT /items/:item_id

Request

Path Parameters

Name	Type	Description
item_id	String	ID of the item

Request Body - Required

Name	Type	Description	Required?
item_name	string	Name of item	Yes
quantity	integer	How many of the item	Yes
Item_description	string	Details about the item	Yes

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No item exists with this id.
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.
Failure	403 Forbidden	The request was received, but the credentials are not authorized to view the entity.

Response Examples

Success

Status: 200 OK

```
{
  "id": "123abc",
  "item_name": lanyard,
  "quantity": 3,
  "item_description": "12in with lobster clasp"
  "self": "https://final-project-314821.wm.r.appspot.com/items/123abc"
  "owner_id": owner1
}
```

Failure

Status: 404 Not Found

```
{
"Error":  "No order with this order_id exists"
}
```

Failure

Status: 406 Not Acceptable

```
{
"Error":  "Please make sure the accept is json"
}
```

Failure

Status: 401 Unauthorized

```
{
"Error":  "Missing auth credentials"
}
```

Failure

Status: 403 Forbidden

```
{
"Error":  "You are unauthorized to view this."
}
```

List all Items

View all existing items.

GET /items

Request

Path Parameters

None

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.

Response Examples

Success

Status: 200 OK

```
[
{
  "id": "123abc",
  "item_name": keychain,
  "quantity": 2,
  "item_description": "acrylic, double-sided, with clip"
  "self": "https://final-project-314821.wm.r.appspot.com/items/123abc"
  "owner_id": owner1
},
{
  "id": "456abc",
  "item_name": keychain,
  "quantity": 2,
  "item_description": "acrylic, double-sided, with clip"
  "self": "https://final-project-314821.wm.r.appspot.com/items/456abc"
  "owner_id": owner1
},
{
  "id": "789abc",
```

```
  "item_name": keychain,
  "quantity": 2,
  "item_description": "acrylic, double-sided, with clip"
  "self": "https://final-project-314821.wm.r.appspot.com/items/789abc"
  "owner_id": owner1
},
{
  "id": "123def",
  "item_name": keychain,
  "quantity": 2,
  "item_description": "acrylic, double-sided, with clip"
  "self": "https://final-project-314821.wm.r.appspot.com/items/123def"
  "owner_id": owner1
},
{
  "id": "456def",
  "item_name": keychain,
  "quantity": 2,
  "item_description": "acrylic, double-sided, with clip"
  "self": "https://final-project-314821.wm.r.appspot.com/items/456def"
  "owner_id": owner1
}],
"next": "https://final-project-314821.wm.r.appspot.com/items?limit=5&offset=5"
}
]
```

Delete an Item

Allows you to delete an item. If the item being deleted is on a order, the order should be updated also.

DELETE /items/:item_id

Request

Path Parameters

Name	Type	Description
item_id	String	ID of the item

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 item with this item_id exists
Failure	406 Not Acceptable	If the Accept header is not json or the body of the request is not json, this will be returned.
Failure	401 Unauthorized	If there is not Authorization header, then this will be returned.
Failure	403 Forbidden	The request was received, but the credentials are not authorized to view the entity.

Response Examples

Success

Status: 204 No Content

Failure

```
Status: 404 Not Found


{
"Error": "No item with this item_id exists"
}
```

Failure

```
Status: 406 Not Acceptable


{
"Error": "Please make sure the accept is json"
}
```

Failure

```
Status: 401 Unauthorized

{
"Error":  "Missing auth credentials"
}
```

Failure

```
Status: 403 Forbidden

{
"Error":  "You are unauthorized to view this."
}
```

Data Model

The three types of entities stored in Datastore: orders, items, and the users. The required section indicates whether the property is necessary for creating that entity in the JSON request.

Order

Property Name	Notes & Valid Values	Required
id	Integer. The id of the order, automatically generated by Datastore	No
date	String, any date between January and December. Date the order was place.	Yes
location	String, limit 50 characters. Where the order will be shipped to.	Yes
has_shipped	Boolean, must be true/false. Indicated if the order has been shipped or not.	Yes
items	List of dictionary entries with the id(int) and self(url) of each of the items the order is currently carrying. If the order has no items, it is absent.	No
self	String. URL to access this particular order.	No
owner_id	String. Corresponds to the User that placed the order's unique id.	No

Item

Property Name	Notes	Required
id	Integer. The id of the item, automatically generated by Datastore	No
item_name	String, limit 50 characters. The name of the item.	Yes
orders	List of dictionary entries with the id(int) and self(url) of the order that is currently carrying this item. If the item is not on a order, it is absent.	No
quantity	Integer, limit 100. Quantity of the item ordered.	Yes
item_description	String limit 100 characters. Details about the item.	Yes
self	String. URL to access this item.	No

User

Property Name	Notes
user_id	String. Equivalent to the "sub" key in the Auth0 response for the user info.
name	string. Whatever info is in the "name" key in Auth0 will also be stored.

The user_id is used as the unique id to determine who the user is. The payload "sub" is mapped to the user entity. In this way, we can verify a user.

Relationships

Between non-user entities:

-An order can have multiple items, and items can be on multiple orders.

Between non-user and the user entity:

-The user can have multiple orders and items.

-The user can only view items and orders they have created.