Final Assignment: Restaurant Order API Spec

CS 493: Cloud Application Development

Fall 2021

Oregon State University

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https://final-project-333515.uk.r.appspot.com/

Change log

Version	Change	Date
1.0	Initial version.	Nov 1, 2021

Data Model

The app stores two kinds of entities in Datastore, Restaurants and Orders.

Restaurants

Property	Data Type	Notes
id	Integer	Unique id of the Restaurant. Automatically generated in Datastore.
title	String	Name of the Restaurant.
location	String	State Restaurant located in, e.g. MI, NY, GA
type	String	Type of the Restaurant
orders	Array	Array containing the 'id' attributes of one or more Order entities associated with the Restaurant. Can be empty.
completed_orders	Array	Array containing the 'id' attributes of one or more completed Orders entities associated with the Restaurant. This attribute is is an Orders entity with Boolean set to "False". Can be empty.
owner	String	The identifier of the User entity that owns the Restaurant. Equals the user's unique id(sub)
self	String	URL where Restaurant is located

Relationships

The Restaurant entity has a one-to-many relationship with the Orders entity. One or more Orders can be associated with a single Restaurant, but each Order can only be associated with a single Restaurant.

The Restaurant entity has a many-to-one relationship with the User entity. One or more Restaurants can be associated with a single User, but each Restaurant can only be associated with a single User.

Orders

Property	Data Type	Notes
id	Integer	The id of the Order. Datastore automatically generates it. Don't add it yourself as a property of the entity.
pid	String	Unique id of the Restaurant that the Order is associated
name	String	Name of the Order (i.e. the person who took the order).
completed	Bool	Whether or not the Order has been fulfilled
table	Integer	Table number of the Order
time	String	Time Order was taken
owner	String	The identifier of the User entity that owns the Restaurant.
self	String	URL where Order is located

Relationships

The Order/Completed Order entity has a many-to-one relationship with the Restaurant entity. One or more Orders can be associated with a single Restaurant, but each Order can only be associated with a single Restaurant.

User Entity Model

User Identification

A user is identified by the 'sub' value of the JSON Web Token received when a user logs in through Google from the Login URL.

Users should supply the JWT in the Authorization header of requests that access resources managed by the user.

In order to GET all Restaurants created by a user, a ':user_id' parameter must be supplied in the request containing the 'sub' attribute from the JWT.

Relationships

The User entity has a one-to-many relationship with the Restaurant entity. One or more Restaurants can be associated with a single User, but each Restaurant can only be associated with a single User. When a Restaurant is created, the identifier of the creating user can be found in the 'owner' attribute of the Restaurant.

Create a Restaurant

Allows you to create a new restaurant.

POST /restaurants

Request

Path Parameters

None

Request Body

Required: Yes

Request Body Format

JSON

Request JSON Attributes

Name	Description	Constraint	Required?
title	Name of the restaurant	Must only contain alphanumeric characters, spaces, and dashes. It must start with an alphanumeric character.	Yes
location	State restaurant located	Must only contain alphanumeric characters, spaces, and dashes. It must start with an alphanumeric character.	Yes
type	Type/genre of restaurant	Must only contain alphanumeric characters, spaces, and dashes. It must start with an alphanumeric character.	Yes

Request Body Example

```
{
  "title": "Sal's",
  "location": "KY",
  "type": "buffet"
}
```

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 project must not be created, and 400 status code must be returned.

Failure	403 Forbidden	A project with same name exists
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.
Failure	405 Method Not Allowed	Not allowed to edit or delete all restaurants
Failure	500 Internal Service Error	

Response Examples

Success

```
Status: 201 Created

{
    "completed_orders": [],
    "id": 5680690091786240,
    "location": "KY",
    "orders": [],
    "owner": "789542539141780084854",
    "self": "https://final-project-
33515.uk.r.appspot.com/restaurants/5680690091786240",
    "title": "Sal's",
    "type": "buffet"
}
```

Failure

```
Status: 400 Bad Request

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

Failure

```
Status: 403 Forbidden

{
    "Error": "A restaurant with the same name already exists!"
}
```

Get a Restaurant

Allows you to get an existing restaurant

GET /restaurants/:pid

Request

Path Parameters

Name	Description
pid	ID of the project

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	404 Not Found	No restaurant with this id exists
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.

Response Examples

Success

```
Status: 200 OK

 {
          "completed_orders": [],
          "id": 5709998948614144,
          "location": "NY",
          "orders": [],
          "owner": "789542539141780084854",
          "self": "https://final-project-
333515.uk.r.appspot.com/restaurants/5709998948614144",
          "title": "Richie's",
          "type": "fine dine"
    }
```

List all Restaurants

List all the restaurants.

GET /restaurants

Request

Path Parameters

None

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.

Response Examples

Success

```
Status: 200 OK

{
    "restaurants": [
        {
            "completed_orders": [],
            "id": 4787246431469568,
            "location": "NY",
            "orders": [],
            "owner": "789542539141780084854",
            "self": "https://final-project-
333515.uk.r.appspot.com/restaurants/4787246431469568",
            "title": "Napoli",
            "type": "pizza"
        },
        {
            "completed_orders": [],
            "id": 4857241781927936,
            "location": "CA",
            "orders": [
                {
                    "id": 5729450050191360,
                    "owner": "789542539141780084854",
                    "pid": "4857241781927936"
```

```
                }
            ],
            "owner": "789542539141780084854",
            "self": "https://final-project-
333515.uk.r.appspot.com/restaurants/4857241781927936",
            "title": "Roscoe's",
            "type": "greasy spoon"
        },
    ]
}
```

Edit a Restaurant

Allows you to edit a restaurant.

PUT or PATCH /restaurants/:pid

Request

Path Parameters

Name	Type	Description	Required
pid	String	ID of the restaurant	Yes

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Description	Constraint	Required?
title	Name of the restaurant. Type String	Name must only contain alphanumeric characters, spaces, and dashes. It must start with an alphanumeric character.	Yes
type	The type of the restaurant. E.g., Diner, Fast Food, etc. Type String	Type must only contain alphanumeric characters, spaces, and dashes. It must start with an alphanumeric character.	Yes
location	State restaurant located	Location must only contain alphanumeric characters, spaces, and dashes. It must start with an alphanumeric character.	Yes

Request Body Example (PATCH)

```
{
"title": "Burger K"


}
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	201 OK	
Failure	400 Bad Request	If the request is missing any of the 3 required attributes, the boat must not be updated, and 400 status code must be returned.

		If either of the 3 attribute values is invalid
		If more attributes are specified than allowed
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.
Failure	406 Unsupported Media Type	Request body is not JSON format

The self attribute will contain the live link to the REST resource corresponding to this restaurant.

Response Examples

Success

```
Status: 201 OK

{
        "completed_orders": [],
        "id": 5709998948614144,
        "location": "NY",
        "orders": [],
        "owner": "789542539141780084854",
        "self": "https://final-project-
333515.uk.r.appspot.com/restaurants/5709998948614144",
        "title": "Burger K",
        "type": "fine dine"
    }
```

Failure

```
Status: 400 Bad Request

{
    "Error": "Invalid content!"
}
```

```
Status: 401 Unauthorized

{
    "Error": "Could not verify JWT!"
}
```

Delete a Restaurant

Allows you to delete a restaurant.

DELETE /restaurants/:pid

Request

Path Parameters

Name	Type	Description	Required?
pid	String	ID of the restaurant	Yes

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 restaurant with this id exists
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.

Response Examples

Success

Status: 204 No Content

Failure

Status: 404 Not Found
 	
{
"Error": "This restaurant does not exist!"
}

Create an Order

Allows you to create a new order.

POST /orders

Request

Path Parameters

None

Request Body

Required: Yes

Request Body Format

JSON

Request JSON Attributes

Name	Description	Constraint	Required?
name	Name of the person who took the order, String	Must only contain alphanumeric characters, spaces, and dashes. It must start with an alphanumeric character.	Yes
table	Table number of the order, Integer	Must only contain integer from 0 to 100.	Yes
time	Time of order was placed, String	Must only contain alphanumeric characters, spaces, and dashes. It must start with an alphanumeric character.	Yes

Request Body Example

```
{
   "name": "Tom",
   "table": 2,
   "time": "11:30P"
}
```

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 project must not be created, and 400 status code must be returned. If either of the 3 attribute values is invalid

		If more attributes are specified than allowed
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.

Response Examples

Success

```
Status: 201 Created


{
    "completed": false,
    "id": 5722267187150848,
    "name": "Dishes",
    "owner": "789542539141780084854",
    "pid": null,
    "self": "https://final-project-333515.uk.r.appspot.com/orders/5722267187150848",
    "table": 2,
    "time": "11:30P"
}
```

Failure

```
Status: 400 Bad Request


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

Get an Order

Allows you to get an existing order

GET /orders/:tid

Request

Path Parameters

Name	Description
tid	ID of the order

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.

Response Examples

Success

```
Status: 200 OK

{
    "completed": false,
    "id": 5722267187150848,
    "name": "Dishes",
    "owner": "789542539141780084854",
    "pid": null,
    "self": "https://final-project-333515.uk.r.appspot.com/orders/5722267187150848",
    "table": 2,
    "time": "11:30P"
}
```

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	401 Unauthorized	Invalid authentication credentials for the requested resource.
Failure	405 Method Not Allowed	Not allowed to edit or delete all restaurants
Failure	500 Internal Service Error	

Response Examples

Success

```
Status: 200 OK

{
    "orders": [
        {
            "completed": false,
            "id": 5081834211770368,
            "name": "Jim",
            "owner": "789542539141780084854",
            "pid": null,
            "self": "https://final-project-
333515.uk.r.appspot.com/orders/5081834211770368",
            "table": 3,
            "time": "11:30A"
        },
        {
            "completed": false,
            "id": 5722267187150848,
```

```
            "name": "Dishes",
            "owner": "789542539141780084854",
            "pid": null,
            "self": "https://final-project-
333515.uk.r.appspot.com/orders/5722267187150848",
            "table": 2,
            "time": "11:30P"
        },
        {
            "completed": false,
            "id": 5762057441902592,
            "name": "Cardi",
            "owner": "789542539141780084854",
            "pid": null,
            "self": "https://final-project-
333515.uk.r.appspot.com/orders/5762057441902592",
            "table": 5,
            "time": "11:30P"
        }
    ],
    "total": 3
}
```

Edit an Order

Allows you to edit an order.

PUT or PATCH /orders/:tid

Request

Path Parameters

Name	Type	Description	Required
tid	Integer	ID of the order	Yes

Request Body

Required

Request Body Format

JSON

Request JSON Attributes

Name	Description	Constraint	Required?
name	Name of the order. Type String	Name must only contain alphanumeric characters, spaces, and dashes. It must start with an alphanumeric character.	Yes
table	Table number for the order. Type Integer	Table must only contain an integer from 0 to 100.	Yes
time	Time order was placed. Type String	Time must only contain alphanumeric characters, spaces, and dashes. It must start with an alphanumeric character.	Yes

Request Body Example (PUT)

```
{
    "name": "Dishes",
    "table": 6,
    "time": "11:30P"
 }
```

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	201 OK	
Failure	400 Bad Request	If the request is missing any of the 3 required attributes, the boat must not be updated, and 400 status code must be returned.

		If either of the 3 attribute values is invalid
		If more attributes are specified than allowed
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.

The self attribute will contain the live link to the REST resource corresponding to this order.

Response Examples

Success

Status: 201 OK

```
{
    "completed": false,
    "id": 5722267187150848,
    "name": "Dishes",
    "owner": "789542539141780084854",
    "pid": null,
    "self": "https://final-project-333515.uk.r.appspot.com/orders/5722267187150848",
    "table": 6,
    "time": "11:30P"
}
```

Failure

Status: 400 Bad Request

```
{
"Error": "Invalid content!"
}
```

Status: 401 Unauthorized

```
{
    "Error": "Could not verify JWT!"
}
```

Delete an Order

Allows you to delete an order.

DELETE /orders/:tid

Request

Path Parameters

Name	Type	Description	Required?
tid	Integer	ID of the order	Yes

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 id exists
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.

Response Examples

Success

Status: 204 No Content

Failure

Status: 404 Not Found

{
"Error": "No order with this id exists"

}

Add an Existing Order to a Restaurant

Allows you to assign an existing order to a specific restaurant

PUT /restaurants/:pid/orders/:tid

Request

Path Parameters

Name	Type	Description	Required?
tid	Integer	ID of the order	Yes
pid	Integer	ID of the restaurant	Yes

Request Body

None

Response

Response Body Format

Success: JSON

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Success	204 No Content	
Failure	404 Not Found	No order with this id exists No restaurant with this id exists
Failure	403 Forbidden	A project with same name exists
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.

Response Examples

Success

Status: 204 No Content

Failure

Status: 403 Forbidden
 	
{
    "Error": "This order is already placed!"
}

Place a new Order with a Restaurant

Allows you to place a new order in a specific restaurant

POST /restaurants/:pid/orders

Request

Path Parameters

Name	Type	Description	Required?
pid	Integer	ID of the restaurant	Yes

Request Body

Request Body Example (PUT)

```
{
   "name": "Dishes",
   "table": 6,
   "time": "11:30P"
 }
```

Response

No body

Response Body Format

Success: No body

Failure: 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 project must not be created, and 400 status code must be returned. If either of the 3 attribute values is invalid If more attributes are specified than allowed
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.

Response Examples

Success

```
Status: 201 Created
{
    "completed_orders": [],
    "id": 5151130757627904,
    "location": "MI",
    "orders": [
```

```
        {
            "id": 5722267187150848,
            "owner": "789542539141780084854",
            "pid": "5151130757627904",
            "self": "https://final-project-
333515.uk.r.appspot.com/orders/5722267187150848"
        },
        {
            "id": 4833034809376768,
            "owner": "789542539141780084854",
            "pid": "5151130757627904",
            "self": "https://final-project-
333515.uk.r.appspot.com/orders/4833034809376768"
        },
        {
            "id": 5739956077068288,
            "owner": "789542539141780084854",
            "pid": "5151130757627904",
            "self": "https://final-project-
333515.uk.r.appspot.com/orders/5739956077068288"
        }
    ],
    "owner": "789542539141780084854",
    "self": "https://final-project-
333515.uk.r.appspot.com/restaurants/5151130757627904",
    "title": "Benny's",
    "type": "diner"
}
```

Get all Orders for a Restaurant

Allows you to view all orders in a specific restaurant

GET /restaurants/:pid/orders

Request

Path Parameters

Name	Type	Description	Required?
pid	Integer	ID of the restaurant	Yes

Request Body

No body

Response

Response Body Format

Success: JSON

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 Success	
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.

Response Examples

Success

```
Status: 200 OK

{
    "completed_orders": [],
    "orders": [
        {
            "completed": false,
            "id": 4833034809376768,
            "name": "Susie",
            "owner": "789542539141780084854",
            "pid": "5151130757627904",
            "self": "https://final-project-
333515.uk.r.appspot.com/orders/4833034809376768",
            "table": 5,
            "time": "11:30P"
        },
        {
```

```json
            "completed": false,
            "id": 5722267187150848,
            "name": "Dishes",
            "owner": "789542539141780084854",
            "pid": "5151130757627904",
            "self": "https://final-project-
333515.uk.r.appspot.com/orders/5722267187150848",
            "table": 6,
            "time": "11:30P"
        },
        {
            "completed": false,
            "id": 5739956077068288,
            "name": "Jen",
            "owner": "789542539141780084854",
            "pid": "5151130757627904",
            "self": "https://final-project-
333515.uk.r.appspot.com/orders/5739956077068288",
            "table": 5,
            "time": "11:30P"
        }
    ]
}
```

Get all Restaurants for an Owner

Allows you to view all Restaurants for a specific approved owner

GET /restaurants/:uid

Request

Path Parameters

Name	Type	Description	Required?
uid	Integer	Unique ID (sub) of the owner	Yes

Request Body

No body

Response

Response Body Format

Success: JSON

Failure: JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 Success	
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.

Response Examples

Success

```
Status: 200 OK

{
    "restaurants": [
        {
            "completed_orders": [],
            "id": 5680690091786240,
            "location": "KY",
            "orders": [],
            "owner": "789542539141780084854",
            "self": "https://final-project-
333515.uk.r.appspot.com/restaurants/5680690091786240",
            "title": "Sal's",
            "type": "buffet"
        },
        {
            "completed_orders": [],
```

```
        "id": 5709998948614144,
        "location": "NY",
        "orders": [],
        "owner": "789542539141780084854",
        "self": "https://final-project-
333515.uk.r.appspot.com/restaurants/5709998948614144",
        "title": "Richie's",
        "type": "fine dine"
    },
    {
        "completed_orders": [],
        "id": 5756247156457472,
        "location": "KY",
        "orders": [],
        "owner": "789542539141780084854",
        "self": "https://final-project-
333515.uk.r.appspot.com/restaurants/5756247156457472",
        "title": "BurgerK",
        "type": "buffet"
    }
  ]
}
```

View a User

Allows you to get an existing owner

GET /users/:uid

Request

Path Parameters

Name	Description
uid	Unique ID (sub) of the owner

Request Body

None

Response

Response Body Format

JSON

Response Statuses

Outcome	Status Code	Notes
Success	200 OK	
Failure	401 Unauthorized	Invalid authentication credentials for the requested resource.

Response Examples

Success

Status: 200 OK

```
[
    {
        "email": "markz@gmail.com",
        "id": 5634161670881280,
        "self": "https://final-project-
333515.uk.r.appspot.com/users/115542598761780084854",
        "sub": "789542539141780084854"
    }
]
```