Amazon Fresh API Design

Group #5
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1. Overview

1.1 Resource Definition

Farmer

- Farmer ID
- First Name
- Last Name
- Address
- City
- State
- Zip Code
- Phone number
- Email
- Rating
- Reviews
- Own introduction in form of images and video
- Delivery history

Product

- Product ID
- Farmer ID
- Name
- Price
- Description
- Reviews
- Ratings

Customer

- Customer ID
- First Name
- Last Name
- Address
- City
- State
- Zip Code
- Phone number
- Email
- Credit Card details
- Purchase History

Bill

- Billing ID
- Date
- Expected Delivery time
- Product ID
- Distance covered
- Total amount for ride
- Source location
- Destination location
- Driver ID
- Customer ID

Administrator

- Admin ID
- First Name
- Last Name
- Address
- City
- State
- Zip Code
- Phone number
- Email

Trip

- Trip ID
- Pickup location (Latitude, Longitude)
- Drop off location (Latitude, Longitude)
- Date/Time
- Customer ID

- Driver ID
- Truck ID

1.2 Response format

Description

All requests to the resources will be responded with the following format.

Format

```
{
        code: response_code(required),
        message: description string(optional),
        object: returned_object(optional)
}
```

1.3 Response Code Definition

- OK: request is successed.
- PARAM_IS_REQUIRED: one or more parameters are missed
- INVALID_PARAM: one or more parameters are invalid, due to format restriction.
- AUTH_IS_REQUIRED: authentication is required before send request
- AUTH_FAILED: authentication failed, due to wrong authentication information.
- RESOURCE_NOT_EXIST: the requested resource does not exist

2. Farmer Module

2.1 Create a New Farmer

Resource URL

Post /farmer/create

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

Farmer(required):JSON
{

```
            farmer:{
                " Farmer ID": required,
                "First Name":required,
                "Last Name":required,
                "Address": required,
                "City": required,
                "State": required,
                "Zip Code": required,
                "Phone number": optional,
                "Email": optional,
                "Rating": optional,
                "Reviews": optional,
                "Own introduction in form of images and video":optional,
                "Delivery history": optional
            }
        };
```

2.2 Delete an Existing Farmer

Resource URL

Get /farmer/delete?id=_id

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

_id(required):String

2.3 List all Farmers known by the system

Resource URL

Get /farmer/show

Response

- Success : {OK with *object* = [Farmer, Farmer, ...]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

    None;

2.4 Change a Farmer's information – This function must support the ability to change ALL attributes

Resource URL

    Post /farmer/update

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

```
Farmer(required):JSON
        {
            farmer:{
                "Farmer ID": required,
                "First Name":required,
                "Last Name":required,
                "Address": required,
                "City": required,
                "State": required,
                 "Zip Code": required,
                 "Phone number": optional,
                "Email": optional,
                 "Rating": optional,
                 "Reviews": optional,
                "Own introduction in form of images and video":optional,
                "Delivery history": optional
            }
        };
```

2.5 Search for a farmer based on attributes. You do not have to consider attributes that are not listed above.

Resource URL

    Post /farmer/search

Response

- Success : {OK with *object* = [Farmer, Farmer, ...]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

Farmer(required):JSON

```
{
    farmer:{
        " Farmer ID": optional,
        "First Name": optional,
        "Last Name": optional,
        "Address": optional,
        "City": optional,
        "State": optional,
        "Zip Code": optional,
        "Phone number": optional,
        "Email": optional,
        "Rating": optional,
        "Reviews": optional,
        "Own introduction in form of images and video":optional,
        "Delivery history": optional
    }
};
```

2.6 Display information about a Farmer.

Resource URL

Get /farmer/show?id=_id

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

_id(required):String

2.7 Introduction video of the farmer.

Resource URL

Get /farmer/video?id=_id

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

_id(required):String

3.Product Module/Service:

3.1 Create a new Product

Resource URL

Post /product/create

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

Product(required):JSON
```
{
    product:{
        " Farmer ID": required,
        "Name":required,
        "Price":required,
        "Name":required,
        "Description":optional,
        "Reviews":optional,
        "Ratings":optional,
    }
};
```

3.2 Delete an existing Product

Resource URL

Get /product/delete?id=_id

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

_id(required):String

3.3 List all Products known by the system

Resource URL

Get /product/show

Response

- Success : {OK with *object* = [Product, Product, ...]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

None;

3.4 Change a Product's information – This function must support the ability to change ALL attributes

Resource URL

Post /product/update

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

Product(required):JSON
```
{
    product:{
```

```
            "Product ID":_id,
            " Farmer ID": required,
            "Name":required,
            "Price":required,
             "Description":optional,
            "Reviews":optional,
            "Ratings":optional
        }
    };
```

3.5 Search for a product based on attributes. You do not have to consider attributes that are not listed above.

Resource URL

    Post /product/search

Response

- Success : {OK with *object* = [Product, Product, …]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

```
    Product(required):JSON
        {
            product:{
                " Farmer ID":optional,
                "Name":optional,
                "Price":optional,
                 "Description":optional,
                "Reviews":optional,
                "Ratings":optional
            }
        };
```

3.6 Display information about a product.

Resource URL

    Get /product/show?id=_id

Response

- Success : {OK}

- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

_id(required):String

3.7 Post reviews and ratings

Resource URL

post /product/:productId

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}, {RESOURCE_NOT_EXIST}]

Parameters

review(required):JSON
```
{
        review: {
                rating: required,
                comment: required
        }
};
```

4. Customer Module

4.1 Create a new Customer

Resource URL

Post /customer

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}]

Parameters

Customer(required):JSON

```
{
    customer:{
        "First Name": required,
        "Last Name": required,
        "Address": required,
        "City": required,
        "State": required,
        "Zip": required,
        "Phone": required,
        "Email": required,
        "Credit Card": required
    }
};
```

4.2 Delete an existing Customer

Resource URL

Delete /customer?customerId=_id

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_REQUIRED}, {RESOURCE_NOT_EXIST}]

Parameters

_id(required): String

4.3 List all Customers known by the system

Resource URL

get /customer/show

Response

- Success : {OK with object=[Customer, Customer, …]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

None

5. Bill Module

5.1 Create a new Bill for each ride

Resource URL

post /customer/:customerId/bill

Response

- Success : {OK with object=[Customer, Customer, ...]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

None

5.2 Delete an existing Bill

Resource URL

delete /customer/:customerId/bill/:billId

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}, {RESOURCE_NOT_EXIST}]

Parameters

- customerId(required): number
- billId(required): number

5.3 Search an existing Bill

Resource URL

get /customer/:customerId/bill/search/:keyword

Response

- Success : {OK with object={Bill}}
- Errors: [{PARAM_IS_REQUIRED}, {AUTH_IS_REQUIRED}]

Parameters

     keyword(required): string

5.4 Select delivery time and date

Resource URL

     post /customer/:customerId/bill/:billId

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}, {RESOURCE_NOT_EXIST}]

Parameters

     time(required):JSON
               {
                    preferred_date_time: optional
               };

6. Admin Module

6.1 Add farmer to the system

Resource URL

     Post /system/addfarmer

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

     Farmer(required):JSON
        {
           farmer:{
              " Farmer ID": required,
              "Name":required,
              "ActiveDate":required,
           }
        };

6.2 Add product to the system

Resource URL

Post /system/addproduct

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

Product(required):JSON
```
{
   product:{
       " Product ID": required,
       "Name":required,
       "Availability":required,
    }
};
```

6.3 Add customer to the system

Resource URL

Post /system/addcustomer

Response

- Success : {OK}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

Customer(required):JSON
```
{
        customer:{
        "Customer ID": required,
        "ActiveDate":required,
        }
};
```

6.4 Review product account.

Resource URL

Get /system/reviewcproduct?id=_id

Response

- Success : {OK with *object* = [Product]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

_id(required):String

6.5 Review customer account.

Resource URL

Get /system/reviewcustomer?id=_id

Response

- Success : {OK with *object* = [Customer]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

_id(required):String

6.6 Show statistics (revenue/day) and total delivery (area wise).

Resource URL

Get /system/showrevedaily?startDate=_startDate?endDate=_endDate?zip=_zipCode

Response

- Success : {OK with *object* = [Revenue,Revenue,...]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Revenue(required):JSON
{
    Revenue:{
        "date": String
        "revenue-daily": String
        "delivery-daily": String

```
        }
    };
```

Parameters

        _startDate (required): Date/String
        _endDate (required): Date/String
        _zipCode (required): String

6.7 Show graphs/charts for different rides(trip) per area, per driver, per customer.

6.7.1 Show graphs/charts for different rides(trip) per area

Resource URL

        Get /system/showridaregraph?startDate=_startDate?endDate=_endDate?zip=_zipCode

Response
- Success : {OK with *object* = [Trip,Trip,...]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

        _startDate (required): Date/String
        _endDate (required): Date/String
        _zipCode (required): String

6.7.2 Show graphs/charts for different rides(trip) per driver

Resource URL

        Get /system/showriddrigraph?startDate=_startDate?endDate=_endDate?id=_idDriver

Response
- Success : {OK with *object* = [Trip,Trip,...]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

        _startDate (required): Date/String
        _endDate (required): Date/String
        _idDriver (required): String

6.7.3 Show graphs/charts for different rides(trip) per customer

Resource URL

Get
/system/showriddrigraph?startDate=_startDate?endDate=_endDate?id=_idCustomer

Response

- Success : {OK with *object* = [Trip,Trip,...]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

_startDate (required): Date/String
_endDate (required): Date/String
_idCustomer (required): String

6.8 Search for a Bill based on attributes· You do not have to consider attributes that are not listed.

Resource URL

Get /system/billsearch

Response

- Success : {OK with *object* = [Bill,Bill,...]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

Bill(required):JSON
{
    bill:{
        "Bill ID":optional,
        "Date":optional,
        "Expected Delivery time":optional,
        "Product ID" :optional,
        "Distance covered":optional,
        "Total amount for ride":optional,
        "Source location":optional,
        "Destination location":optional,
        "Driver ID":optional,
        "Customer ID":optional,
        }
};

6.9 Display information about a Bill.

Resource URL

Get /system/bill/show?id=_id

Response
- Success : {OK with *object* = [Bill]}
- Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

Parameters

_id(required):String

7. Trips Module

7.1 Create a new trip

Resource URL

Post /system/create_trip

Response

·

Success : {OK}

·

Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

·

Parameters

Trip(required):JSON
```
{
    trip:{
        "Trip ID":required,
        " Truck ID": required,
        "Drive ID":required,
        "Customer ID":required,
        "Pickup location":required,
        "Drop off location":required,
```

"Date/Time":required
                            }
                    };

7.2 Edit an existing trip

Resource URL

        Post /trip/edit?id=_id

Response

            .

        Success : {OK}

            .

        Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

            .

Parameters

        Trip(required):JSON
                {
                    trip:{
                            "Trip ID":required,
                            " Truck ID": required,
                            "Drive ID":required,
                            "Customer ID":required,
                            "Pickup location":required,
                            "Drop off location":required,
                            "Date/Time":required
                    }
                };

7.3 Delete an existing trip

Resource URL

        Get/trip/delete?id=_id

Response

.

Success : {OK}

.

Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

.

Parameters

_id(required):String

7.4 List of all trips of a truck

Resource URL

Get /trip/show_truck_trip?truck_id=_id

Response

.

Success : {OK with *object* = [Trip, Trip, ...]}

.

Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

```
Customer(required):JSON
{
   customer:{
   }
};
```

Parameters

```
        Truck(required):JSON
{
   customer:{
       "Truck ID": required,
       "Driver ID": required,
```

```
            "First Name": required,
            "Last Name": required,
            "Address": required,
            "City": required,
            "State": required,
            "Zip": required,
            "Phone number":required,
            "Email":required,
            "Car details": required,
            "Ride history": required,
              }
    };
```

7.5 List of all trips of a driver

Resource URL

Get /trip/show_driver_trip?driver_id=_id

Response

.

Success : {OK with *object* = [Trip, Trip, ...]}

.

Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

.

Parameters

```
    Driver(required):JSON
   {
     customer:{
          "Farmer ID": required,
          "First Name": required,
          "Last Name": required,
          "Address": required,
          "City": required,
          "State": required,
```

```
                                   "Zip": required,
                                   "Phone number":required,
                                   "Email":required,
                                   "Rating":required,
                                   "Reviews":required,
                                   "Own introduction": required,
                                   "Delivery history": required,
                                     }
                    };
```

7.6 Show trip statistics as per location

Resource URL

Get /trip/trip_statistics?id=_id

Response

.

Success : {OK with trip [location, location,location]}

.

Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

.

Parameters

_id(required):String

7.7 Display location of delivery truck from customer location

Resource URL

Get /trip/show_customer_truck_location?customer_id=_id

Response

.

Success : {OK}

.

Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

.

Parameters

Customer(required):JSON
```
{
   customer:{
         "First Name": required,
         "Last Name": required,
         "Address": required,
         "City": required,
         "State": required,
         "Zip": required,
         "Phone": required,
         "Email": required,
         "Credit Card": required
   }
};
```

7.8 Sample Admin Analysis Report for all deliveries from farms to customers

Resource URL

Get /system/report?customer_id=_id&&farmer_id=_id

Response

.

Success : {OK with *object* = [Report,Report,...]}

.

Errors: [{PARAM_IS_REQUIRED}, {INVALID_PARAM}, {AUTH_IS_REQUIRED}]

.

Parameters

Customer(required):JSON
```
{
   customer:{
        "First Name": required,
        "Last Name": required,
        "Address": required,
        "City": required,
        "State": required,
        "Zip": required,
        "Phone": required,
        "Email": required,
        "Credit Card": required
   }
};


Farmer(required):JSON
{
   farmer:{
        " Farmer ID": required,
        "Name":required,
        "ActiveDate":required,
   }
};
```