# I.     Overview

The goal of this assignment is to develop a management system for a restaurant, emphasizing management functions. The requirements are as follows:

- **Front End Frameworks:** Use any of these frameworks: React (Recommended), VueJS.
- **Responsive Design:** Implement a responsive design that works seamlessly on phones, tablets, and computer screens using any framework of your choice.
- **Error Handling Pages:** Create separate pages for handling errors, specifically a 404 page (Page Not Found) and a 500 page (Internal Server Error).
- **State Management:** While not mandatory, using a state management library (e.g., VueX) is recommended.
- **API Calls:** Using AXIOS for API calls is recommended but not required.

**I'll try my best to define all needed endpoints for each section, also acts as each set of requirements. If a endpoint is missing, please contact me through Zalo: 0906790230 or Email: ducsangtruong2004@gmail.com. I'll answer and resolve the matter within 4 hours.**

# Contents

## II.    Verify Middleware

Endpoints marked with "Verify Middleware" require verification before proceeding. This verification involves checking a header called "Authorization" for a token in the request. If verification is successful, the process continues, and the endpoint responds as intended. If verification fails, the following responses will be returned:

1. **No Token Found**:

- **Status**: 401
- **JSON**: `{"message": "Unauthorized"}`

2. **Invalid Token**:

- **Status**: 401
- **JSON**: `{"message": "Unauthorized"}`

3. **User's Role is Invalid for the Operation**:

- **Status**: 403
- **JSON**: `{"message": "Forbidden"}`

4. **Invalid User (Fake Token or Deleted User)**:

- **Status**: 404
- **JSON**: `{"message": "User does not exist"}`

5. **Error**:

- **Status**: 500
- **JSON**: `{"message": "Internal Server Error"}`

## III.    User Management End Points

The endpoints listed below are designed for user login, password changes, and self-management. While the following front-end pages are recommended, their structure are not mandatory. Suggested pages include:

- **Login Page**
- **Change Password Page**
- **User Profile Page**: This page should allow users to update their profile information. For location-related information, a dropdown list of available locations is preferred. Refer to the location endpoint for more details.

The related endpoints are detailed as follows:

### 1. Login Endpoint

- **URL**: https://koala-restaurant.vercel.app/api/v1/user/login
- **Method**: POST

- **Payload**: JSON `{"username": "Gus", "password": "LosPollos"}`
- **Respond Success**:
  - **Status**: 200
  - **JSON**: `{"token": "JWT.user.token"}`
- **Respond Invalid User (Wrong username or password)**:
  - **Status**: 404
  - **JSON**: `{"message": "Invalid username or password"}`
- **Respond Invalid Input / Missing Field**:
  - **Status**: 400
  - **JSON**: `{"message": "Missing input fields!"}`
- **Respond Error**:
  - **Status**: 500
  - **JSON**: `{"message": "Internal server error"}`
- **Side Note**: JSON token is valid for 3 days. Please save the token in browser storage, and disable login button when logged in, replace by a welcome message. If possible, please implement the auto delete token when expired.

## 2. ChangePassword Endpoint

- **Requires Authorization Middleware**
- **URL**: https://koala-restaurant.vercel.app/api/v1/user/change-password
- **Method**: PATCH
- **Payload**: JSON `{"newPassword": "newPasswordOfYourChoice"}`
- **Header**: Authorization, Content: Token from Login
- **Respond Success**:
  - **Status**: 200
  - **JSON**: `{"message": "Password updated successfully"}`
- **Respond Invalid Input / Missing Field**:
  - **Status**: 400
  - **JSON**: `{"message": "Missing input fields!"}`
- **Respond Change Failed**:
  - **Status**: 500
  - **JSON**: `{"message": "Failed to update password"}`
- **Respond Error**:
  - **Status**: 500
  - **JSON**: `{"message": "Internal server error"}`

## 3. ViewProfile Endpoint

- **Requires Authorization Middleware**
- **URL**: https://koala-restaurant.vercel.app/api/v1/user/view-profile
- **Method**: GET
- **Header**: Authorization, Content: Token from Login
- **Respond Success**:
  - **Status**: 200
  - **JSON**:

```
{
  "UserID": 2,
  "Name": "Gustavo Fring",
  "Role": "Owner",
  "ContactDetails": null,
  "Login": "Gus",
  "CreationDate": "2024-06-27T18:14:59.000Z",
  "ModificationDate": "2024-07-03T09:10:30.000Z",
  "location": {
```

```
        "LocationID": 2,
        "Address": "12000 - 12100 Coors Rd SW",
        "City": "Albuquerque",
        "State": "New Mexico",
        "ZipCode": "87045",
        "Country": "USA",
        "CreationDate": "2024-07-03T09:09:25.000Z",
        "ModificationDate": "2024-07-03T09:09:25.000Z"
      }
    }
```

- **Respond Error**:
  - **Status**: 500
  - **JSON**: {"message": "Internal server error"}

Note: The `location` may be an empty object in some cases.

## 4. UpdateUser Endpoint

- **Requires Authorization Middleware**
- **URL**: https://koala-restaurant.vercel.app/api/v1/user/update
- **Method**: PATCH
- **Header**: Authorization, Content: Token from Login
- **Payload**: JSON, note: Empty fields are still acceptable

```
{
  "name": "Gustavo Fring",
  "contactDetails": "Phone",
  "login": "Gustavo",
  "password": "ChickenMan",
  "locationID": 1
}
```

- **Respond Success**:
  - **Status**: 200
  - **JSON**:

```
{
  "message": "User updated successfully",
  "result": {
    "fieldCount": 0,
    "affectedRows": 1,
    "insertId": 0,
    "serverStatus": 2,
    "warningCount": 0,
    "message": "(Rows matched: 1  Changed: 1  Warnings: 0",
    "protocol41": true,
    "changedRows": 1
  }
}
```

- **Respond Invalid Location**:
  - **Status**: 400
  - **JSON**:

```
{
  "message": "Invalid LocationID"
}
```

- **Respond Error**:
  - **Status**: 500

- **JSON**: `{"message": "Internal server error"}`
- **Respond Error**:
  - **Status**: 409
  - **JSON**: `{"message": " Duplicate username error"}`

## IV.   Owner Management Endpoint

The endpoint listed below are designed for Owner to manage all accounts, which including viewing details of the account, update account details, create account, role assigment, searching, etc. In these routes, the only role accepted is Owner.

The front end is expected to allow Owner fully control over their employees, and pages are freely defined, as long as fitting the mentioned requirements.

The related endpoints are listed down as follows:

### 1.  Create User endpoint

- **Require Authorization Middleware**
- **URL:** https://koala-restaurant.vercel.app/api/v1/owner/create-user

- **Method:** POST
- **Header:** Authorization, Content: Token from Login
- **Note:** Only roles Owner, Waiter, Chef, Customer are accepted.
- **Payload: JSON**

```
{
  "name": "Tiger D. Dragon",
  "role": "Owner",
  "login": "Ego",
  "password": "hehe",
  "locationID": 2
}
```

- **Success Response:**
  - **Status:** 201
  - **JSON:**

    ```
    {
      "message": "User created successfully",
      "userID": 14
    }
    ```

- **Error Responses:**
  - **Status:** 400
    - **JSON:** `{"message": "Invalid LocationID"}`
  - **Status:** 400
    - **JSON:** `{"message": "Invalid Role"}`
  - **Status:** 409 (this refer to Login)
    - **JSON:** `{"error": "Duplicate username error"}`
  - **Status:** 500
    - **JSON:** `{"error": "Internal server error"}`

### 2.  Update User End Point

- **Require Authorization Middleware**
- **URL:** https://koala-restaurant.vercel.app/api/v1/owner/update-user/:id
- **Method:** PATCH
- **Header:** Authorization, Content: Token from Login
- **Note: Only roles Chef, Waiter, Owner, Customer are accepted, Empty input are acceptable**

- **Accepted Roles: Waiter, Owner, Chef, Customer**
- **Payload:** JSON (Note: Empty fields are still acceptable)

```
{
  "name": "Tiger D. Dragon",
  "contactDetails": "email",
  "role": "Owner",
  "login": "Ego",
  "locationID": 2
}
```

- **Success Response:**
  - **Status:** 200
  - **JSON:**

```
{
  "message": "User updated successfully",
  "result": {
    "fieldCount": 0,
    "affectedRows": 1,
    "insertId": 0,
    "serverStatus": 2,
    "warningCount": 0,
    "message": "(Rows matched: 1  Changed: 0  Warnings: 0",
    "protocol41": true,
    "changedRows": 0
  }
}
```

- **Error Responses:**
  - **Status:** 400
    - **JSON:** {"message": "Invalid LocationID"}
  - **Status:** 400
    - **JSON:** {"message": "Invalid Role"}
  - **Status:** 404
    - **JSON:** {"error": "User does not exist"}
  - **Status:** 409
    - **JSON:** {"error": "Duplicate username error"}
  - **Status:** 500
    - **JSON:** {"error": "Internal server error"}

3. Delete User endpoint

- **Require Authorization Middleware**
- **URL:** https://koala-restaurant.vercel.app/api/v1/owner/delete-user/:id
- **Method:** DELETE
- **Header:** Authorization, Content: Token from Login
- **Success Response:**

  - **Status:** 200
  - **JSON:**

```
{
  "message": "User deleted successfully."
}
```
- **Error Responses:**

  - **Status:** 404
    - **JSON:** {"error": "User not found."}

- **Status:** 500
  - o **JSON:** {"error": "Internal server error"}

## 4. ViewEmployeeOnLocation Endpoint

- **Require Authorization Middleware**
- **URL:** https://koala-restaurant.vercel.app/api/v1/owner/view-user/location/:id
- **Method:** GET
- **Header:** Authorization, Content: Token from Login
- **Success Response:**
  - o **Status:** 200
  - o **JSON:**

```
[
  {
    "UserID": 2,
    "Name": "Gustavo Fring",
    "Role": "Owner",
    "ContactDetails": "Phone",
    "Login": "Gustavo",
    "CreationDate": "2024-06-27T18:14:59.000Z",
    "ModificationDate": "2024-07-09T09:27:26.000Z",
    "LocationID": 2
  },
  {
    "UserID": 5,
    "Name": "Victor",
    "Role": "Waiter",
    "ContactDetails": null,
    "Login": "Victor",
    "CreationDate": "2024-07-03T10:09:52.000Z",
    "ModificationDate": "2024-07-03T15:53:07.000Z",
    "LocationID": 2
  }
]
```

- **Error Responses:**
  - o **Status:** 404
    - ▪ **JSON:** {"error": "There is no user in this location"}
  - o **Status:** 500
    - ▪ **JSON:** {"error": "Internal server error"}

## 5. ViewEmployeeAccount Endpoint

- **Require Authorization Middleware**
- **URL:** https://koala-restaurant.vercel.app/api/v1/owner/view-user/:id
- **Method:** GET
- **Header:** Authorization, Content: Token from Login
- **Success Response:**
  - o **Status:** 200
  - o **JSON:**

```
{
  "user": {
    "UserID": 1,
    "Name": "Walter Hartwell White",
    "Role": "Chef",
    "ContactDetails": null,
    "Login": "Heisenberg",
    "CreationDate": "2024-06-27T18:14:58.000Z",
```

```
          "ModificationDate": "2024-07-08T07:23:31.000Z",
          "LocationID": 1
        },
      "location": {
        "LocationID": 1,
        "Address": "308 Negra Arroyo Lane",
        "City": "Albuquerque",
        "State": "New Mexico",
        "ZipCode": "87104",
        "Country": "USA",
        "CreationDate": "2024-06-27T18:07:48.000Z",
        "ModificationDate": "2024-06-27T18:07:48.000Z"
      }
    }
```

- **Error Responses:**
  - **Status: 404**
    - **JSON:** {"error": "User does not exist"}
  - **Status: 500**
    - **JSON:** {"error": "Internal server error"}

## 6. AssignUserRole Endpoint

- **Require Authorization Middleware**
- **Accepted Roles: Waiter, Owner, Chef, Customer**
- **URL:** https://koala-restaurant.vercel.app/api/v1/owner/assign-role/:id
- **Method:** PATCH
- **Header:** Authorization, Content: Token from Login
- **Payload:**

```
{
  "role": "Waiter"
}
```

- **Success Response:**
  - **Status: 200**
  - **JSON:**

```
{
  "message": "User role updated successfully",
  "result": {
    "fieldCount": 0,
    "affectedRows": 1,
    "insertId": 0,
    "serverStatus": 2,
    "warningCount": 0,
    "message": "(Rows matched: 1  Changed: 1  Warnings: 0",
    "protocol41": true,
    "changedRows": 1
  }
}
```

- **Error Responses:**
  - **Status: 400**
    - **JSON:** {"message": "Invalid role"}
  - **Status: 404**
    - **JSON:** {"error": "User not found"}
  - **Status: 500**
    - **JSON:** {"error": "Internal server error"}

## 7. SearchUser Endpoint

- **Require Authorization Middleware**
- **URL:** https://koala-restaurant.vercel.app/api/v1/owner/search-user/:searchQueries
- **Method:** POST
- **Header:** Authorization, Content: Token from Login
- **Note:** Search query can be Location, name or login's name. Either works when passed in, but only one parameter is accepted.
- **Success Response:**
  - **Status:** 200
  - **JSON:**

```
[
  {
    "UserID": 1,
    "Name": "Walter Hartwell White",
    "Role": "Chef",
    "ContactDetails": null,
    "Login": "Heisenberg",
    "CreationDate": "2024-06-27T18:14:58.000Z",
    "LocationID": 1,
    "ModificationDate": "2024-07-08T07:23:31.000Z",
    "Location": "308 Negra Arroyo Lane, Albuquerque, New Mexico 87104, USA"
  },
  {
    "UserID": 2,
    "Name": "Gustavo Fring",
    "Role": "Owner",
    "ContactDetails": "Phone",
    "Login": "Gustavo",
    "CreationDate": "2024-06-27T18:14:59.000Z",
    "LocationID": 2,
    "ModificationDate": "2024-07-09T09:27:26.000Z",
    "Location": "12000 - 12100 Coors Rd SW, Albuquerque, New Mexico 87045,
USA"
  }
]
```

- **Error Responses:**
  - **Status:** 500
    - **JSON:** {"error": "Internal server error"}

## 8. ViewAllEmployee Endpoint

- **Require Authorization Middleware**
- **URL:** https://koala-restaurant.vercel.app/api/v1/owner/view-user
- **Method:** GET
- **Header:** Authorization, Content: Token from Login
- **Success Response:**
  - **Status:** 200
  - **JSON:**

```
[
  {
    "UserID": 1,
    "Name": "Walter Hartwell White",
```

```
      "Role": "Chef",
      "ContactDetails": null,
      "Login": "Heisenberg",
      "CreationDate": "2024-06-27T18:14:58.000Z",
      "LocationID": 1,
      "ModificationDate": "2024-07-08T07:23:31.000Z",
      "Location": "308 Negra Arroyo Lane, Albuquerque, New Mexico 87104, USA"
    },
    {
      "UserID": 2,
      "Name": "Gustavo Fring",
      "Role": "Owner",
      "ContactDetails": "Phone",
      "Login": "Gustavo",
      "CreationDate": "2024-06-27T18:14:59.000Z",
      "LocationID": 2,
      "ModificationDate": "2024-07-09T09:27:26.000Z",
      "Location": "12000 – 12100 Coors Rd SW, Albuquerque, New Mexico 87045,
USA"
    },
    {
      "UserID": 3,
      "Name": "Michael Ehrmantraut",
      "Role": "Waiter",
      "ContactDetails": null,
      "Login": "Mike",
      "CreationDate": "2024-06-27T18:15:01.000Z",
      "LocationID": 3,
      "ModificationDate": "2024-07-03T13:01:23.000Z",
      "Location": "204 Edith Blvd. NE, Albuquerque, New Mexico 87102, USA"
    },
    {
      "UserID": 5,
      "Name": "Victor",
      "Role": "Waiter",
      "ContactDetails": null,
      "Login": "Victor",
      "CreationDate": "2024-07-03T10:09:52.000Z",
      "LocationID": 2,
      "ModificationDate": "2024-07-03T15:53:07.000Z",
      "Location": "12000 – 12100 Coors Rd SW, Albuquerque, New Mexico 87045,
USA"
    },
    {
      "UserID": 10,
      "Name": "Tiger D. Dragon",
      "Role": "Chef",
      "ContactDetails": "email",
      "Login": "Ego",
      "CreationDate": "2024-07-09T09:57:33.000Z",
      "LocationID": 2,
      "ModificationDate": "2024-07-09T10:22:16.000Z",
      "Location": "12000 – 12100 Coors Rd SW, Albuquerque, New Mexico 87045,
USA"
    }
]
```

- **Error Responses:**
  - **Status:** 500
    - **JSON:** {"error": "Internal server error"}

## V.    Owner Manage Location Endpoint

The following routes are defined as routes for owner to manage branches on their restaurant system, allowing owner to update branch's basic information, add branch, read and delete, or simply display the

branches for all user.. SearchLocation Endpoint. In this section, all routes need user verify middleware require the role Owner, while others can be interracted by the general public.

1. Search Location Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/location/search/:searchQueries
- **Method:** POST
- **Responds:**
  - **Status 200:**

```
[
  {
    "LocationID": 1,
    "Address": "308 Negra Arroyo Lane",
    "City": "Albuquerque",
    "State": "New Mexico",
    "ZipCode": "87104",
    "Country": "USA",
    "CreationDate": "2024-06-27T18:07:48.000Z",
    "ModificationDate": "2024-06-27T18:07:48.000Z"
  }
]
```

  - **Status 500:**

```
{ "message": "Internal server error" }
```

## 2. ViewLocation Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/location/:id
- **Method:** GET
- **Responds:**
  - **Status 200:**

```
{
  "LocationID": 1,
  "Address": "308 Negra Arroyo Lane",
  "City": "Albuquerque",
  "State": "New Mexico",
  "ZipCode": "87104",
  "Country": "USA",
  "CreationDate": "2024-06-27T18:07:48.000Z",
  "ModificationDate": "2024-06-27T18:07:48.000Z"
}
```

  - **Status 400:**

```
{ "message": "Location ID is required" }
```

  - **Status 404:**

```
{ "message": "Location not found" }
```

  - **Status 500:**

```
{ "message": "Internal server error" }
```

## 3. CreateLocation Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/location
- **Method:** POST
- **Require Authorization Middleware**

- **Header:** Authorization, Content: Token from Login
- **Payload: JSON**

```
{

  "address": "to be deleted",

  "city": "Albuquerque",

  "state": "New Mexico",

  "zipCode": "87101",

  "country": "USA"

}
```

- **Responds:**
  - **Status 201:**

```
{
  "message": "Location created",
  "locationID": 4
}
```

  - **Status 400:**

```
{ "message": "Missing input fields" }
```

  - **Status 500:**

```
{ "message": "Internal server error" }
```

## 4. UpdateLocation Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/location/:id
- **Method:** PATCH
- **Require Authorization Middleware**
- **Header:** Authorization, Content: Token from Login
- **Payload: JSON**

```
{

  "address": "1600 Pennsylvania Avenue NW",

  "city": "Albuquerque",

  "state": "New Mexico",

  "zipCode": "87101",

  "country": "USA"

}
```

- **Responds:**
  - **Status 200:**

```
{ "message": "Location updated" }
```

o **Status 400:**

```
{ "message": "LocationID is required" }
```

o **Status 404:**

```
{ "message": "Location not found" }
```

o **Status 500:**

```
{ "message": "Internal server error" }
```

## 5. DeleteLocation Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/location/:id
- **Method:** DELETE
- **Require Authorization Middleware**
- **Header:** Authorization, Content: Token from Login
- **Responds:**
  o **Status 200:**

```
{ "message": "Location deleted" }
```

  o **Status 400:**

```
{ "message": "Location ID is required" }
```

  o **Status 404:**

```
{ "message": "Location not found" }
```

  o **Status 500:**

```
{ "message": "Internal server error" }
```

## 6. ViewAllLocation Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/location/
- **Method:** GET
- **Responds:**
  o **Status 200:**

```
[
  {
    "LocationID": 1,
    "Address": "308 Negra Arroyo Lane",
    "City": "Albuquerque",
    "State": "New Mexico",
    "ZipCode": "87104",
    "Country": "USA",
    "CreationDate": "2024-06-27T18:07:48.000Z",
    "ModificationDate": "2024-06-27T18:07:48.000Z"
  },
  {
    "LocationID": 2,
    "Address": "12000 - 12100 Coors Rd SW",
    "City": "Albuquerque",
    "State": "New Mexico",
    "ZipCode": "87045",
    "Country": "USA",
```

```
      "CreationDate": "2024-07-03T09:09:25.000Z",
      "ModificationDate": "2024-07-03T09:09:25.000Z"
    },
    {
      "LocationID": 3,
      "Address": "204 Edith Blvd. NE",
      "City": "Albuquerque",
      "State": "New Mexico",
      "ZipCode": "87102",
      "Country": "USA",
      "CreationDate": "2024-07-03T13:00:25.000Z",
      "ModificationDate": "2024-07-03T13:00:25.000Z"
    },
    {
      "LocationID": 4,
      "Address": "1600 Pennsylvania Avenue NW",
      "City": "Albuquerque",
      "State": "New Mexico",
      "ZipCode": "87101",
      "Country": "USA",
      "CreationDate": "2024-07-10T13:23:15.000Z",
      "ModificationDate": "2024-07-10T15:21:56.000Z"
    }
  ]
```

- o **Status 500:**

```
{ "message": "Internal server error" }
```

# VI.    Waiter / Owner Manage Dishes

The following routes are defined for Waiter to create and manage dishes of the restaurant. Dishes referred here is the dishes in menu, not in order. The waiter is required to provide an illustrate of image when create / update dish. Fields with verify middleware accepts role Owner and Waiter, while other fields are available for the general public.

## 1. AddDish Endpoint

- **Require Authorization Middleware (Waiter role)**
- **URL:** https://koala-restaurant.vercel.app/api/v1/dishes
- **Method:** POST
- **Header:**
  - o `Authorization`: Token from Login
- **Payload:** Multipart form
  - o `name`: string
  - o `description`: string
  - o `price`: string (AUD)
  - o `preparationTime`: int (Minute)
  - o `categoryID`: int
  - o `image`: file
- **Success Response:**
  - o **Status:** 201
  - o **JSON:**

```
{
  "message": "Dish uploaded successfully",
  "dishID": 3
}
```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      `{ "message": "Dish Missing Field!" }`

    - **JSON:**

      `{ "message": "Error uploading file" }`

    - **JSON:**

      `{ "message": "No file uploaded" }`

    - **JSON:**

      `{ "message": "Category Does Not Exist" }`

  - **Status:** 500
    - **JSON:**

      `{ "message": "Internal server error" }`

## 2. UpdateDish Endpoint

- **Require Authorization Middleware (Waiter role)**
- **URL:** https://koala-restaurant.vercel.app/api/v1/dishes/:id
- **Method:** PATCH
- **Header:**
  - `Authorization`: Token from Login
- **Payload:** Multipart form
  - `name`: string
  - `description`: string
  - `price`: string (AUD)
  - `preparationTime`: int (Minute)
  - `categoryID`: int
  - `image`: file
- **Note:** Empty fields are acceptable
- **Success Response:**
  - **Status:** 200
  - **JSON:**

    ```
    {
      "message": "Dish updated successfully",
      "result": true
    }
    ```

- **Error Responses:**
  - **Status:** 404
    - **JSON:**

      `{ "message": "Dish not found" }`

  - **Status:** 400
    - **JSON:**

      `{ "message": "Category Does Not Exist" }`

o **Status:** 500
  ▪ **JSON:**

```
{ "message": "Internal server error" }
```

## 3. DeleteDish Endpoint

- **Require Authorization Middleware**
- **URL:** https://koala-restaurant.vercel.app/api/v1/dishes/:id
- **Method:** DELETE
- **Header:**
  o `Authorization`: Token from Login
- **Success Response:**
  o **Status:** 200
  o **JSON:**

```
{
  "message": "Dish deleted successfully"
}
```

- **Error Responses:**
  o **Status:** 404
    ▪ **JSON:**

```
{ "message": "Dish not found" }
```

  o **Status:** 400
    ▪ **JSON:**

```
{ "message": "Dish ID is required" }
```

  o **Status:** 500
    ▪ **JSON:**

```
{ "message": "Internal server error" }
```

## 4. GetDishByID Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/dishes/:id
- **Method:** GET
- **Success Response:**
  o **Status:** 200
  o **JSON:**

```
{
  "DishID": 2,
  "DishName": "Heisenberg Speciality",
  "Description": "Special from Heisenberg",
  "Price": 100,
  "PreparationTime": 200,
  "ImageLink": "https://prod-restaurant-bucket.s3.amazonaws.com/3228b916-
5f87-4914-8041-427ed56abd45-Heisenberg.jpg",
  "CreationDate": "2024-07-04T09:22:01.000Z",
  "ModificationDate": "2024-07-05T06:08:28.000Z",
  "CreatedBy": null,
  "ModifiedBy": null,
  "CategoryID": 1,
  "CategoryName": "Beverages"
}
```

- **Error Responses:**
  - **Status:** 404
    - **JSON:**

      `{ "message": "Dish not found" }`

  - **Status:** 400
    - **JSON:**

      `{ "message": "Dish ID is required" }`

  - **Status:** 500
    - **JSON:**

      `{ "message": "Internal server error" }`

## 5. SearchDishes Endpoint (name or description)

- **URL:** https://koala-restaurant.vercel.app/api/v1/dishes/search/:searchQueries
- **Method:** POST
- **Success Response:**
  - **Status:** 200
  - **JSON:**

    ```
    [
      {
        "DishID": 2,
        "DishName": "Heisenberg Speciality",
        "Description": "Special from Heisenberg",
        "Price": 100,
        "PreparationTime": 200,
        "ImageLink": "https://prod-restaurant-bucket.s3.amazonaws.com/3228b916-
    5f87-4914-8041-427ed56abd45-Heisenberg.jpg",
        "CreationDate": "2024-07-04T09:22:01.000Z",
        "ModificationDate": "2024-07-05T06:08:28.000Z",
        "CreatedBy": null,
        "ModifiedBy": null,
        "CategoryID": 1,
        "CategoryName": "Beverages"
      }
    ]
    ```

- **Error Responses:**
  - **Status:** 500
    - **JSON:**

      `{ "message": "Internal server error" }`

## 6. GetDishesByCategoryID Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/dishes/category/:id
- **Method:** GET
- **Success Response:**
  - **Status:** 200
  - **JSON:**

    ```
    [
      {
        "DishID": 2,
        "DishName": "Heisenberg Speciality",
        "Description": "Special from Heisenberg",
    ```

```
      "Price": 100,
      "PreparationTime": 200,
      "ImageLink": "https://prod-restaurant-bucket.s3.amazonaws.com/3228b916-
  5f87-4914-8041-427ed56abd45-Heisenberg.jpg",
      "CreationDate": "2024-07-04T09:22:01.000Z",
      "ModificationDate": "2024-07-05T06:08:28.000Z",
      "CreatedBy": null,
      "ModifiedBy": null,
      "CategoryID": 1,
      "CategoryName": "Beverages"
    }
  ]
```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      ```
      { "message": "Category ID is required" }
      ```

  - **Status:** 404
    - **JSON:**

      ```
      { "message": "No dishes found for the given category ID" }
      ```

  - **Status:** 500
    - **JSON:**

      ```
      { "message": "Internal server error" }
      ```

## 7. GetAllDishes Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/dishes
- **Method:** GET
- **Success Response:**
  - **Status:** 200
  - **JSON:**

    ```
    [
      {
        "DishID": 2,
        "DishName": "Heisenberg Speciality",
        "Description": "Special from Heisenberg",
        "Price": 100,
        "PreparationTime": 200,
        "ImageLink": "https://prod-restaurant-bucket.s3.amazonaws.com/3228b916-
    5f87-4914-8041-427ed56abd45-Heisenberg.jpg",
        "CreationDate": "2024-07-04T09:22:01.000Z",
        "ModificationDate": "2024-07-05T06:08:28.000Z",
        "CreatedBy": null,
        "ModifiedBy": null,
        "CategoryID": 1,
        "CategoryName": "Beverages"
      }
    ]
    ```

- **Error Responses:**
  - **Status:** 500
    - **JSON:**

      ```
      { "message": "Internal server error" }
      ```

## VII.  Owner / Waiter Manage Menu

### 1. Add Menu

- **URL:** https://koala-restaurant.vercel.app/api/v1/menu
- **Method:** POST
- **Authorization Required:** Yes (Owner role)
- **Header:**
  - Authorization: Token from Login
- **Payload:** application/json

```
{
  "name": "Los Pollos Hermanos Speciality",
  "description": "Mein menu!!!!!",
  "locationID": 2
}
```

- **Responses:**
  - **Success:** 201

    ```
    {
      "message": "Menu added successfully",
      "menuID": 3
    }
    ```

  - **Error:** 400

    ```
    { "message": "Menu Missing Field!" }
    ```

  - **Error:** 404

    ```
    { "message": "Location does not exist" }
    ```

  - **Error:** 500

    ```
    { "message": "Internal server error" }
    ```

### 2. Get Menu by ID

- **URL:** https://koala-restaurant.vercel.app/api/v1/menu/:id
- **Method:** GET
- **Responses:**
  - **Success:** 200

    ```
    {
      "MenuID": 1,
      "Name": "Main menu - edited",
      "Description": "Main menu for all main dishes - edited",
      "CreationDate": "2024-07-11T10:38:11.000Z",
      "ModificationDate": "2024-07-16T10:01:53.000Z",
      "LocationID": 1,
      "CreatedBy": 2,
      "ModifiedBy": 2
    }
    ```

  - **Error:** 400

    ```
    { "message": "Menu ID is required" }
    ```

  - **Error:** 404

```
{ "message": "Menu not found" }
```

- **Error:** 500

```
{ "message": "Internal server error" }
```

## 3. Get Menu by Location ID

- **URL:** https://koala-restaurant.vercel.app/api/v1/menu/location/:id
- **Method:** GET
- **Responses:**
  - **Success:** 200

    ```
    [
      {
        "MenuID": 1,
        "Name": "Main menu",
        "Description": "Main menu for all main dishes",
        "CreationDate": "2024-07-11T10:38:11.000Z",
        "ModificationDate": "2024-07-11T10:38:11.000Z",
        "LocationID": 1,
        "CreatedBy": 2,
        "ModifiedBy": 2
      }
    ]
    ```

  - **Error:** 400

    ```
    { "message": "Location ID is required" }
    ```

  - **Error:** 404

    ```
    { "message": "Location does not exist" }
    ```

  - **Error:** 404

    ```
    {
      "message": "No menu available at this location",
      "location": {
        "LocationID": 3,
        "Address": "204 Edith Blvd. NE",
        "City": "Albuquerque",
        "State": "New Mexico",
        "ZipCode": "87102",
        "Country": "USA",
        "CreationDate": "2024-07-03T13:00:25.000Z",
        "ModificationDate": "2024-07-03T13:00:25.000Z"
      }
    }
    ```

  - **Error:** 500

    ```
    { "message": "Internal server error" }
    ```

## 4. Get Dishes in Menu by ID

- **URL:** https://koala-restaurant.vercel.app/api/v1/menu/dishes/:id
- **Method:** GET
- **Responses:**
  - **Success:** 200

    ```
    [
    ```

```
  {
    "MenuID": 1,
    "DishID": 2,
    "DishName": "Heisenberg Speciality",
    "DishDescription": "Special from Heisenberg",
    "Price": 100,
    "PreparationTime": 200,
    "ImageLink": "https://prod-restaurant-bucket.s3.amazonaws.com/3228b916-
5f87-4914-8041-427ed56abd45-Heisenberg.jpg",
    "Status": "Unavailable",
    "CategoryID": 1,
    "CategoryName": "Beverages"
  }
]
```

- o **Error:** 400

```
{ "message": "Menu ID is required" }
```

- o **Error:** 404

```
{ "message": "Menu not found or menu with given ID is empty" }
```

- o **Error:** 500

```
{ "message": "Internal server error" }
```

## 5. Add Dish to Menu

- **URL:** https://koala-restaurant.vercel.app/api/v1/menu/:id/dish
- **Method:** POST
- **Authorization Required:** Yes (Waiter, Owner roles)
- **Header:**
  - o Authorization: Token from Login
- **Payload:** application/json

```
{
  "dishID": 2
}
```

- **Responses:**
  - o **Success:** 200

```
{
  "message": "Added dish to menu successfully"
}
```

  - o **Error:** 400

```
{ "message": "MenuID is required" }
```

  - o **Error:** 400

```
{ "message": "Dish to be added does not exist" }
```

  - o **Error:** 400

```
{ "message": "Dish already exists in the given menu" }
```

  - o **Error:** 404

```
{ "message": "The menu with the given ID does not exist" }
```

  o **Error:** 500

```
{ "message": "Internal server error" }
```

## 6. Delete Whole Menu

- **URL:** https://koala-restaurant.vercel.app/api/v1/menu/:id
- **Method:** DELETE
- **Authorization Required:** Yes (Owner role)
- **Header:**
    o Authorization: Token from Login
- **Responses:**
    o **Success:** 200

```
{
  "message": "Menu deleted successfully"
}
```

  o **Error:** 400

```
{ "message": "MenuID is required" }
```

  o **Error:** 500

```
{ "message": "Internal server error" }
```

## 7. Delete Dish from Menu

- **URL:** https://koala-restaurant.vercel.app/api/v1/menu/:id/dish
- **Method:** DELETE
- **Authorization Required:** Yes (Waiter, Owner roles)
- **Header:**
    o Authorization: Token from Login
- **Payload:** application/json

```
{
  "dishID": 2
}
```

- **Responses:**
    o **Success:** 200

```
{
  "message": "Dish removed from menu successfully"
}
```

  o **Error:** 400

```
{ "message": "Missing required fields" }
```

  o **Error:** 500

```
{ "message": "Internal server error" }
```

## 8. Update Menu Details

- **URL:** https://koala-restaurant.vercel.app/api/v1/menu/:id
- **Method:** PATCH
```

- **Authorization Required:** Yes (Waiter, Owner roles)
- **Header:**
  - o  `Authorization: Token from Login`
- **Payload:** `application/json`

```
{
  "name": "Main menu - edited",
  "description": "Main menu for all main dishes - edited"
}
```

- **Responses:**
  - o  **Success:** 200

    ```
    {
      "message": "Menu updated successfully",
      "result": true
    }
    ```

  - o  **Error:** 400

    ```
    { "message": "menuID is required" }
    ```

  - o  **Error:** 404

    ```
    { "message": "Menu not found" }
    ```

  - o  **Error:** 500

    ```
    { "message": "Internal server error" }
    ```

## 9. Modify Dish Status

- **URL:** https://koala-restaurant.vercel.app/api/v1/menu/dish/status
- **Method:** `PUT`
- **Authorization Required:** Yes (Waiter, Owner, Chef roles)
- **Header:**
  - o  `Authorization: Token from Login`
- **Payload:** `application/json`

```
{
  "dishID": 2,
  "menuID": 1,
  "status": "Unavailable"
}
```

- **Accepted Status:** `Available`, `Unavailable`
- **Responses:**
  - o  **Success:** 200

    ```
    {
      "message": "Dish status updated successfully"
    }
    ```

  - o  **Error:** 400

    ```
    { "message": "Missing input field!" }
    ```

  - o  **Error:** 400

```
{ "message": "Invalid Status Entered" }
```

o **Error:** 500

```
{ "message": "Internal server error" }
```

## VIII.  Owner Manage Category

### 1. CreateCategory Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/category
- **Method:** POST
- **Authorization Required:** Yes (Owner role)
- **Header:**
    - o  Authorization: Token from Login
- **Payload:** application/json

```
{
  "name": "Chicken",
  "description": "Los Pollos Hermanos's chicken"
}
```

- **Responses:**
    - o  **Success: 201**

    ```
    {
      "message": "Category created successfully",
      "CategoryID": 10
    }
    ```

    - o  **Error: 500**

    ```
    { "message": "Internal server error" }
    ```

### 2. ModifyCategory Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/category/:id
- **Method:** PATCH
- **Authorization Required:** Yes (Owner role)
- **Header:**
    - o  Authorization: Token from Login
- **Payload:** application/json

```
{
  "name": "Los Pollos's Chicken",
  "description": "Los Pollos Hermanos's chicken"
}
```

- **Responses:**
    - o  **Success: 200**

    ```
    {
      "message": "Category updated successfully"
    }
    ```

    - o  **Error: 400**

    ```
    { "message": "CategoryID is required" }
    ```
```

o **Error: 404**

```
{ "message": "Category does not exist" }
```

o **Error: 500**

```
{ "message": "Internal server error" }
```

## 3. ViewByID Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/category/:id
- **Method:** GET
- **Responses:**
  - **Success: 200**

```
{
  "category": {
    "CategoryID": 10,
    "Name": "Los Pollos's Chicken",
    "Description": "Los Pollos Hermanos's chicken",
    "CreatedBy": null,
    "ModifiedBy": null,
    "CreationDate": "2024-07-17T07:42:42.000Z",
    "ModificationDate": "2024-07-17T07:43:04.000Z"
  }
}
```

  - **Error: 404**

```
{ "message": "Category not found" }
```

  - **Error: 500**

```
{ "message": "Internal server error" }
```

## 4. DeleteCategory Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/category/:id
- **Method:** DELETE
- **Authorization Required:** Yes (Owner role)
- **Header:**
  - Authorization: Token from Login
- **Responses:**
  - **Success: 200**

```
{
  "message": "Category deleted successfully"
}
```

  - **Error: 400**

```
{
  "message": "There are still dishes linked to this category, please
delete, or modify them first",
  "dishes": [
    {
      "DishID": 2,
      "DishName": "Heisenberg Speciality",
      "Description": "Special from Heisenberg",
      "Price": 100,
      "PreparationTime": 200,
```

```
      "ImageLink": "https://prod-restaurant-
bucket.s3.amazonaws.com/3228b916-5f87-4914-8041-427ed56abd45-
Heisenberg.jpg",
      "CreationDate": "2024-07-04T09:22:01.000Z",
      "ModificationDate": "2024-07-05T06:08:28.000Z",
      "CreatedBy": null,
      "ModifiedBy": null,
      "CategoryID": 1,
      "CategoryName": "Beverages"
    }
  ]
}
```

- o **Error: 404**

```
{ "message": "Category not found" }
```

- o **Error: 500**

```
{ "message": "Internal server error" }
```

## 5. View All Categories

- **URL:** https://koala-restaurant.vercel.app/api/v1/category
- **Method:** GET
- **Responses:**
  - o **Success: 200**

```
{
  "categories": [
    {
      "CategoryID": 1,
      "Name": "Beverages",
      "Description": "Various types of drinks including coffee, tea,
juices, and soft drinks.",
      "CreatedBy": 1,
      "ModifiedBy": 1,
      "CreationDate": "2024-07-05T06:06:24.000Z",
      "ModificationDate": "2024-07-05T06:06:24.000Z"
    },
    {
      "CategoryID": 3,
      "Name": "Sandwiches",
      "Description": "Different kinds of sandwiches including vegetarian
and non-vegetarian options.",
      "CreatedBy": 1,
      "ModifiedBy": 1,
      "CreationDate": "2024-07-05T06:06:24.000Z",
      "ModificationDate": "2024-07-05T06:06:24.000Z"
    },
    {
      "CategoryID": 4,
      "Name": "Salads",
      "Description": "Fresh and healthy salads made with seasonal
ingredients.",
      "CreatedBy": 1,
      "ModifiedBy": 1,
      "CreationDate": "2024-07-05T06:06:24.000Z",
      "ModificationDate": "2024-07-05T06:06:24.000Z"
    },
    {
      "CategoryID": 5,
      "Name": "Breakfast",
      "Description": "Breakfast items including pancakes, waffles, and
omelets.",
```

```
      "CreatedBy": 1,
      "ModifiedBy": 1,
      "CreationDate": "2024-07-05T06:06:24.000Z",
      "ModificationDate": "2024-07-05T06:06:24.000Z"
    },
    {
      "CategoryID": 6,
      "Name": "Desserts",
      "Description": "Sweet treats like cakes, pies, and ice cream.",
      "CreatedBy": 1,
      "ModifiedBy": 1,
      "CreationDate": "2024-07-05T06:06:24.000Z",
      "ModificationDate": "2024-07-05T06:06:24.000Z"
    },
    {
      "CategoryID": 7,
      "Name": "Specials",
      "Description": "Daily or weekly special menu items.",
      "CreatedBy": 1,
      "ModifiedBy": 1,
      "CreationDate": "2024-07-05T06:06:24.000Z",
      "ModificationDate": "2024-07-05T06:06:24.000Z"
    },
    {
      "CategoryID": 10,
      "Name": "Los Pollos's Chicken",
      "Description": "Los Pollos Hermanos's chicken",
      "CreatedBy": 2,
      "ModifiedBy": null,
      "CreationDate": "2024-07-17T07:42:42.000Z",
      "ModificationDate": "2024-07-17T07:43:04.000Z"
    }
  ]
}
```

- o **Error: 500**

```
{ "message": "Internal server error" }
```

## IX.   User Manage Table

### 1. CreateTable Endpoint

- **Require Authorization Middleware:** Yes (Waiter role)
- **URL:** https://koala-restaurant.vercel.app/api/v1/table
- **Method:** POST
- **Header:**
  - o Authorization: Token from Login
- **Payload:**

```
{
  "capacity": 4,
  "location": "indoor",
  "locationID": 1
}
```

- **Success Response:**
  - o **Status:** 201
  - o **JSON:**

```
{
  "message": "Dining table created successfully",
  "tableID": 2
```

}
- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      ```json
      { "message": "Input missing fields!" }
      ```

  - **Status:** 404
    - **JSON:**

      ```json
      { "message": "Invalid location!" }
      ```

  - **Status:** 500
    - **JSON:**

      ```json
      { "message": "Internal server error" }
      ```

## 2. GetByID Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/table/:id
- **Method:** GET
- **Success Response:**
  - **Status:** 200
  - **JSON:**

    ```json
    {
      "TableID": 2,
      "Capacity": 4,
      "Location": "indoor",
      "LocationID": 1,
      "CreatedBy": 2,
      "ModifiedBy": null
    }
    ```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      ```json
      { "message": "TableID is required" }
      ```

  - **Status:** 404
    - **JSON:**

      ```json
      { "message": "Dining table not found" }
      ```

  - **Status:** 500
    - **JSON:**

      ```json
      { "message": "Internal server error" }
      ```

## 3. UpdateTable Endpoint

- **Require Authorization Middleware:** Yes (Waiter role)
- **URL:** https://koala-restaurant.vercel.app/api/v1/table/:id
- **Method:** PATCH
- **Header:**
  - Authorization: Token from Login
- **Payload:**

```
{
  "capacity": 6,
  "location": "outdoor"
}
```

- **Success Response:**
  - **Status:** 200
  - **JSON:**

    ```
    {
      "message": "Dining table updated successfully"
    }
    ```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      ```
      { "message": "TableID is required" }
      ```

  - **Status:** 404
    - **JSON:**

      ```
      { "message": "Table not found" }
      ```

  - **Status:** 500
    - **JSON:**

      ```
      { "message": "Internal server error" }
      ```

## 4. DeleteTable Endpoint

- **Require Authorization Middleware:** Yes (Waiter role)
- **URL:** https://koala-restaurant.vercel.app/api/v1/table/:id
- **Method:** DELETE
- **Header:**
  - Authorization: Token from Login
- **Success Response:**
  - **Status:** 200
  - **JSON:**

    ```
    {
      "message": "Table deleted successfully"
    }
    ```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      ```
      { "message": "All reservations associated with the table must be
      deleted first" }
      ```

  - **Status:** 500
    - **JSON:**

      ```
      { "message": "Internal server error" }
      ```

## 5. GetByLocationID Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/table/location/:id
```

- **Method:** GET
- **Success Response:**
  - **Status:** 200
  - **JSON:**

```json
[
  {
    "TableID": 1,
    "Capacity": 4,
    "Location": "indoor",
    "LocationID": 1,
    "CreatedBy": 2,
    "ModifiedBy": null
  },
  {
    "TableID": 2,
    "Capacity": 6,
    "Location": "outdoor",
    "LocationID": 1,
    "CreatedBy": 2,
    "ModifiedBy": 2
  }
]
```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

    ```json
    { "message": "LocationID is required!" }
    ```

  - **Status:** 500
    - **JSON:**

    ```json
    { "message": "Internal server error"
    ```

# X. User Manage Reservation

## 1. GetReservationsByStatusAndLocationID Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/reservation/location/:id/status/:status
- **Method:** GET
- **Require Authorization Middleware:** Yes (Waiter role)
- **Header:**
  - Authorization: Token from Login
- **Accepted Status:** Pending, Confirmed, Cancelled
- **Success Response:**
  - **Status:** 200
  - **JSON:**

```json
{
  "reservations": [
    {
      "ReservationID": 3,
      "UserID": 2,
      "TableID": 2,
      "ReservationTime": "2024-07-22T07:42:42.000Z",
      "SpecialRequests": null,
```

```
          "Status": "Confirmed",
          "LocationID": 1
      }
    ]
  }
```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      ```
      { "message": "Status and LocationID are required" }
      ```

    - **JSON:**

      ```
      { "message": "Invalid Status" }
      ```

  - **Status:** 500
    - **JSON:**

      ```
      { "message": "Internal server error" }
      ```

## 2. ViewReservationsByLocationID Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/reservation/location/:id
- **Method:** GET
- **Require Authorization Middleware:** Yes (Waiter role)
- **Header:**
  - Authorization: Token from Login
- **Success Response:**
  - **Status:** 200
  - **JSON:**

    ```
    {
      "reservations": [
        {
          "ReservationID": 1,
          "UserID": 2,
          "TableID": 1,
          "ReservationTime": "2024-07-22T07:42:42.000Z",
          "SpecialRequests": null,
          "Status": "Cancelled",
          "LocationID": 1
        },
        {
          "ReservationID": 3,
          "UserID": 2,
          "TableID": 2,
          "ReservationTime": "2024-07-22T07:42:42.000Z",
          "SpecialRequests": null,
          "Status": "Confirmed",
          "LocationID": 1
        }
      ]
    }
    ```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      ```
      { "message": "LocationID is required" }
      ```

- **Status:** 500
  - **JSON:**

```json
{ "message": "Internal server error" }
```

## 3. ViewReservationByID Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/reservation/:id
- **Method:** GET
- **Require Authorization Middleware:** Yes (Waiter role)
- **Header:**
  - Authorization: Token from Login
- **Success Response:**
  - **Status:** 200
  - **JSON:**

```json
{
  "reservation": {
    "ReservationID": 1,
    "UserID": 2,
    "TableID": 1,
    "ReservationTime": "2024-07-22T07:42:42.000Z",
    "SpecialRequests": null,
    "Status": "Confirmed",
    "LocationID": 1
  }
}
```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

```json
{ "message": "ReservationID is required" }
```

  - **Status:** 404
    - **JSON:**

```json
{ "message": "Reservation not found" }
```

  - **Status:** 500
    - **JSON:**

```json
{ "message": "Internal server error" }
```

## 4. CreateReservation Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/reservation/
- **Method:** POST
- **Require Authorization Middleware:** Yes (Waiter role)
- **Header:**
  - Authorization: Token from Login
- **Accepted Status:** Pending, Confirmed, Cancelled
- **Payload:**

```json
{
  "tableID": 2,
  "reservationTime": "2024-07-22T07:42:42.000Z",
  "specialRequest": null,
  "status": "Confirmed"
```

}

- **Success Response:**
  - **Status:** 201
  - **JSON:**

```
{
  "message": "Reservation created successfully",
  "ReservationID": 3
}
```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      { "message": "Required fields are missing" }

    - **JSON:**

      { "message": "Invalid Status" }

    - **JSON:**

      { "message": "Invalid reservation date" }

    - **JSON:**

      { "message": "Reservation time cannot be in the past" }

    - **JSON:**

      { "message": "Reservation time cannot be more than a week in advance"
      }

    - **JSON:**

      { "message": "Table does not exist" }

  - **Status:** 500
    - **JSON:**

      { "message": "Internal server error" }

## 5. UpdateReservationStatus Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/reservation/:id
- **Method:** PATCH
- **Require Authorization Middleware:** Yes (Waiter role)
- **Header:**
  - Authorization: Token from Login
- **Accepted Status:** Pending, Confirmed, Cancelled
- **Payload:**

```
{
  "status": "Cancelled"
}
```

- **Success Response:**
  - **Status:** 200

o **JSON:**

```
{
  "message": "Reservation status updated successfully"
}
```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      `{ "message": "ReservationID and status are required" }`

    - **JSON:**

      `{ "message": "Invalid Status" }`

  - **Status:** 404
    - **JSON:**

      `{ "message": "Reservation not found" }`

  - **Status:** 500
    - **JSON:**

      `{ "message": "Internal server error" }`

## 6. DeleteReservation Endpoint

- **URL:** https://koala-restaurant.vercel.app/api/v1/reservation/:id
- **Method:** DELETE
- **Require Authorization Middleware:** Yes (Waiter role)
- **Header:**
  - `Authorization: Token from Login`
- **Success Response:**
  - **Status:** 200
  - **JSON:**

    ```
    {
      "message": "Reservation deleted successfully"
    }
    ```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      `{ "message": "ReservationID is required" }`

  - **Status:** 404
    - **JSON:**

      `{ "message": "Reservation not found" }`

  - **Status:** 500
    - **JSON:**

      `{ "message": "Internal server error" }`

# XI. User Manage Order endpoints

### 1. createOrder Endpoint

- **URL**: https://koala-restaurant.vercel.app/api/v1/orders
- **Method**: POST
- **Accepted Status**: "Pending", "Preparing", "Served", "Completed"
- **Require Authorization Middleware**: Yes (Waiter role)
- **Header**:
  - Authorization: Token from Login
- **Payload**: JSON

```
{
  "tableID": 2,
  "status": "Pending"
}
```

- **Responds**:
  - **201**:

    ```
    {
      "message": "Order created successfully",
      "orderId": 10
    }
    ```

  - **400**:

    ```
    { "message": "Input missing fields!" }
    ```

  - **400**:

    ```
    { "message": "Invalid Table Associated" }
    ```

  - **400**:

    ```
    { "message": "Invalid Status Entered" }
    ```

  - **500**:

    ```
    { "message": "Internal server error" }
    ```

### 2. getOrderByID Endpoint

- **URL**: https://koala-restaurant.vercel.app/api/v1/orders/:id
- **Method**: GET
- **Require Authorization Middleware**: Yes (Waiter role)
- **Header**:
  - Authorization: Token from Login
- **Responds**:
  - **200**:

    ```
    {
      "order": {
        "OrderID": 2,
        "UserID": 2,
        "TableID": 2,
        "OrderTime": "2024-07-21T16:15:56.000Z",
        "Status": "Preparing",
        "LocationID": 1
      }
    ```

```
        }
```

- o **400**:

```
{ "message": "OrderID is required" }
```

- o **404**:

```
{ "message": "Order not found" }
```

- o **500**:

```
{ "message": "Internal server error" }
```

## 3. Update Order Status Endpoint

- **URL**: https://koala-restaurant.vercel.app/api/v1/orders/:id/status
- **Method**: PATCH
- **Accepted Status**: "Pending", "Preparing", "Served", "Completed"
- **Require Authorization Middleware**: Yes (Waiter role)
- **Header**:
  - o Authorization: Token from Login
- **Payload**: JSON

```
{
  "status": "Preparing"
}
```

- **Responds**:
  - o **200**:

```
{
    "message": "Order's status updated successfully"
}
```

- o **400**:

```
{ "message": "Status and id are required" }
```

- o **400**:

```
{ "message": "Invalid Status Entered" }
```

- o **404**:

```
{ "message": "Order not found!" }
```

- o **500**:

```
{ "message": "Internal server error" }
```

## 4. Delete Order Endpoint

- **URL**: https://koala-restaurant.vercel.app/api/v1/orders/:id
- **Method**: DELETE
- **Require Authorization Middleware**: Yes (Waiter role)
- **Header**:
  - o Authorization: Token from Login
- **Responds**:

- 200:

```
{
  "message": "Order deleted successfully"
}
```

- 404:

```
{ "message": "Order not found" }
```

- 500:

```
{ "message": "Internal server error" }
```

5. GetOrdersByLocation Endpoint

- **URL**: https://koala-restaurant.vercel.app/api/v1/orders/location/:id
- **Method**: GET
- **Require Authorization Middleware**: Yes (Waiter role)
- **Header**:
  - Authorization: Token from Login
- **Responds**:
  - 200:

```
{
  "orders": [
    {
      "OrderID": 2,
      "UserID": 2,
      "TableID": 2,
      "OrderTime": "2024-07-21T16:15:56.000Z",
      "Status": "Preparing",
      "LocationID": 1
    },
    {
      "OrderID": 3,
      "UserID": 2,
      "TableID": 2,
      "OrderTime": "2024-07-21T16:16:07.000Z",
      "Status": "Pending",
      "LocationID": 1
    },
    {
      "OrderID": 4,
      "UserID": 2,
      "TableID": 2,
      "OrderTime": "2024-07-21T16:58:57.000Z",
      "Status": "Pending",
      "LocationID": 1
    }
  ]
}
```

  - 400:

```
{ "message": "id is required!" }
```

  - 500:

```
{ "message": "Internal server error" }
```

## 6. DeleteOrdersInTimeFrame Endpoint

- **URL**: https://koala-restaurant.vercel.app/api/v1/orders/timeframe
- **Method**: DELETE
- **Require Authorization Middleware**: Yes (Waiter role)
- **Header**:
  - Authorization: Token from Login
- **Payload**:

```
{
  "startTime": "2024-07-21T16:58:58.000Z",
  "endTime": "2024-07-21T16:59:03.000Z"
}
```

- **Responds**:
  - **200**:

    ```
    {
      "message": "Orders deleted",
      "affectedRows": 6
    }
    ```

  - **400**:

    ```
    { "message": "Missing startTime or endTime" }
    ```

  - **400**:

    ```
    { "message": "Invalid startTime or endTime" }
    ```

  - **400**:

    ```
    { "message": "startTime cannot be in the future" }
    ```

  - **400**:

    ```
    { "message": "startTime cannot be greater than endTime" }
    ```

  - **500**:

    ```
    { "message": "Internal server error" }
    ```

## 7. AddItemToOrder Endpoint

- **URL**: https://koala-restaurant.vercel.app/api/v1/orders/items
- **Method**: POST
- **Accepted Status**: "ordered", "preparing", "cancelled", "delivered", "completed"
- **Require Authorization Middleware**: Yes (Waiter role)
- **Header**:
  - Authorization: Token from Login
- **Payload**:

```
{
  "orderID": 2,
  "dishID": 2,
  "quantity": 100,
  "status": "ordered",
  "specialRequests": "some request"
}
```

- **Responds**:
    - **201**:

        ```
        {
          "message": "Dish added successfully",
          "orderItemId": 5
        }
        ```

    - **400**:

        ```
        { "message": "Missing input fields" }
        ```

    - **400**:

        ```
        { "message": "Invalid Status Entered" }
        ```

    - **400**:

        ```
        { "message": "Invalid order" }
        ```

    - **400**:

        ```
        { "message": "Invalid dish" }
        ```

    - **500**:

        ```
        { "message": "Internal Server Error" }
        ```

## 8. DeleteOrderItem Endpoint

- **URL**: https://koala-restaurant.vercel.app/api/v1/orders/item/:id
- **Method**: DELETE
- **Require Authorization Middleware**: Yes (Waiter role)
- **Header**:
    - Authorization: Token from Login
- **Responds**:
    - **200**:

        ```
        {
          "message": "Order item deleted successfully"
        }
        ```

    - **404**:

        ```
        { "message": "Order item not found" }
        ```

    - **500**:

        ```
        { "message": "Internal Server Error" }
        ```

## 9. UpdateStatusOfItem Endpoint

- **URL**: https://koala-restaurant.vercel.app/api/v1/orders/items/:id/status/:status
- **Method**: PATCH
- **Accepted Status**: "ordered", "preparing", "cancelled", "delivered", "completed"
- **Require Authorization Middleware**: Yes (Waiter role)
- **Header**:
    - Authorization: Token from Login
- **Responds**:

- o **200**:

```
{
  "success": true
}
```

- o **400**:

```
{ "message": "Missing fields!" }
```

- o **400**:

```
{ "message": "Invalid Status Entered" }
```

- o **404**:

```
{
  "message": "Order item not found or no change in status"
}
```

- o **500**:

```
{ "message": "Internal server error" }
```

## 10. GetAllOrderItemsInLocation Endpoint

- **URL**: https://koala-restaurant.vercel.app/api/v1/orders/with-table/location/:id
- **Method**: GET
- **Require Authorization Middleware**: Yes (Waiter role)
- **Header**:
  - o Authorization: Token from Login
- **Responds**:
  - o **200**:

```
[
  {
    "OrderItemID": 4,
    "OrderID": 2,
    "UserID": 2,
    "TableID": 2,
    "OrderTime": "2024-07-21T16:15:56.000Z",
    "OrderStatus": "Preparing",
    "LocationID": 1,
    "DishID": 2,
    "DishName": "Heisenberg Speciality",
    "Quantity": 100,
    "ItemStatus": "ordered",
    "SpecialRequests": null,
    "TableCapacity": 6,
    "TableLocation": "outdoor"
  },
  {
    "OrderItemID": 5,
    "OrderID": 2,
    "UserID": 2,
    "TableID": 2,
    "OrderTime": "2024-07-21T16:15:56.000Z",
    "OrderStatus": "Preparing",
    "LocationID": 1,
    "DishID": 2,
    "DishName": "Heisenberg Speciality",
    "Quantity": 100,
    "ItemStatus": "ordered",
```

```
          "SpecialRequests": "some request",
          "TableCapacity": 6,
          "TableLocation": "outdoor"
        }
      ]
```

- o **400**:

```
{ "message": "id is required!" }
```

- o **500**:

```
{ "message": "Internal server error" }
```

# XII. Receipt Management Endpoints

## 1. CreateReceipt Endpoint

- **Require Authorization Middleware:** Yes (Waiter role)
- **URL:** https://koala-restaurant.vercel.app/api/v1/receipts
- **Method:** POST
- **Header:**
  - o Authorization: Token from Login
- **Payload:**

```
{
  "orderID": 2,
  "amount": 1,
  "paymentMethod": "Card"
}
```

- **Success Response:**
  - o **Status:** 201
  - o **JSON:**

```
{
  "message": "Receipt created successfully",
  "receiptID": 3
}
```

- **Error Responses:**
  - o **Status:** 400
    - ▪ **JSON:**

```
{ "message": "Missing input fields" }
```

  - o **Status:** 404
    - ▪ **JSON:**

```
{ "message": "Order associated not found" }
```

  - o **Status:** 500
    - ▪ **JSON:**

```
{ "message": "Internal server error" }
```

## 2. ViewByID Endpoint

- **Require Authorization Middleware:** Yes (Waiter role)
- **URL:** https://koala-restaurant.vercel.app/api/v1/receipts/:id
- **Method:** GET
- **Header:**
  - Authorization: Token from Login
- **Success Response:**
  - **Status:** 200
  - **JSON:**

```
{
  "ReceiptID": 1,
  "OrderID": 3,
  "Amount": 0,
  "PaymentMethod": "Card",
  "PaymentTime": "2024-07-22T08:33:53.000Z",
  "LocationID": 1
}
```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      ```
      { "message": "id is required" }
      ```

  - **Status:** 404
    - **JSON:**

      ```
      { "message": "Receipt not found" }
      ```

  - **Status:** 500
    - **JSON:**

      ```
      { "message": "Internal server error" }
      ```

## 3. EditReceipt Endpoint

- **Require Authorization Middleware:** Yes (Waiter role)
- **URL:** https://koala-restaurant.vercel.app/api/v1/receipts/:id
- **Method:** PATCH
- **Header:**
  - Authorization: Token from Login
- **Payload:** None (This endpoint is used when the customer pays, and records the current time. The PaymentTime in the DB will be null, indicating the receipt is not paid unless this endpoint is called).
- **Success Response:**
  - **Status:** 200
  - **JSON:**

```
{
  "message": "Receipt updated successfully"
}
```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      ```
      { "message": "id is required" }
      ```

- Status: 404
  - JSON:

    ```
    { "message": "Receipt not found" }
    ```

- Status: 500
  - JSON:

    ```
    { "message": "Internal server error" }
    ```

## 4. DeleteReceipt Endpoint

- **Require Authorization Middleware:** Yes (Waiter role)
- **URL:** https://koala-restaurant.vercel.app/api/v1/receipts/:id
- **Method:** DELETE
- **Header:**
  - Authorization: Token from Login
- **Success Response:**
  - **Status:** 200
  - **JSON:**

    ```
    {
      "message": "Receipt deleted successfully"
    }
    ```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      ```
      { "message": "id is required" }
      ```

  - **Status:** 404
    - **JSON:**

      ```
      { "message": "Receipt not found" }
      ```

  - **Status:** 500
    - **JSON:**

      ```
      { "message": "Internal server error" }
      ```

## 5. GetAllReceipts Endpoint

- **Require Authorization Middleware:** Yes (Waiter role)
- **URL:** https://koala-restaurant.vercel.app/api/v1/receipts
- **Method:** GET
- **Header:**
  - Authorization: Token from Login
- **Success Response:**
  - **Status:** 200
  - **JSON:**

    ```
    [
      {
        "ReceiptID": 2,
        "OrderID": 4,
        "Amount": 0,
        "PaymentMethod": "Card",
        "PaymentTime": "2024-07-22T08:42:46.000Z",
    ```

```
      "LocationID": 1
    },
    {
      "ReceiptID": 3,
      "OrderID": 2,
      "Amount": 1,
      "PaymentMethod": "Card",
      "PaymentTime": null,
      "LocationID": 1
    }
  ]
```

- **Error Response:**
  - **Status:** 500
    - **JSON:**

      ```
      { "message": "Internal server error" }
      ```

## 6. ViewReceiptsByLocation Endpoint

- **Require Authorization Middleware:** Yes (Waiter role)
- **URL:** https://koala-restaurant.vercel.app/api/v1/receipts/location/:id
- **Method:** GET
- **Header:**
  - Authorization: Token from Login
- **Success Response:**
  - **Status:** 200
  - **JSON:**

    ```
    [
      {
        "ReceiptID": 2,
        "OrderID": 4,
        "Amount": 1,
        "PaymentMethod": "Card",
        "PaymentTime": null,
        "LocationID": 1
      },
      {
        "ReceiptID": 3,
        "OrderID": 2,
        "Amount": 1,
        "PaymentMethod": "Card",
        "PaymentTime": null,
        "LocationID": 1
      }
    ]
    ```

- **Error Responses:**
  - **Status:** 400
    - **JSON:**

      ```
      { "message": "id is required" }
      ```

  - **Status:** 500
    - **JSON:**

      ```
      { "message": "Internal server error" }
      ```