

# API Documentation

## Overview

This document outlines the API endpoints for managing users, products, and orders in the application. The API uses standard HTTP methods for localhost and HTTPS deployed for CRUD operations and follows a structured response format for consistency.

## Base URL

- Local
  - <http://http://localhost:5000>
- Deployed
  - <https://vc-backend-production.up.railway.app>

## Header requires Authorization token

### Authorization

- Login a user (also get the Authorization token)
  - **POST** `/api/v1/login`

#### Request Body:

```
{  
  "password": "string",  
  "email": "string"  
}
```

**Response:** 200 success

### Notes:

- To obtain your token, run the login or register user API, then use the token in the format **Authorization: Bearer <your-token-here>** for subsequent requests (mentioned below in the apis endpoints).
- Get Postman collections for api test in above deployed link

# Endpoints

## Users

- **Register a new user**
  - **POST** `/api/v1/users`

**Request Body:**

```
{  
  "username": "string",  
  "password": "string",  
  "email": "string"  
}
```

**Response:** 201 Created

- **Get user details**
  - **GET** `/api/v1/users/{id}`

**Header**

Required Authorization Bearer token

**Response:** 200 OK

- **Update user details**
  - **PUT** `/api/v1/users/{id}`

**Header**

Required Authorization Bearer token

**Request Body:**

```
{  
  "username": "string",  
  "password": "string",  
  "email": "string"  
}
```

**Response:** 200 OK

- **Delete a user**
  - **DELETE** `/api/v1/users/{id}`

**Header**

Required Authorization Bearer token

**Response:** 204 No Content

## **Products**

- **List all products with pagination**
  - **GET** `/api/v1/products`

**Response:** 200 OK

- **Create a new product**
  - **POST** `/api/v1/products`

**Header**

Required Authorization Bearer token

**Request Body:**

```
{  
  "name": "string",  
  "description": "string",  
  "price": "number",  
  "stock": "number"  
}
```

**Response:** 201 Created

- **Get product details**
  - **GET** `/api/v1/products/{id}`

**Response:** 200 OK

- **Update product details**

- **PUT** `/api/v1/products/{id}`

**Header**

Required Authorization Bearer token

**Request Body:**

```
{  
  "name": "string",  
  "description": "string",  
  "price": "number",  
  "stock": "number"  
}
```

**Response:** 200 OK

- **Delete a product**

- **DELETE** `/api/v1/products/{id}`

**Header**

Required Authorization Bearer token

**Response:** 204 No Content

## Orders

- **Create a new order**

- **POST** `/api/v1/orders`

**Header**

Required Authorization Bearer token

**Request Body:**

```
{  
  "userId": "string",  
  "productIds": ["string"],  
  "quantities": ["number"]  
}
```

**Response:** 201 Created

- **Get order details**

- **GET** `/api/v1/orders/{id}`

**Header**

Required Authorization Bearer token

**Response:** 200 OK

- **List all orders for a user**

- **GET** `/api/v1/users/{id}/orders`

**Header**

Required Authorization Bearer token

**Response:** 200 OK

# Response Structure

All responses from the API follow a consistent structure defined by the `ResUtil` module:

```
{
  "api_version": "1.0",
  "success": {
    "message": "string",
    "body": {}
  },
  "error": {
    "message": "string",
    "body": {}
  },
  "error_status": false,
  "status_code": 200
}
```

## Response Messages

- **SUCCESS:**
  - Sets the success message and body.
  - Status Code: 200
- **SERVER\_ERROR:**
  - Used for internal server errors.
  - Status Code: 500
- **VALIDATION\_ERROR:**
  - Used for validation errors (e.g., incorrect input).
  - Status Code: 400
- **UNAUTHORIZED:**
  - Used when authentication fails.
  - Status Code: 401
- **NOTFOUND:**
  - Used when the requested resource is not found.
  - Status Code: 404

# Example Response

## Success Response

```
{
  "api_version": "1.0",
  "success": {
    "message": "User created successfully.",
    "body": {
      "user": {
        "id": "12345",
        "username": "newuser"
      }
    }
  },
  "error_status": false,
  "status_code": 200
}
```