Inventory Management API

# Introduction

The Inventory Management API enables the management of stock levels for products. It supports CRUD (Create, Read, Update, Delete) operations for inventory, tracks stock levels, and provides low-stock notifications. This API is backend-only and designed to integrate with other services such as product management and order management.

# Features

The core features of the Inventory Management API include:

1. **Add Inventory Items: Register new products in inventory with their stock levels.**
2. **Update Inventory**: Modify stock levels for existing products.
3. **Retrieve Inventory**: View all inventory items or check details of specific products.
4. **Delete Inventory Item**: Remove inventory records when necessary.
5. **Low Stock Alerts**: Automatically mark products as "low stock" when stock levels fall below a specified threshold.

# API Endpoints

* **Base URL:** The API is accessible at **/orders/**.
* Endpoints and HTTP Methods:

|  |  |  |
| --- | --- | --- |
| Method | Endpoint | Description |
| GET | /inventory/ | |  | | --- | | Retrieve all inventory items. |  |  | | --- | |  | |
| POST | /inventory/ | |  | | --- | | Add a new inventory item. |  |  | | --- | |  | |
| GET | /inventory/{id}/ | |  | | --- | | Retrieve details of a specific inventory item. |  |  | | --- | |  | |
| PUT | /inventory/{id}/ | |  | | --- | | Update an inventory item. |  |  | | --- | |  | |
| DELETE | /inventory/{id}/ | Delete an inventory item. |

## Examples

**Create an Order (POST)**

* **Endpoint:** /inventory/
* **Request Type:** POST
* **Request Body (JSON):**

{

"product\_name": "Laptop",

"stock": 50,

"low\_stock\_threshold": 10

}

* **Response:**

{

    "id": 1,

    "is\_low\_stock": **true**,

    "product\_name": "Laptop",

    "product\_description": **null**,

    "quantity": 0,

    "low\_stock\_threshold": 10,

    "created\_at": "2025-01-24T18:23:12.683224Z",

    "updated\_at": "2025-01-24T18:23:12.683252Z"

}

## Testing the API

* **Manual Testing**

Use tools like **Postman** or **cURL** to manually test the endpoints.

* **Automated Testing**

Test case class *InventoryTestCase (TestCase)* in *tests.py* to ensure API functionality:

Run the tests using:

**python manage.py test**