

INVENTORY MANAGEMENT SYSTEM

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1. Project Overview

The Inventory Management System is a Django-based web application designed to help small retail stores efficiently manage their inventory. The system allows users to add, update, and delete inventory items, track stock levels, and manage product information through a user-friendly interface.

2. Technologies Used

- Python 3.x
 - Django Web Framework
 - SQLite Database (default with Django)
 - Git & GitHub for version control
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3. Project Setup

- Created a virtual environment (`env`) to isolate dependencies.
 - Installed Django using `pip`.
 - Initialized a Git repository and pushed the code to GitHub at:
https://github.com/Saivarshini-001/inventory_management_system
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4. Key Features

- Add, edit, and delete inventory items.
- User authentication via Django's admin panel.

- Database migrations to manage schema changes.
 - Local deployment using Django's development server.
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5. How to Run

1. Clone the repository:

```
git clone  
https://github.com/Saivarshini-001/inventory_management_sys  
tem.git
```

2. Create and activate virtual environment:

```
python3 -m venv env  
source env/bin/activate
```

3. Install dependencies:

```
pip install -r requirements.txt
```

4. Run migrations:

```
python manage.py migrate
```

5. Create superuser:

```
python manage.py createsuperuser
```

6. Run the server:

```
python manage.py runserver
```

7. Access the app at <http://127.0.0.1:8000/>
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6. Challenges and Learnings

- Setting up the virtual environment and managing dependencies with `requirements.txt`.

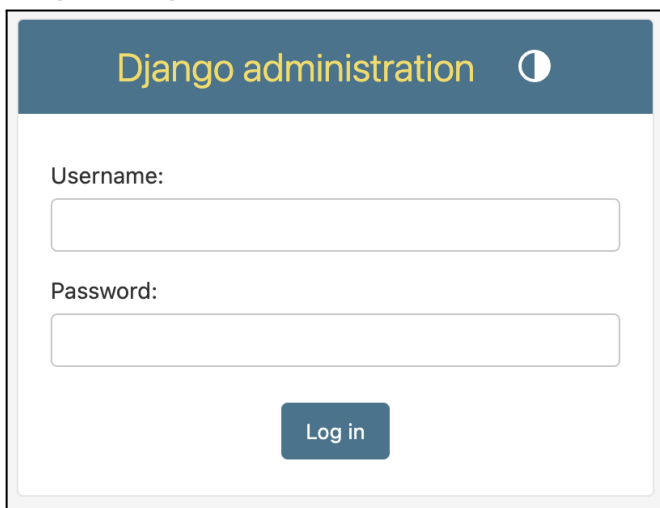
- Understanding Django's migration system and admin panel.
 - Using Git commands to version control and push to GitHub.
 - Learning basic Django views and URL routing for future expansions.
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7. Future Enhancements

- Add a user-friendly frontend interface using Django templates or React.js.
 - Implement barcode scanning for quicker inventory updates.
 - Add reporting and analytics on stock levels and sales.
 - Deploy the app to a cloud platform for remote access.
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8. Output

Login Page



The image shows a screenshot of the Django administration login page. At the top, there is a dark blue header bar with the text "Django administration" in yellow and a white circular icon to its right. Below the header, the page has a light gray background. On the left side, there are labels "Username:" and "Password:" in a small, dark font. To the right of each label is a white rectangular input field with a thin gray border. Below these two input fields, centered horizontally, is a dark blue rectangular button with the text "Log in" in white.

Dashboard

Django administration

WELCOME, SAIVARSHINI. VIEW SITE / CHANGE PASSWORD / LOG OUT

Site administration

AUTHENTICATION AND AUTHORIZATION

Groups

+ Add

Change

Users

+ Add

Change

INVENTORY

Items

+ Add

Change

Recent actions

My actions

+ Pet Toy (Ball)

Item

+ Pet Food (Dry, Small Bag)

Item

+ Candy Bar (Popular Brand)

Item

+ Chewing Gum (Multi-pack)

Item

+ Soda (Can, Assorted Flavors)

Item

+ Bottled Water (16.9oz, Single)

Item

+ Snack Bars (Granola, 5-pack)

Item

+ Paper Napkins (Cocktail, 100-ct)

Item

+ Paper Plates (Dinner Size, 50-ct)

Item

+ Plastic Cutlery (Fork/Spoon/Knife Combo, 50-ct)

Item

Final Result

Inventory Items

- Water Bottles - Quantity: 15 - Price: \$3.99
- Doritos - Quantity: 25 - Price: \$2.99
- Milk - Quantity: 10 - Price: \$6.99
- Mangoes - Quantity: 50 - Price: \$1.99
- Yogart - Quantity: 20 - Price: \$2.99
- Cilantro - Quantity: 65 - Price: \$0.99
- Carrot - Quantity: 15 - Price: \$5.00
- Beetroot - Quantity: 14 - Price: \$1.99
- Notebook - Quantity: 100 - Price: \$7.99
- Pen Set(Black,5set) - Quantity: 45 - Price: \$5.99
- LED Desk Lamp - Quantity: 15 - Price: \$19.99
- Scented Candels(Vanila) - Quantity: 10 - Price: \$10.00
- Coffee Mug - Quantity: 35 - Price: \$8.00
- Reusable Shopping Bag - Quantity: 35 - Price: \$2.50
- Umbrella - Quantity: 25 - Price: \$5.99
- Hansoap - Quantity: 40 - Price: \$4.50
- Hand Sanitizor - Quantity: 50 - Price: \$2.00
- Toothbrush - Quantity: 30 - Price: \$6.00
- Tooothpaste(Mint) - Quantity: 35 - Price: \$4.00
- Shampoo(16.5oz) - Quantity: 25 - Price: \$7.50
- Conditioner - Quantity: 25 - Price: \$7.50
- Body Lotion - Quantity: 20 - Price: \$9.00
- Face Wash - Quantity: 18 - Price: \$11.00
- Sunscreen - Quantity: 22 - Price: \$8.50
- Lipbalm - Quantity: 40 - Price: \$3.00
- Adhesive Bandages (Assorted Sizes, 100-ct) - Quantity: 20 - Price: \$6.99
- Pain Reliever (Ibuprofen, 50-ct) - Quantity: 15 - Price: \$7.99
- Digital Thermometer - Quantity: 10 - Price: \$18.99
- First Aid Kit (Small) - Quantity: 12 - Price: \$25.00
- Batteries (AA, 4-pack) - Quantity: 50 - Price: \$6.99
- Batteries (AAA, 4-pack) - Quantity: 45 - Price: \$6.99
- Phone Charger (USB-C) - Quantity: 20 - Price: \$12.00
- Phone Charger (Lightning) - Quantity: 18 - Price: \$12.00
- Earbuds (Wired) - Quantity: 25 - Price: \$9.99
- Portable Bluetooth Speaker - Quantity: 10 - Price: \$35.00
- USB Flash Drive (32GB) - Quantity: 30 - Price: \$8.99
- HDMI Cable (6ft) - Quantity: 15 - Price: \$7.00
- Extension Cord (6ft, 3-outlet) - Quantity: 20 - Price: \$10.00