prehensive Web-Based Inventory and Order Management System for S.A.M. Blocks & Inter

Introduction

This project is a Comprehensive Web-Based Inventory and Order Management System for S.A.M. Blocks & Interlocks. The system is designed to allow tracking of stock materials, listing of produced blocks (categorized by size: 9, 6, 8, and 4 inches), sales records, online ordering by customers, and a simple AI system that counts the total number of blocks produced daily.

Key Features

- Home page with company introduction and services.
- Calculator to estimate block needs based on project dimensions.
- Online Order form for customers.
- Inventory Management (Sales record, Material management).
- AI block counting after daily production.
- User-friendly dashboard for managing all data.

AI Block Counting System

A simple object detection model (MobileNetSSD) will be used to detect and count blocks from camera feed or uploaded images. The system will only be triggered at the end of each production day.
AI is integrated separately from the website backend but can be accessed from a link inside the dashboard.

How to Explain to Supervisors

- Understand each module: Inventory, Sales, Order.
- Walk through the code in app.py: Explain the database operations (CRUD).
- Demonstrate how online orders are stored.
- Clearly explain AI system workflow: detect blocks -> count them -> save result.

Updated app.py (Main Backend)

The updated Flask backend contains:

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- Routes for home, inventory, sales, order management.
- Database connection to store materials, sales, blocks produced.
- Basic validation and user-friendly forms.
- Integration point for AI counting page.

app.py code is attached separately below.

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app.py (Summary)

```
from flask import Flask, render_template, request, redirect
import sqlite3

app = Flask(__name__)

@app.route('/')
def home():
    return render_template('index.html')

# Other routes for inventory, sales, order management
# Simple database interactions using SQLite3
# AI counting system available via a link/button

if __name__ == '__main__':
    app.run(debug=True)
```