JKE FYP EXHIBITION

JABATAN KEJURUTERAAN ELEKTRIK

SMART SHOE RACK

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PROJECT DESCRIPTION

- Scan barcodes Attached to shoes, making it easy to identify and manage individual pairs.
- Send the scanned barcode data to a google sheets database for logging and tracking shoe usage.
- Utilize blynk, an iot platform, to allow remote control of the system. Users can effortlessly select which shoe to retrieve through A mobile application.
- The movement of the shoe rack is controlled by stepper motors that navigate in x, y, and z directions, ensuring the selected shoe is accurately retrieved and brought down to the user.

PROBLEM STATEMENT

•Limited storage capacity and inefficient space usage.
•Difficulty in sorting and retrieving shoes, especially by style, size, or color.
•Hygiene and safety concerns due to disorganized shoe placement, leading to potential falling hazards.
•Manual stock management in stores is time-consuming and error-prone, often resulting in inventory issues (overstock or out-of-stock).

PROJECT OBJECTIVE

Modular Design: Develop a customizable shoe storage system with a unified and expandable structure, allowing users to adjust modules based on space and needs.

User-Friendly Interface: Provide a mobile app Blynk that allows users to **remote control** and retrieve shoes from the storage system.

Automation: Automate the process of shoe storage and retrieval using a 3x3 grid system with 2 active compartments.

Barcode Integration: Implement a barcode scanner for efficient shoe identification and placement.

IoT Control: Utilize IoT technology via Blynk for remote operation, enhancing user convenience.

MARKET POTENTIAL

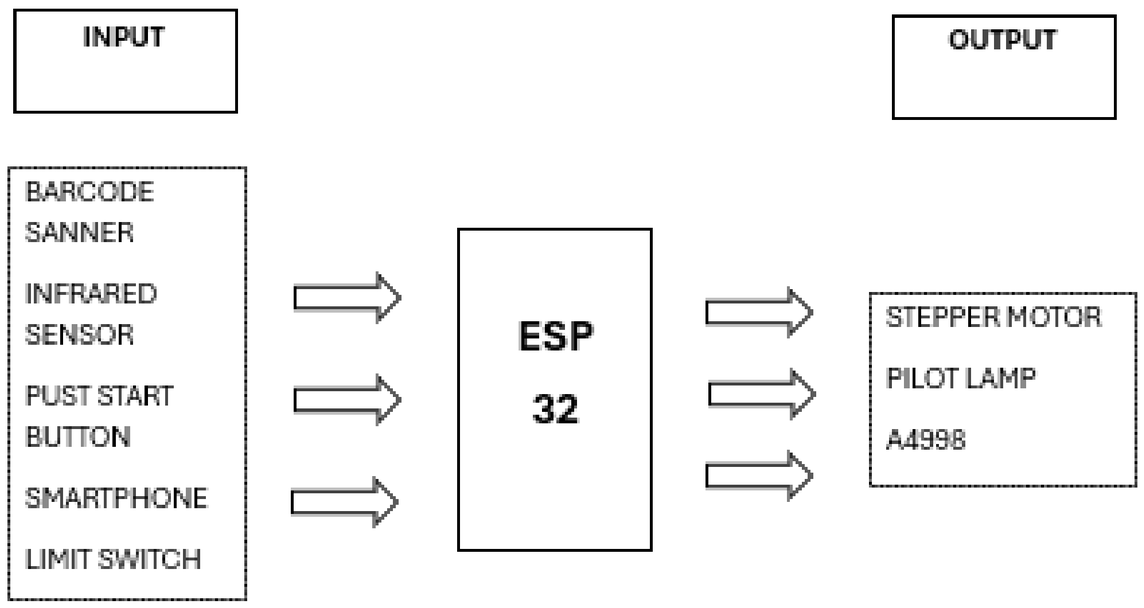
1. Target Market
   - Shoe retailers & boutiques
   - Department stores with large shoe inventories
   - Shoe storage solutions for shoe stores and shoe factories.
   - Commercial spaces with high foot traffic (malls, airports)

2. Competitive Advantages
   - Automated shoe management for efficient inventory control
   - Fast, organized access to shoes for customers
   - Barcode integration for easy tracking and inventory updates

IMPACT PROJECT

- Streamlines inventory management for commercial spaces
- Automates shoe storage and retrieval
- Faster, more personalized service for customers
- Easy access to shoes with automated retrieval
- Reduces labor costs by minimizing manual shoe handling
- Improves accuracy in stock management
- Enhances business automation trends

PROJECT PICTURE



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