

ECHELON 2.0

SMART WARDROBE FOR FUTURE HOMES

By Team 4: Echelon 2.0
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“Where are my clothes?”

“I am running out of time!”

“What should I pair this jeans with?”

“I do not have enough shirts these days... it's time to get new ones!”

“What should I wear today?”

“Why is my wardrobe so messy?”

Have you asked yourself any of the above questions? Do you encounter these *problems* on a daily basis?



Fret Not! Our smart wardrobe system is here to save you!

Problems

- Fast fashion
- Messy wardrobe
- Difficulty tracking clothing
- Inefficient use of existing clothing



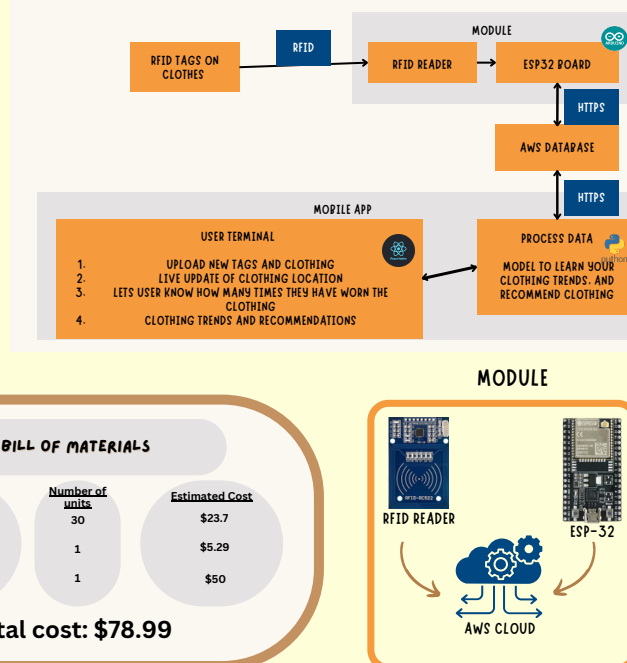
Technical Design & Feasibility

Technical Design:

- Data Registration
 - Mobile App Usage: Users upload a photo of their clothing item and scan its RFID tag using the mobile app
 - Data Upload: This information is securely transmitted to an AWS database over HTTPS
- Real-Time Tracking
 - RFID Detection: When the smart wardrobe is opened, the RFID reader detects any clothing that is added or removed
 - Data Synchronization: Detected data is sent to the AWS database to keep the inventory updated
- App Updates
 - Real-Time Inventory: The mobile app continuously retrieves data from the AWS database
 - Outfit Recommendations: The app updates in real-time to provide users with an up-to-date inventory of their clothing and generate outfit suggestions based on their wardrobe

Feasibility:

- Low cost of bill of materials
- Easily scalable with more wardrobe items through additional purchases of low-cost RFID tags
- Quick and simple setup
- One-time setup for each clothing item
- Easy integration into existing wardrobe
- Only requires installation of RFID module and applying of RFID tags

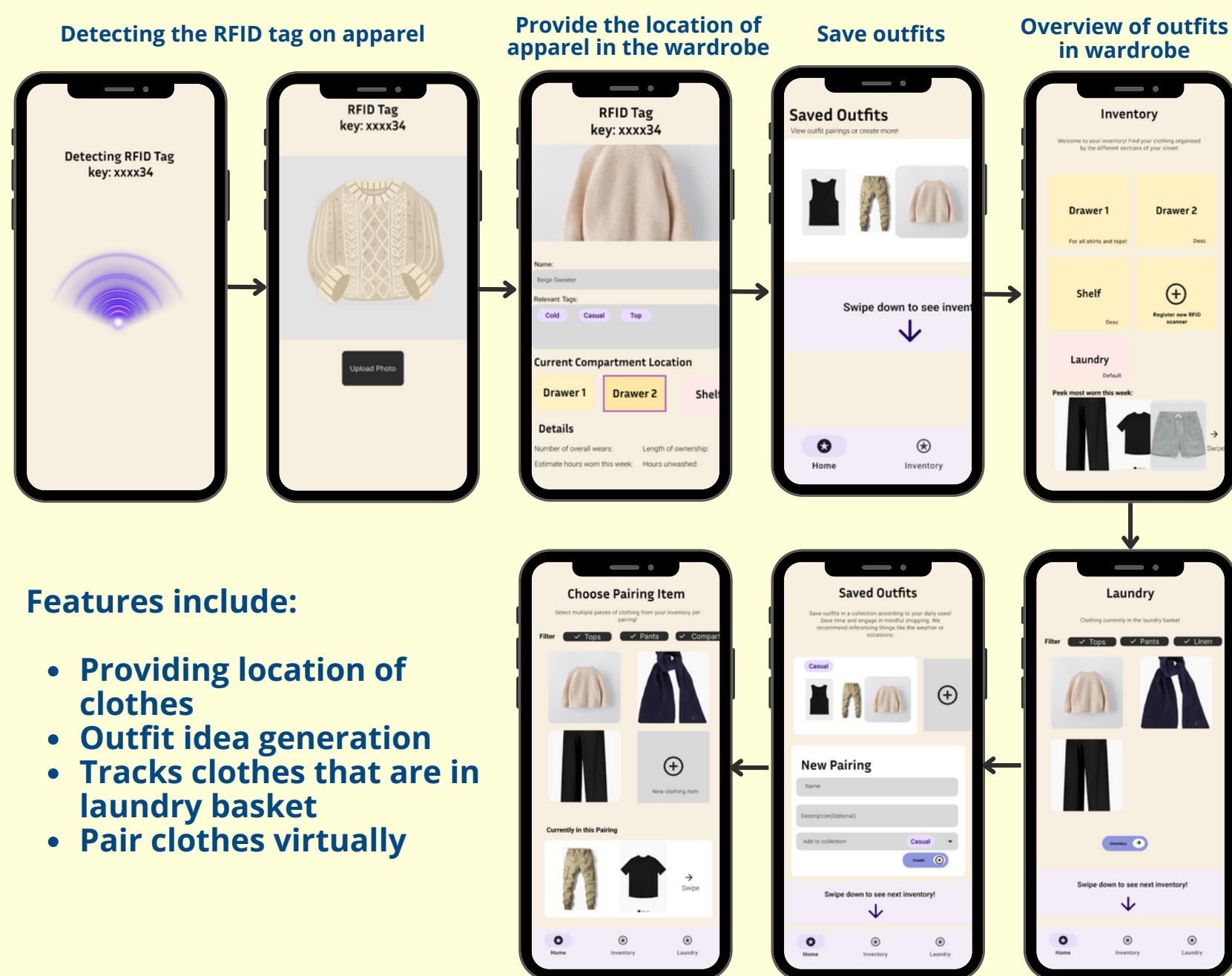


Introduction

A smart wardrobe system with RFID and IoT for real-time outfit management



Design & Usability



Modularity & Scalability

- **Modularity:** Add or update components without system disruption
- **Scalability:** Efficiently handles growth in items and users

