

SORTING MACHINE

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OUTLINE

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Introduction:

- ❑ a sorting system, is a computer-controlled machine for depositing, sorting, storing, and counting parcels.
- ❑ is good for saving time and reducing labor costs in the tasks of sorting parcels based on barcode reading.
- ❑ supported by website to show the number of all packages and their cities and to show the state of the machine (ON/OFF).

Motivation of the idea:

- The constant need to replace the workforce in factories and postal centers with automatic machines to save time, effort and cost
- the automated systems available in the market are complex, heavy, and expensive.

Features:

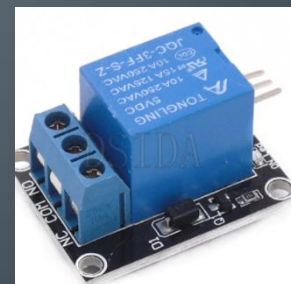
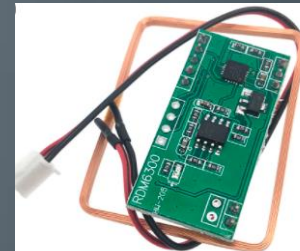
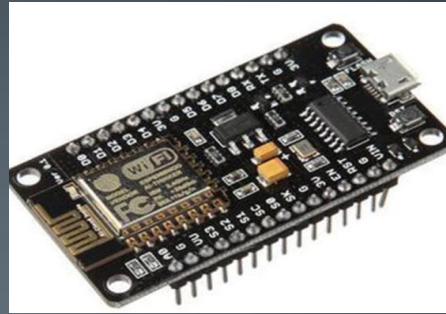
- ❖ Show the number of all packages and their cities.
- ❖ Turn on/off the machine by two ways : using pushbutton switch , using sensor .
- ❖ Scalability
- ❖ Simplicity
- ❖ User-friendly GUI

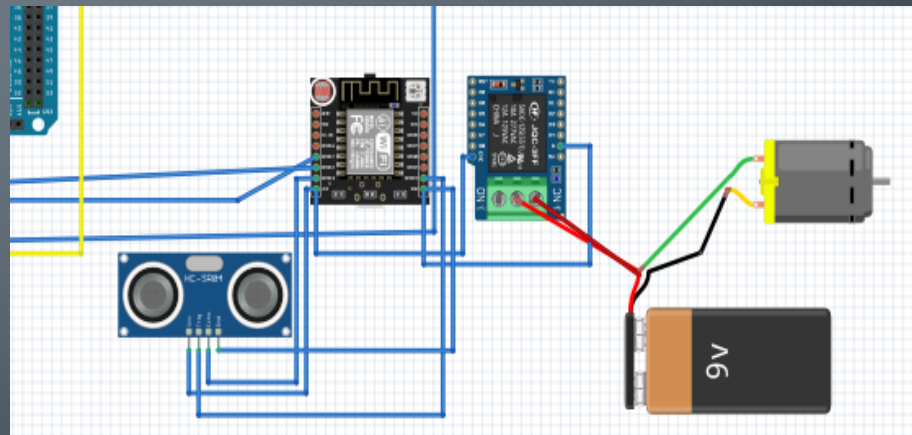
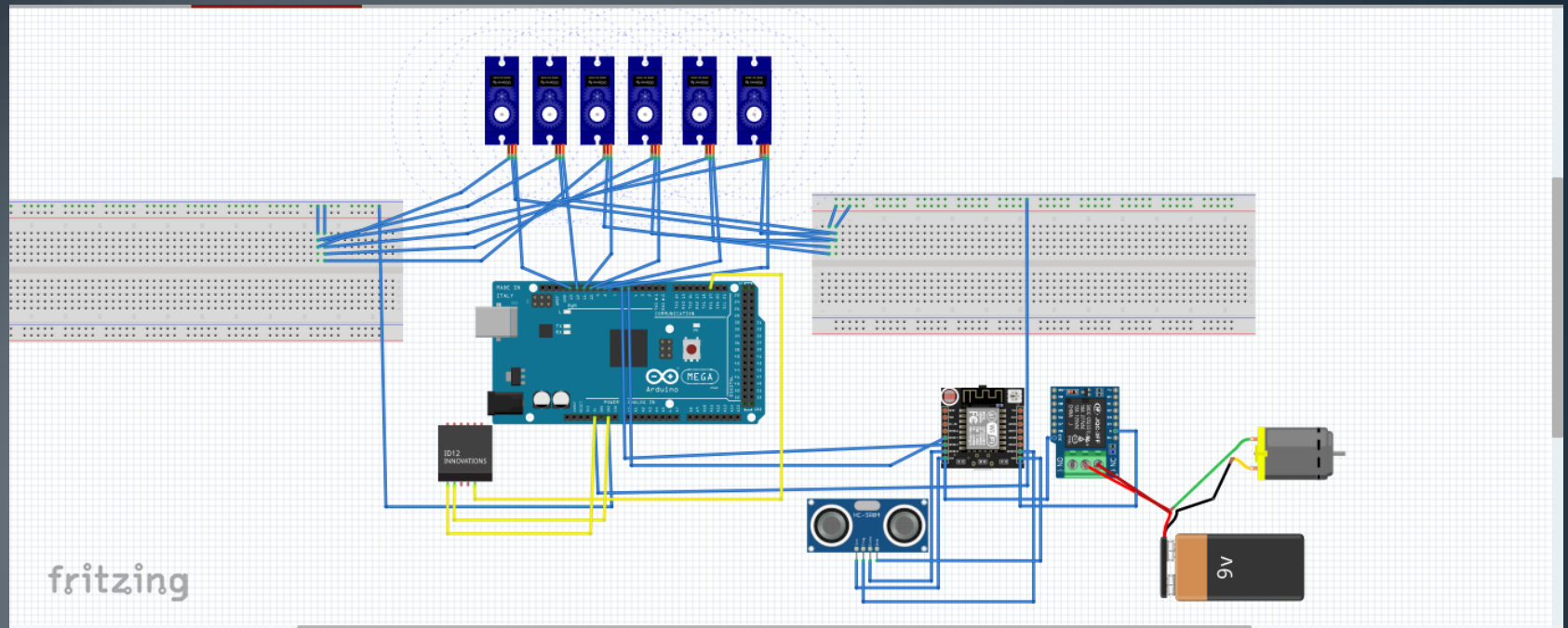
Used Technologies:

- Software Serial.
- I2C
- Wi-Fi.
- PWM.

Tools

- Arduino Mega
- ESP8266
- RFID - rdm6300
- Servo Motor SG90
- Power Supply 12 V
- Relay
- Motor (98110-1r000)
- Ultrasound sensor





How application works







Sorting Machine Web Page

belt - State off

City	count
jenin	1
Hebron	1
Tulkarm	2
Jerusalem	1
Ramallah	2
Nablus	2
Unknown	1

Constraints

- Finding appropriate libraries for the parts we own.
- Covid-19 .
- Learning some techniques as working on Arduino and connect it with Wi-Fi .

Future works

- to develop the machine to include website out of the factory Wi-Fi range .
- extended belt and more Flexible one to help it to extend and shrink in what length the owner need.
- Making bigger coils to improve the strength of RFID.

THANKS.