HACKFEST'23

Team

CORE CHIP

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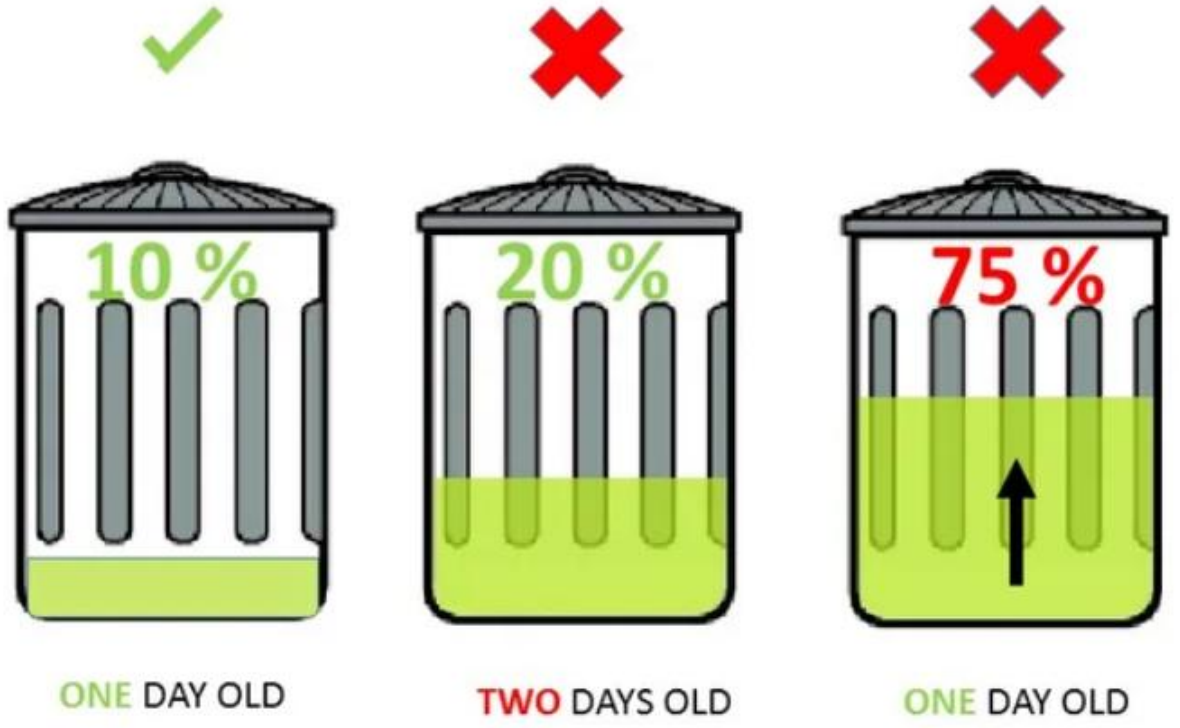
Problem Statement

- **Statement:** **Build an IOT-based dustbin that can send the status of the dustbin to the webpage.**



Description

- **Developed a solution for overflow of garbage in dustbin . The solution should provide a smart Dustbin using IOT and sensor , that can send the status of the dustbin in percentage ,when the dustbin filled .**
- **We used an ultrasonic sensor and Node MCU to build this IoT dustbin project. The ultrasonic sensor calculates the occupancy by detecting the trash in the dustbin. The distance between ultrasonic and trash is converted to percentage so that instead of showing two or three levels, we can show the dustbin status in percentage.**

Proposed solution

- **The proposed technique will create an IOT-based dustbin. The existing system is that, it send the notification when the bin is filled.**

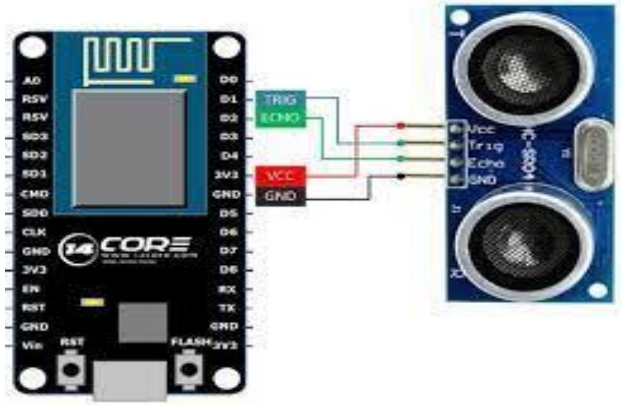
- **To use a webpage, we can identify a dustbin is completed or otherwise. A dustbin updates its status percentage, and when more than 70 percent of the dustbin is filled, it sends an email that the dustbin is almost full**

Components used

NODEMCU

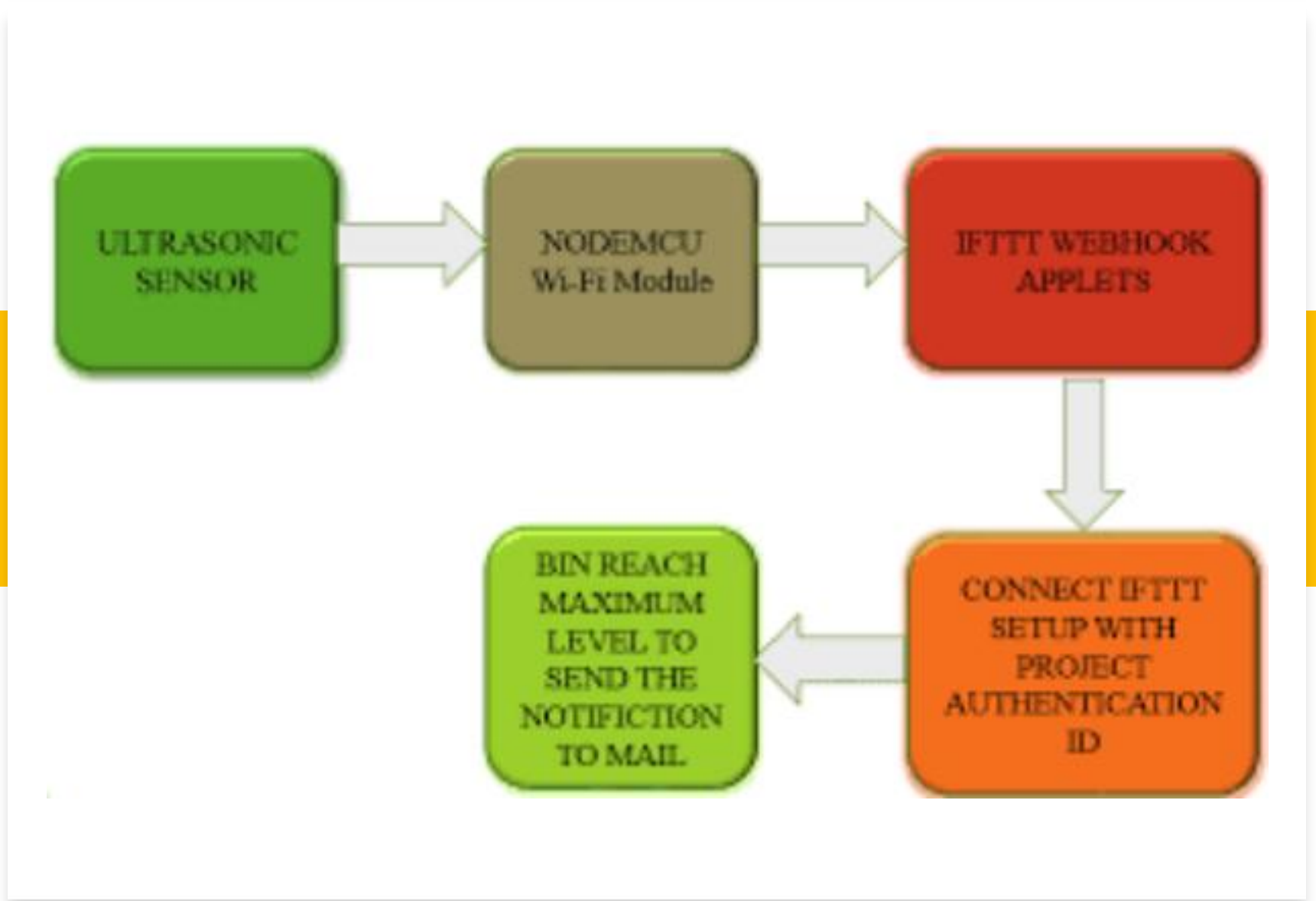
ULTRASONIC SENSOR

CIRCUIT DIAGRAM

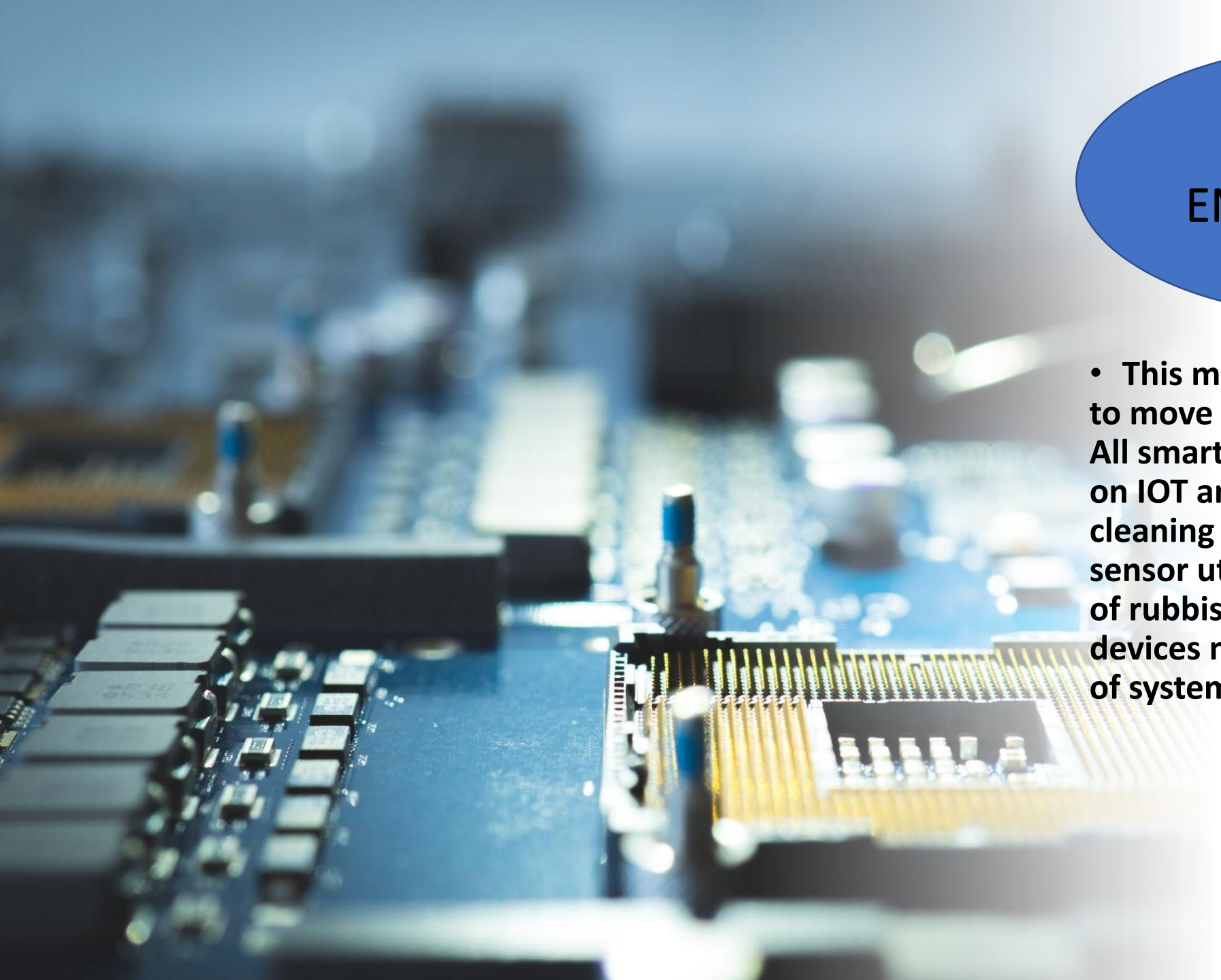


Jumper wires

We are interconnecting a ultrasonic sensor with a NodeMCU.



BLOCK DIAGRAM



FUTURE ENHANCEMENT

- **This method described above is to move towards IOT implantation. All smart dustbin methods based on IOT are very helpful for cleaning the waste. An Ultrasonic sensor utilize the maximum peaks of rubbish on a dustbin. Many devices may be used in a variety of systems.**

Thank you!

CORE CHIP

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