

BVRIT HYDERABAD
College of Engineering for Women



Department Of Information Technology

IoT BASED BIDIRECTIONAL VISITOR COUNTER

Under the Guidance of

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AGENDA

- Introduction
- Existing System
- Problem Statement
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- Tools & Technology
- Feasibility Study
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- Implementation
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Introduction

- The human counting was unreliable and came at a great cost.
- It may be confusing for a person to tally the quantity of individual entering and leaving at a same time.
- Our intension is to design and develop the system to manage human traffic in a large industry and also conserve the usage of electricity.

Existing System

- The present systems are used to count the bidirectional visitor count using the IR sensors and measure the temperature using temperature sensor.

Drawbacks:-

These systems do not measure the humidity of the room and do not indicate using buzzer.

Problem Statement

Bidirectional visitor counter counts the number of people incoming and outgoing through any large industry and saves electricity based on the requirement using different sensors.

Literature Survey

Title	Author	Journal	Description
IoT Based Smart Assist System to Monitor Entertainment Spots Occupancy and COVID 19 Screening During the Pandemic(2022)	Lakshmi Narayanan, Santhana Krishnan .R, Y.Haro Id Robinson	IEEE	Proposed system will use an IR sensor for counting the people entering and use a MLX90614 IR temperature sensor for screening the public with high temperature.
Automatic Temperature Control System Using Arduino.	Raju, Srujan & Sinha, Professor G.	IEEE	Proposed system will only sense temperature but not humidity.
Design and Construction of a Bidirectional Digital Visitor Counter(2019)	Winfred Adjardjah, George Essien, Hilary Ackar-Arthur	ISSN	Proposed system will count visitors effectively by reducing the rate at which error occurs when Counting visitors.

Proposed System

- In our proposed model we use IR sensor and DHT11 sensor.
- We use a buzzer to indicate that the temperature of the room exceeded the limit.
- This model is also used to conserve electricity by automatically turning the devices on/off.
- We will use an Arduino (microcontroller) to implement this system.

Tools and Technology

Environment	Specifications
Hardware	Arduino Uno Board , LCD Display , IR sensor, DHT11 sensor , Buzzer , Power Supply
Software	C language, Arduino IDE Environment

Feasibility Study

- IR sensors will count the numbers of guests and automatically run the lights and fans accordingly.
- DHT11 sensors is used as the temperature and humidity sensor to output the values of temperature and humidity as serial data.
- Buzzer to notify when the limit of the number of people exceeds.

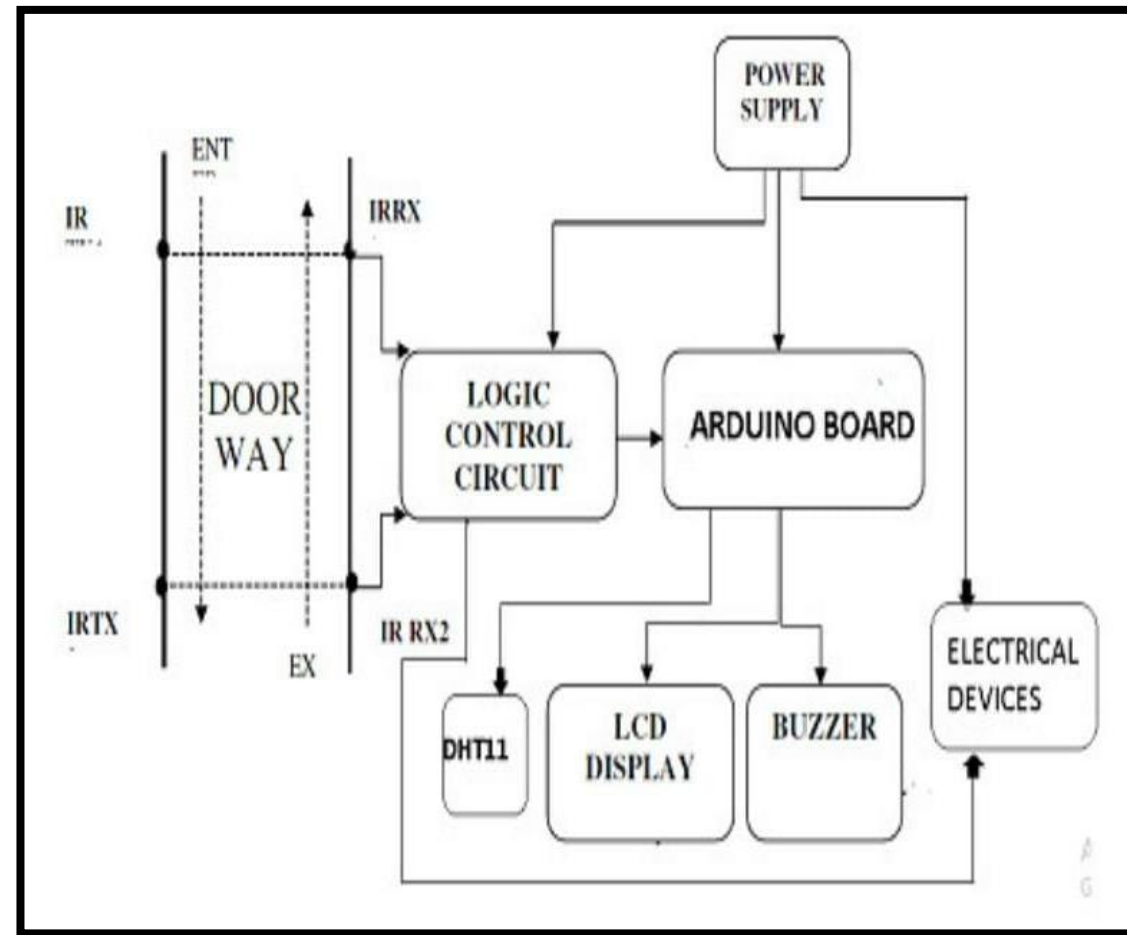
Societal Impact

- Our model helps in saving the time by avoiding manually counting the number of people are entering and exiting.
- It also helps in saving the electricity which is very useful in many sectors.
- It can be implemented in cinema halls, multiplex, shopping malls as well as in temples to count the no. of people entering inside. So that these places should not get over crowded to avoid conjection.

Project Timeline

Dates(To-From)	Duration	Tasks
06.09.2022-22.10.2022	4 weeks	Domain Selection References Specifications Requirements
23.10.2022-12.11.2022	3 weeks	Literature Survey
13.11.2022-18.12.2022	5 weeks	Partial implementation
19.12.2022-10.01.2023	3 weeks	Full Implementation

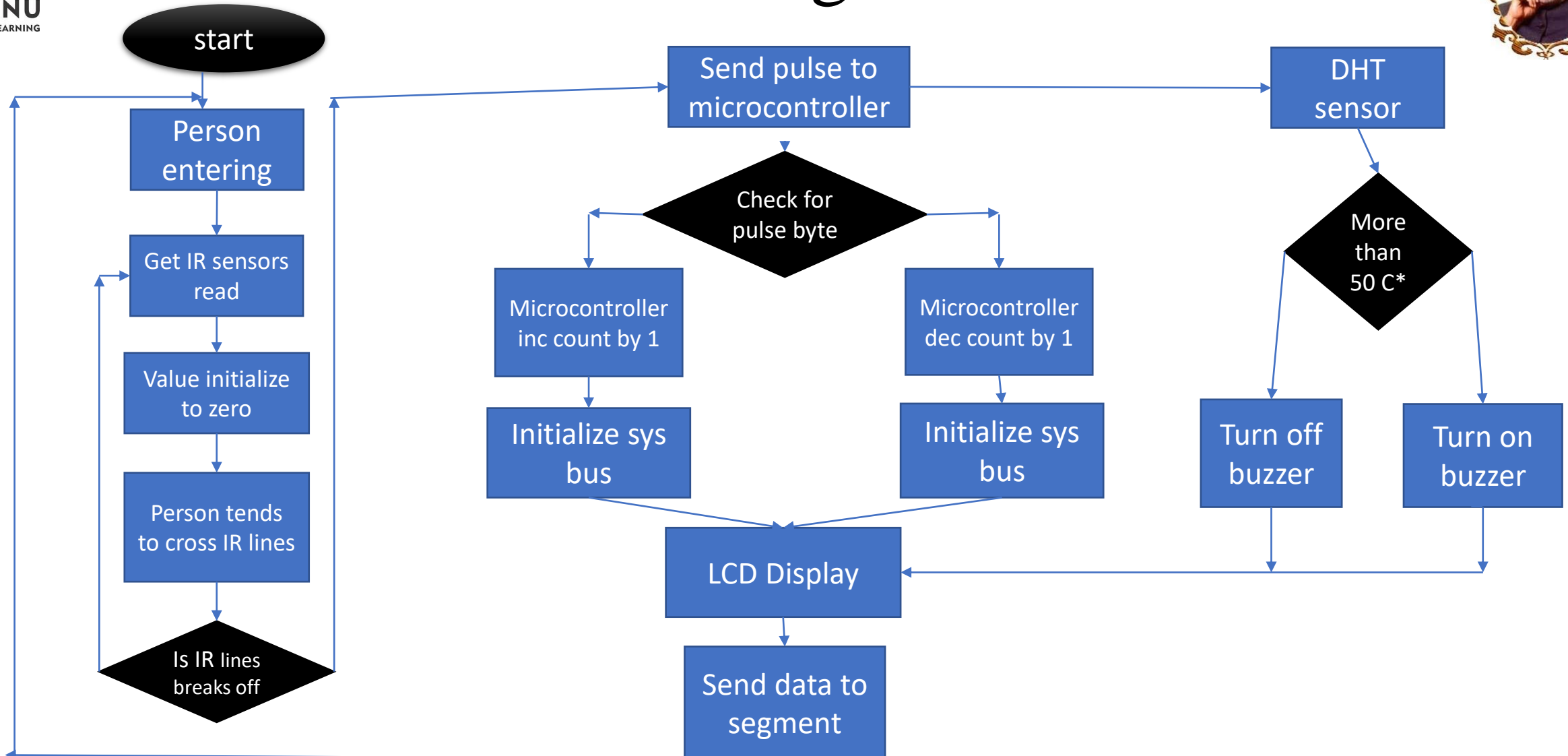
Architecture



Modules

- Counting the persons entering and exiting the room.
- Automatic on & off of lights and fans based on the number of persons .
- Checking the temperature & humidity.

UML Diagram



Implementation

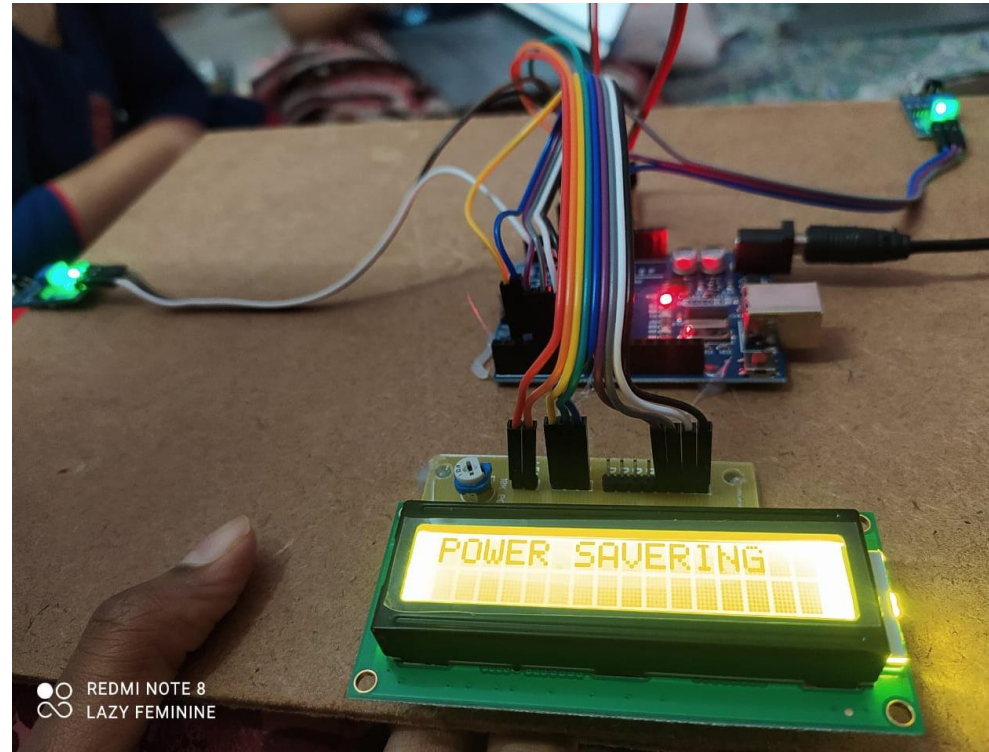


Fig- 1: Image is displayed when power supply is given

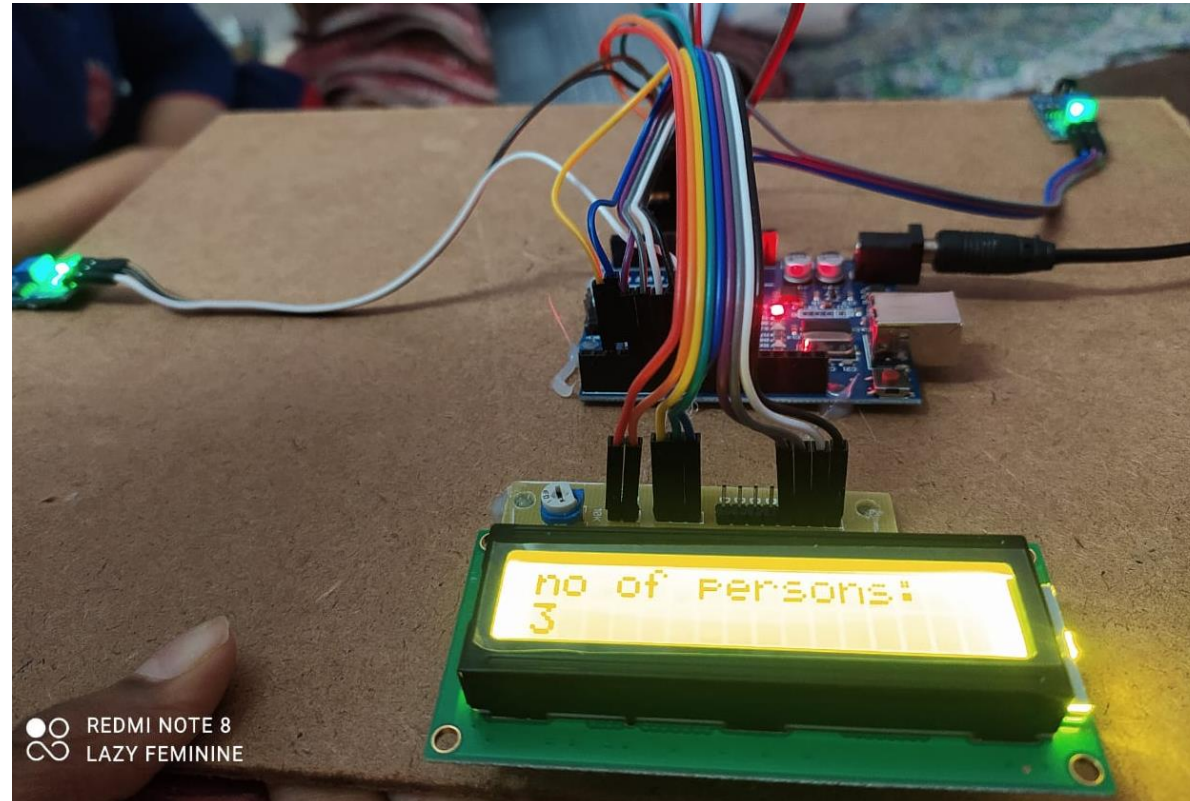


Fig-2: When people enter the room,
the count is shown as above

References

1. Narayanan, K.L., Krishnan, R.S. & Robinson, Y.H. “IoT Based Smart Assist System to Monitor Entertainment Spots Occupancy and COVID 19 Screening During the Pandemic”. IEEE(2022).
2. Raju, Srujan & Sinha, Professor G. “Automatic Temperature Control System Using Arduino”. IEEE(2020).
3. Winfred Adjardjah , George Essien, Hilary Ackar - Arthur, “Design and Construction of a Bidirectional Digital Visitor Counter ”, ISSN(2019).

THANK YOU