M.KUMARASAMY
COLLEGE OF ENGINEERING
NAAC Accredited Autonomous Institution
Approved by AICTE & Affiliated to Anna University
ISO 9001:2015 & ISO 14001:2015 Certified Institution
Thalavapalayam, Karur-639 113, Tamilnadu.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

MINOR PROJECT FINAL REVIEW

TEAM MEMBERS

1. Muthukumar S
2. Nandhakumar M
3. Jainishaanth N S
4. Kiruthivarma S

PROTECTION OF CROPS AGAINST BIRDS & ANIMALS

Using sensor based system

OBJECTIVE

1. Cultivate crops in protected area
2. Sensor based Acoustic System
3. Automatic feed and water supply
4. Protecting Living Organisms

ABSTRACT

Our project introduces a clever system that helps protect farming lands from unwanted visitors, like birds and animals. We are using a special sensor called Passive Infrared (PIR) to detect when these creatures get too close. When they do, an alarm will sound to scare them away, but don't worry, it's a harmless sound at frequencies of 360 to 440 Hertz.

The PIR sensor sends out rays that are picked up by a photodiode. These signals are then used to trigger an automatic feeding and watering system for the animals nearby. So, not only does it keep them away, but it also takes care of their needs.

Our system can be powered by a battery or a solar panel, making it eco-friendly. The components used include steel wire for fencing, the PIR sensor, a battery, an alarm, an automatic feeder, a water supplier for birds, and an Arduino UNO for control.

In summary, this project provides a safe and effective way to deter birds and animals from your space while ensuring their well-being, all while being eco-conscious.

SENSOR BASED ACOUSTIC SYSTEM

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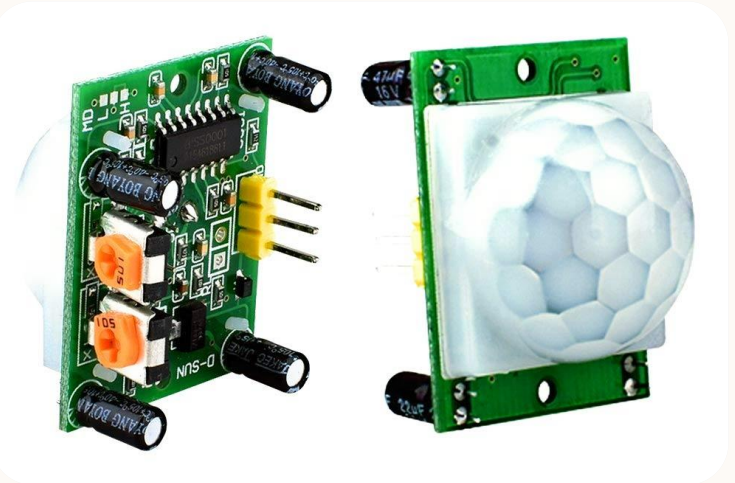
In the system we are using Passive Infrared(PIR) sensor – Produce alarm sound – Comes nearer to it in limited distances

1. High chances of diversion of Birds and Animals
2. Also produce alarm sound when birds are crossed

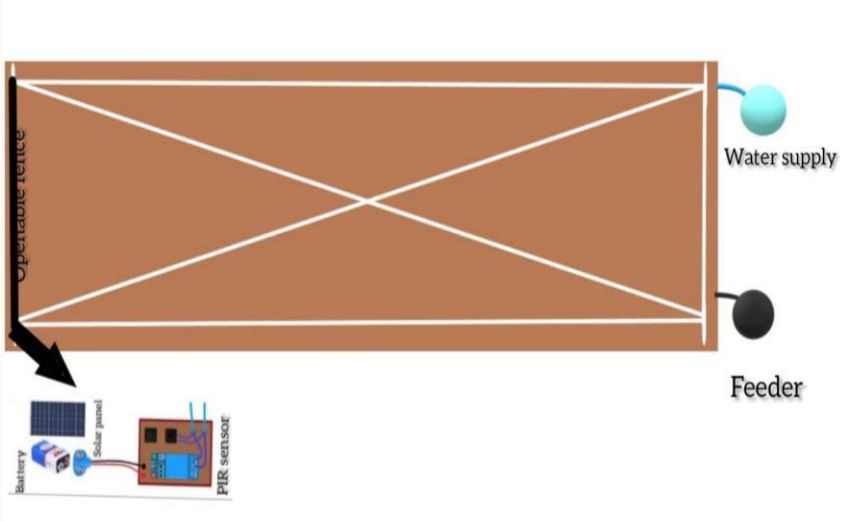
SENSOR BASED ACOUSTIC SYSTEM

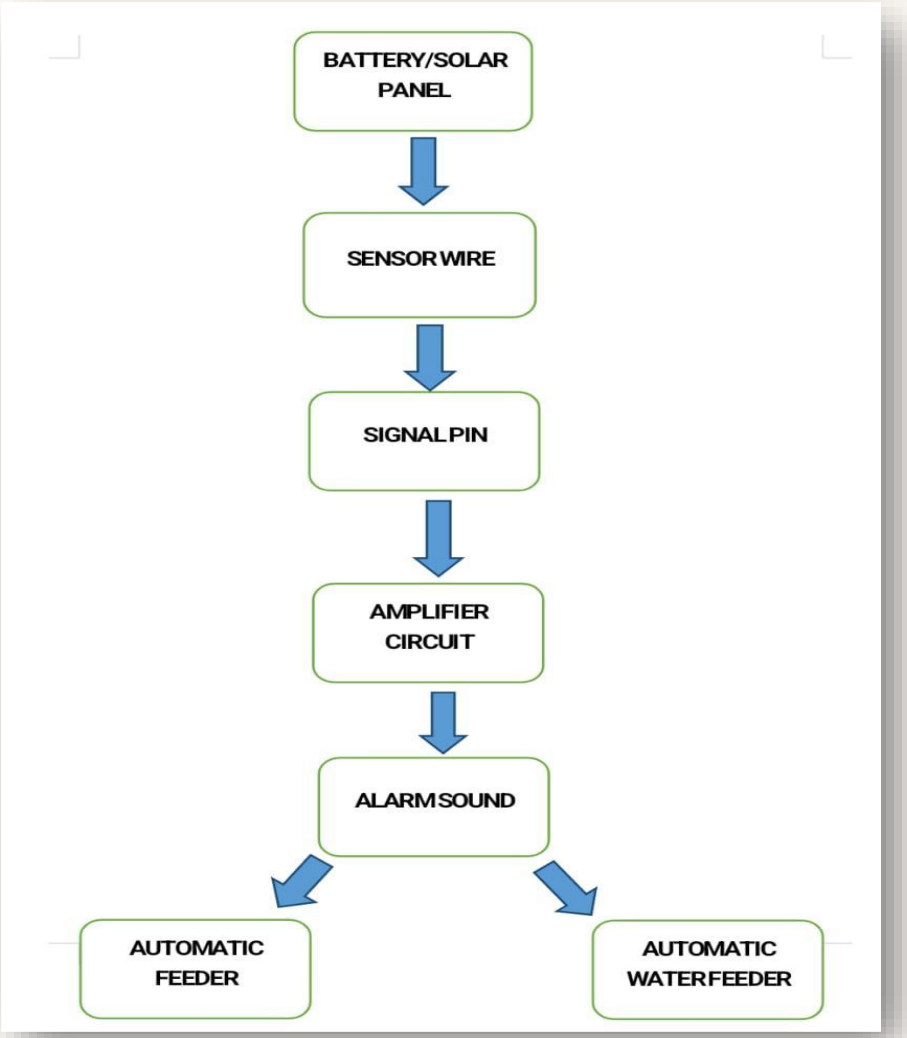
3. The rays produced by PIR sensor – absorbed by photodiode – signals passes to automatic feed system – activate providing feed and drinking water – animals present near by

4. Source – Battery/ Solar Panel(12V)



FLOW CHART

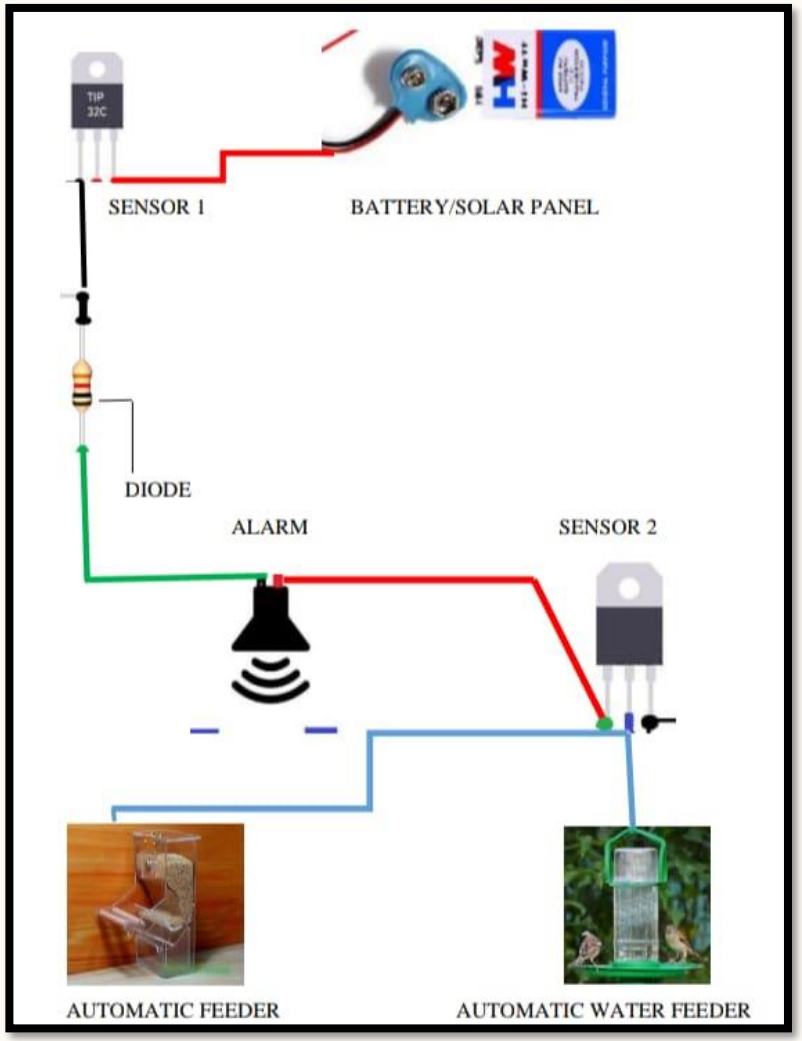

Water supply
Feeder
PIR sensor


BATTERY/SOLAR PANEL
SENSOR WIRE
SIGNAL PIN
AMPLIFIER CIRCUIT
ALARM SOUND
AUTOMATIC FEEDER
AUTOMATIC WATER FEEDER

COMPONENTS

S. No	Name	Qty
1	PIR Sensor	2
2	Fence Steel wire	2 kg
3	Alarm	1
4	Automatic Feeder	1
5	Automatic Water Feeder	1
6	Battery / Solar panel	1
7	Arduino UNO	1

CIRCUIT DIAGRAM



ADVANTAGES

- ✓ This is farmer's friendly and low cost
- ✓ Harmless to living beings
- ✓ Cares for the feed and drinking water supply of the birds and animals
- ✓ Sound produced will be mild(360/440Hz)
- ✓ Eco-friendly

THANK YOU!