Temperature Management And Protection of Domestic Animals From Reptiles

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Abstract: This project reads and controls the temperature and humidity of animal shelter and shatters away snakes from the animal shelter. The temperature and humidity will be first measured and then according to the favorable conditions for the animals the temperature and the humidity will be changed. An ultrasonic generator will be used to replicate away snakes by generating an ultrasonic frequency of 50Hz.

By doing this project we provide a safe and healthy environment for domestic animals by maintaining shelter's temperature and protecting them for animals.

IndexTerms **– pic18F4550,DHT11,ultrasonic frequency generator.**

I. INTRODUCTION

Proper housing and management safety of animal facilities are essential to animal well being and to the health and safety of personnel. The livestock are facing cattle health problem around the world , temperature change being one of the greatest threat. Animals that are exposed to heat stress reduce feed intake and increase water intake, and there are changes in the endocrine status which in turn increase the maintenance requirements leading to reduced performances. Environmental changes reduce body weight, average daily gain and body condition of livestock. Variations in temperature and rainfall are the most significant climatic variables affecting livestock. Warmer and wetter weather will increase the risk and occurrence of animal disease. There is considerable research evidence showing substantial decline in animal performance inflicting heavy economic losses when subjected to heat changes.

So it becomes of prime importance to develop a system that will be able to maintain a temperature to which livestock will be adaptive. We will be using a sensor that will be reading the shelter temperature. This information will be passed on to a micro controller. Based on the readings of the sensor the micro controller will decide whether the temperature needs to be increased or reduced. The temperature range can be set already or it can be entered manually by the user.

Another major threat to the livestock is from snake bites. A survey has revealed that harm to livestock due to snake bite is most seen in India. Snakes are not harmful for the animals but can also prove to be dangerous to the humans working in animal shelter. Hence, a loss due to snake bites. For this purpose, we will be generating ultrasonic waves that will be enough to scare the snakes and scatter them away.

1.GOALS AND OBJECTIVE:

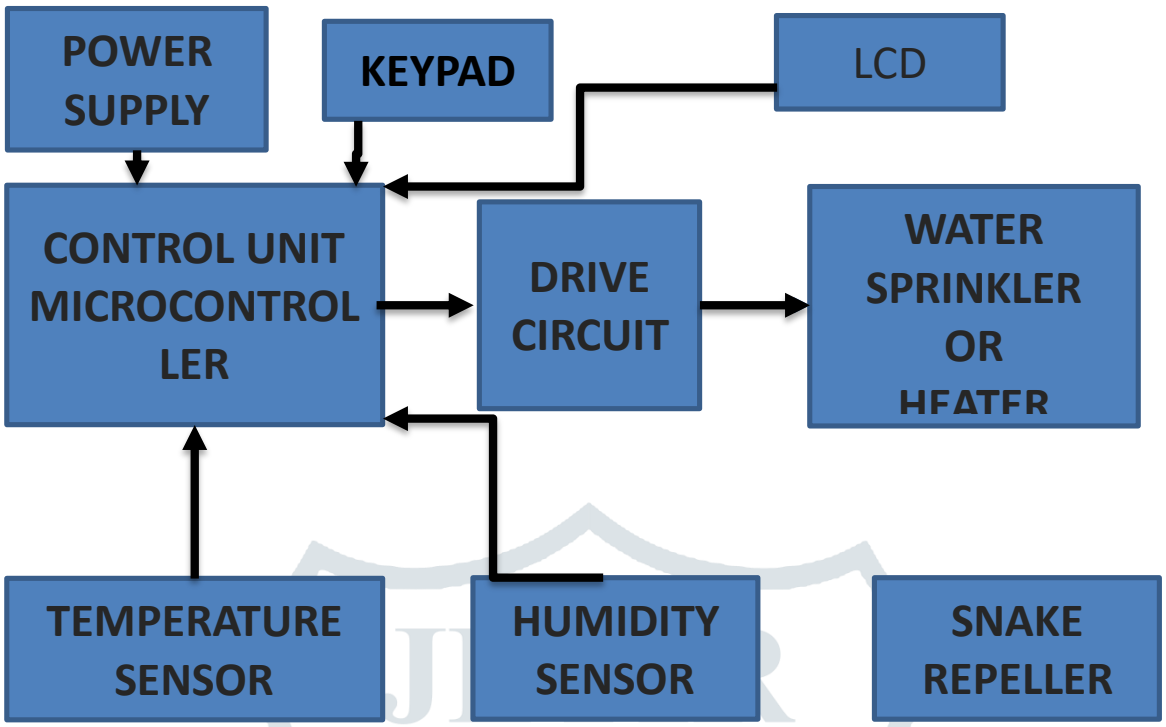
1.To protect the animals from reptiles.

2.To manage the temperature and humidity in animal shelter.

3.To manage the Temperature in poultry farming.

4.To save the time and utilizes the technology efficiently.

2.METHOD:



WORKING OF PROJECT:

The sensing devices from the animal shelter are connected to the Micro controller System which is programmed to convert the sensed data from the animal shelter to readable signals.

TEMPERATURE AND HUMIDITY SENSOR:

Temperature and humidity signal will sensed the data of animal shelter.Then for the management of sensed data this data will send to micro controller.

CONTROL UNIT MICRO CONTROLLER:

Micro controller will convert the sensed data from animals shelter to readable signals.All the sensors,power supply,LCD,keypad are connected to micro controller. Micro controller will send this data to drive circuit.

DRIVE CIRCUIT:

The values of required temperature and humidity are stored in micro controller.By taking help of this data drive circuit will decide to start water sprinkler or heater.

WATER SPRINKLER OR HEATER:

Water sprinkler is used to reduce the temperature of animal shelter and heater is used to increase the temperature.

ULTRASONIC SENSORS:

It will generate the amount of ultrasonic frequency on which snakes are inactive and it will shatter away the snakes from animal shelter and from human. This system will operate for limited range of area where it is placed.

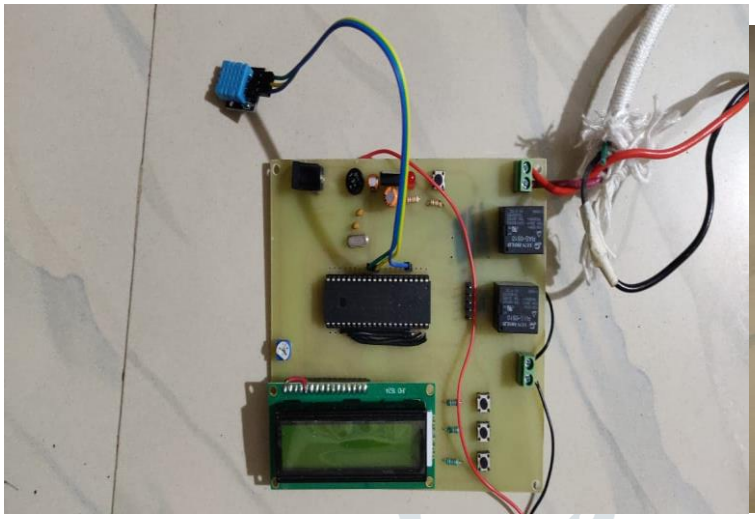
Here proposed system is designed to reduce the difficulties of farmers and rural people. It merges the idea of an active temperature and humidity management and snake repeller system. The system mainly reduces the human effort by using this system. The sensors play a major role in this temperature and humidity management and snake repeller system. we are using DHT11 for temperature sensing and humidity sensing. For sensing temperature or humidity on the base of the requirement the management will be done with help of drive circuit the water sprinkler or cooling system will operate. These sensors are together interfaced with PIC18F4550 micro controller. For safety of animals we are using certain amount of ultrasonic frequency by which snakes get affected which is done by the help of snake repeller unit (Frequency generator circuit)

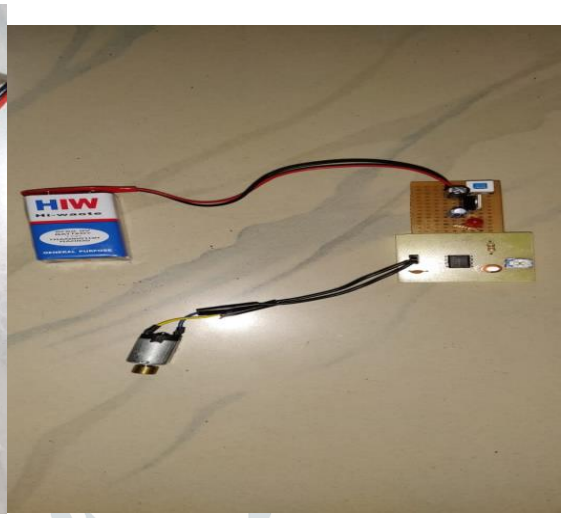
3.METHODOLOGY:

We are using microcontroller PIC18F4550 for designing the system,we are using DHT11 for temperature sensing and humidity sensing for sensing the temperature or humidity on the based of the requirement the management will be done with the help of drive circuit the water sprinkler or cooling system will operate.

For the safety of animals we are are using certain amount of frequency by which reptiles get affected which is done by the help of snake repeller unit (frequency generator circuit).

4.Output Result:





5.Conclusion:

Temperature of animals shelter is maintained between a specific range,which is bearable by the livestock and hazard due to temperature variations are reduced.

Moreover, the death of domestic's animals due to snake bites is also avoided.

6.REFERENCES:

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