

## FACULTY INNOVATIONS



**Mr. V. Nagarjuna, M.Tech (Ph.D)**, Asst.Prof, Department of Information Technology. He Successfully submitted Thesis in the area of An Improved Healthcare Data Transmission In Cloud Using Connected Dominating Set Based Algorithm.

### **DOMAIN:**

Cloud Computing

### **Innovative Journal publications:**

1. Nagarjuna Valeti,. Ceronmani Sharmila.V.(2021). Ensemble Cloud Deployment for Integrated Secure Health Domain System Private Cloud Deployment. *Indonesian Journal of Electrical Engineering and Computer Science*. (Submitted for Review).
2. Nagarjuna Valeti,. Ceronmani Sharmila.V.(2020). Fault detection based Connected Dominating Set (FDCDS) in Fog Computing. *Webology*. Vol. No. 17, Issue No. 2, 599-606.
3. Nagarjuna Valeti,. Ceronmani Sharmila.V.( 2019). Integrated Secure Health Domain System using IOT. *International Journal of Recent Technology and Engineering*. Vol. No. 8, Issue No. 4, 483-485.
4. Nagarjuna Valeti,. Ceronmani Sharmila.V.(2019). Optimizing cloud health Care Data Transmissions using Fog. *Journal of Physics*. Vol. No. 1228, Issue No.2, 1-9.

## CSE(IOT & CSBT) , STUDENT INNOVATIONS



SRINIVASA EDUCATIONAL SOCIETY'S  
**PACE INSTITUTE OF TECHNOLOGY & SCIENCES**  
(Autonomous)  
Approved by AICTE, NEW DELHI & Govt. of Andhra Pradesh | Permanently Affiliated to JNTUK, Kakinada, A.P.  
ACCREDITED BY NAAC WITH 'A' GRADE | ACCREDITED BY NBA  
An ISO 9001 : 2008 Certified Institution | 'A' Grade Engineering College by Government of A.P.  
NH-16, Near Valluramma Temple, ONGOLE - 523 272, Contact No.: 08592 278315, 9581456371 | www.pace.ac.in

Department of CSE(IoT&CSBT)

### DESIGN THINKING FOR INNOVATION REPORT OF THE PROTOTYPE **BALLOON CAR**

ALAHARI DIVYA VANI	20KQ1A4701
P.V.S.S.L CHANDRIKA	20KQ1A4711
PERISETLA CHAITANYA	20KQ1A4753
GALI PAVANI	20KQ1A4705
SYED SHABNAM	20KQ1A4717

**Submitted By**

**Under the guidance of**  
**K.Swarna Latha**  
**Assistant professor**



**DEPARTMENT OF INTERNET OF THINGS ,CSE(IOT &CSBT)**

**PACE INSTITUTE OF TECHNOLOGY &SCIENCES(AUTONOMOUS)**

**Approved by AICTE, Accredited by NBA & NAAC (A Grade), Recognized under  
2(f) & 12 (B) ofUGC Permanently Affiliated to JNTUK, KAKINADA, A.P.,An  
ISO 9001:2008 Certified InstitutionNH-16, Near Valluramma Temple, ONGOLE-  
523272, ANDHRA PRADESH**

**PACE INSTITUTE OF TECHNOLOGY & SCIENCES**

(Approved by AICTE, New Delhi, Accredited by NBA and NAAC with 'A' Grade)(Permanently Affiliated to

Jawaharlal Nehru Technological University Kakinada, Kakinada)Vallur, NH-16,  
Ongole, Prakasam District,

A.P- 523272



DEPARTMENT OF INTERNET OF THINGS,CSE(IOT&CSBT)

**CERTIFICATE**

This is to certify that the prototype entitled "**BALLOON CAR**" is a bonified work of

ALAHARI DIVYAVANI(20KQ1A4701)

P.V.S.S.L.CHANDRIKA(20KQ1A4711)

PERISETLA CHAITANYA(20KQ1A4753)

GALI.PAVANI(20KQ1A4705)

SYED.SHABNAM (20KQ1A4717)

in the partial fulfilment of the requirement for the Design thinking for innovation for the academic year 2022-2023. This work is done under my supervision and guidance.

Signature of Guide

**Assistant Professor**

Signature of Head of the Department

**Professor, Head of the Department**

## **Abstract:**

Our Balloon Car will be a new emerging toy for many kids which is very useful to play and as well as to improve their knowledge.

It is very helpful to make the kids learn something new and it is so attractive.

As it is a theme to work car without any machinery and runs by using air. It Functions when we move the car with our power for some distance it automatically fills the balloon with air through the air pump made up of syringe. It is more attractive because people likes balloon and it is less expensive.

## **Introduction:**

### **Theme:**

New from Old

### **Challenge:**

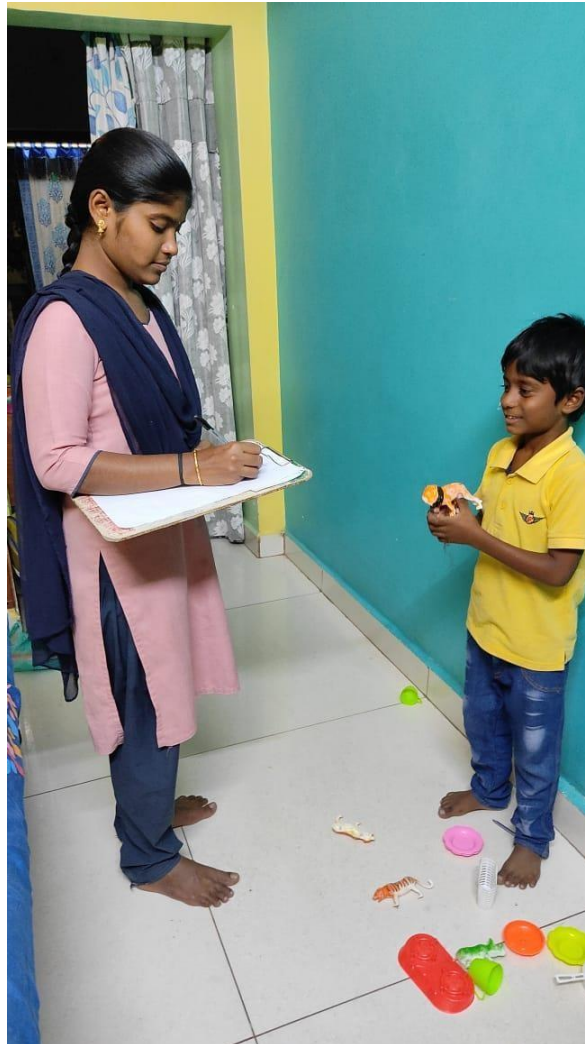
Seek ideas/Solutions/Working models for a sustainable and climate conscious Toy value chain like innovative material choices, packaging design, and reuse-reshape models.

### **Context:**

To encourage circularity in toy industry- Circular systems employ reuse, sharing, repair, refurbishment, remanufacturing and recycling to create a system that keeps materials in perpetual circulation closed-loop system. It's time for transition from a linear 'take-make-waste' mindset to a multi lifecycle circular approach. Industrial ecology encourages inter organizational cooperation based on the reclamation of waste materials, exchanging materials and energy, inspired by the circular functioning of natural ecosystem.

## Interviews:

Most of them said that their children mind is harmed by using digital toys .So,we created the toy using normal things and also children are enjoying when they play with balloons.





## Synthesis:

Unlike other toys our toy runs without any machinery. It functions with the help of air which is pumped into the balloon. For pumping system we used syringe and modified it as air pump. When it comes to functionality, when we move the car with our power for some distance it automatically fills the balloon with air through the air pump made out of syringe and it is more attractive.

## Brainstorming:

We worked together as a team and generated new ideas. They are: -

- Seating chair with colorful and attractive like princess chair with music and umbrella.
- A mini-Bank game with duplicate money creating a bank scenario.
- A box shaped puzzle which has an image of a flower or an animal or fruits. After solving the puzzle, the box will be open for the rewards.
- A car or a vehicle shaped water bottle which will be playable as a vehicle itself and it can also be used as a pencil/pen holder.
- A mini projector made up of bulb and water with less expensive.
- A mini locker used to store valuable things in the home with low cost.
- IOT Weather Reporting System using Arduino
- Smart Digital School Bell with Timetable Display



## Prototyping:

We collect all the tools that are required for the project Balloon Car and we made the prototype.







## Prototype Testing:



## Story Telling:

When we were discussing as a team, we together had an idea. That idea was a Air Ballon. After we had this idea, we discussed what can be added to this toy which makes it unique from others.

We also discussed adding new features to our toy. We also discussed the faults in our toy and how to solve them.

## Tools Used:

- Balloons
- Injections
- cardboard
- wooden strips
- straws

- bottle caps
- papers

## Conclusion:

- We have learnt how the children play with the toys and we also understood the behavior and emotions of the children.
- We also learned how toys are made by using different methods and tools.
- We understood the situation of the parents when it comes to buying toys for the children.
- We undershould how to make make toys with the tools which use use daily in our lifes and with low cost

**DESIGN THINKING FOR INNOVATION  
REPORT OF THE PROTOTYPE**

**PROJECT TITLE**

**Submitted By**

Shaik Asha  
Alakunta supriya  
Bheeram Sneha latha  
Vargani Prashanthi  
Thammisetty Devi kusuma

20KQ1A4715  
20KQ1Q4702  
20KQ1A4703  
20KQ1A4720  
20KQ1A4718

**Under the guidance of**

**V.Mounica**



**DEPARTMENT OF CSE (IOT & CSBT)**

**PACE INSTITUTE OF TECHNOLOGY & SCIENCES**

**(AUTONOMOUS)**

**Approved by AICTE, Accredited by NBA & NAAC (A Grade), Recognized  
under 2(f) & 12 (B) of UGC Permanently Affiliated to JNTUK, KAKINADA,  
A.P.,**

**An ISO 9001:2008 Certified Institution NH-16, Near Valluramma Temple,  
ONGOLE-523272, ANDHRA PRADESH**

## PACE INSTITUTE OF TECHNOLOGY & SCIENCES

(Approved by AICTE, New Delhi, Accredited by NBA and NAAC with 'A' Grade)

(Permanently Affiliated to Jawaharlal Nehru Technological University Kakinada,

Kakinada) Vallur, NH-16, Ongole, Prakasam District, A.P- 523272



### DEPARTMENT OF CSE (IOT & CSBT)

#### CERTIFICATE

This is to certify that the prototype “ **Indian metal works company kitchenware** ” is a bonified work of Shaik Asha (20KQ1A4715) Alakunta Supriya (20KQ1A4702) Bheeram Sneha latha (20KQ1A4703) Vargani Prashanthi (20KQ1A4720) Tammisetty Devi kusuma (20KQ1A4718) in the partial fulfilment of the requirement for the Design thinking for innovation for the academic year 2020-2021. This work is done under my supervision and guidance.

Signature of Guide

**Assistant Professor**

Signature of Head of the Department

**Professor, Head of the department**

## Abstract

In this study, an improved coal stove was designed, fabricated and tested to evaluate the thermal performance of the stove. The performance of the stove was compared with that of traditional coal stove and conventional kerosene stove. The results obtained showed a better performance of the improved coal stove in terms of cooking duration and specific fuel consumption than that of the traditional coal stove and kerosene stove. The results also showed that the improved coal stove with coal burning rate of  $0.15 \text{ kg hr}^{-1}$  can handle fuel more efficiently and economically than traditional coal stove, which has coal burning rate of  $0.20 \text{ kg hr}^{-1}$ . The thermal efficiency of improved coal stove was found to be 42.6%, whilst those of kerosene and traditional coal stoves were 40.5 and 28.2%, respectively.

## Introduction:

In of the world's population of six billion lives in developing countries. Many of these people lack access to modern energy services for economic and social development and some of their present energy system is unsustainable (Smith 1993). And the emergence of perennial fuel crisis in the developing countries has drawn attention to the need for energy experts to further concentrate on producing viable alternatives and/or complements to kerosene and cooking gas for domestic cooking (Olorunsola 1999).

In some homes electricity is used for cooking but the supply is erratic, unreliable and a high percentage of the population in the developing world is not on the electricity grid. Gas burns quite efficiently but it is expensive and out of reach of the common



### Problems:

1. There is not a deep bed of burning coal.shaking the grates too little.
2. Too much ash built up
3. Not adding enough coal
4. Poor drafting chimney.



## Interviews:

- 1) What type of problems do you face coal stove ?
- 2) Fire extend what you will do ?
- 3) How you will reduce fire in coal stove ?

## Prototyping:

**Student must attach all these in documentation:**

**COAL STOVE:**

Mild By:

PepsiCo India Holdings Pvt Ltd.

(Frito-Lay Division)

JL No. 2 & 4 (Kendua Panchayat),

Mouja Jaladuhlagori via Andul Mouri,

P.O. Dhulagarh, PS Sankrail,

District Howrah - 711302 West Bengal

Marketed By:

PepsiCo India Holdings Pvt. Ltd.

Level 3-5, Pioneer Square, Sector 62,

Near Golf Course Extension Road,

Gurgaon-122101, Haryana, India

Net Quantity

Mild

Batch No.

MRP (Inclusive of all taxes) for each pack

Primary Pack  
Wholesale Pack



## Prototype Testing:

1. Achieve the basic idea using a new pellet burned to heat large pot for clean and high efficiency cooking
2. Add autoignition and manual flame power adjustment, pilot integration of new stove with traditional Chinese cook stove structure

## Story Telling:

How you succeed in completing your project.

Team work in my team we have 5 members.

I really satisfied with my team, everyone's hard work makes our prototype finally.

We all went near to by coal stove users, parents family members for information.

We are clearly knowledgeable and noted what the users said and all these helped us to make our prototype.

## Tools Used:

Tools used in project are :-

Cardboard

Colours

Chats

Sketch pen.etc...

## Conclusion:

Conclusion of your project

we make a helpful coal stove for every type of people



**DESIGN THINKING FOR INNOVATION  
REPORT OF THE PROTOTYPE**

**TEMPERATURE SENSOR**

**Submitted By**

PANDI SHARON PUSHPA RANI  
SHAIK SHEEMA  
PALAM ANUSHA  
CHILIPI RAGHAVA REDDY

20KQ1A4713  
20KQ1A4716  
20KQ1A4712  
20KQ1A4725

**Under the guidance of  
V.Nagarjuna**



**DEPARTMENT OF CSE (IOT & CSBT)**

**PACE INSTITUTE OF TECHNOLOGY & SCIENCES**

**(AUTONOMOUS)**

**Approved by AICTE, Accredited by NBA & NAAC (A Grade), Recognized  
under 2(f) & 12 (B) of UGC Permanently Affiliated to JNTUK, KAKINADA,  
A.P.,**

**An ISO 9001:2008 Certified Institution NH-16, Near Valluramma Temple,  
ONGOLE-523272, ANDHRA PRADESH  
PACE INSTITUTE OF TECHNOLOGY & SCIENCES**

(Approved by AICTE, New Delhi, Accredited by NBA and NAAC with 'A' Grade)

(Permanently Affiliated to Jawaharlal Nehru Technological University Kakinada,  
Kakinada) Vallur, NH-16, Ongole, Prakasam District, A.P- 523272



**DEPARTMENT OF CSE (IOT & CSBT)**

**CERTIFICATE**

This is to certify that the prototype entitled **“Temperature sensor”** is a bonified work of  
**PANDI SHARON PUSHPA RANI (20KQ1A4716) CIC, SHAIK SHEEMA (20KQ1A4716) CIC,**  
**PALAM ANUSHA (20KQ1A4712) CIC, CHILIPI RAGHAVA REDDY (20KQ1A4725) CIC,**  
in the partial fulfilment of the requirement for the Design thinking for innovation for the academic  
year 2020-2021. This work is done under my supervision and guidance.

Signature of guide  
Professor,  
Head of the Department

Signature of Head of the Department  
Assitstant professor

## Abstract:

Temperature sensor will be a revolutionary project which will be useful in many sectors like industries, shopping malls, offices, colleges and home appliance.

As the usage of air conditioners, coolers, fans, ventilator fans wastage of current is very high.

By using this temperature sensor, we can use all the electrical devices such as AC, coolers, fans, etc., we can automatically operate these devices when we needed.

We can reduce the wastage of electricity.

We can also operate by illiterates as a just takes only one switch to on.

Everywhere in the world, each and every person can use this device without any instructions

## Introduction:

The temperature sensor refers to a sensor that can sense the temperature and convert it into a usable output signal, which is the core part of the temperature measuring instrument.

It's divided into 5 types and each type has unique working principles. Besides, some factors need to be noticed in the installation and using process.

For the temperature sensor can accurately measure the ambient temperature, it's widely used in various fields and provide convenience for people's production and daily lives.

The temperature sensor is one of the most frequently used sensors, which is widely used in computers, automobiles, kitchen appliances, air conditioners, and household thermostats.

## Synthesis:

By using this temperature sensor, we can use all the electrical devices such as AC, coolers, fans, etc., we can automatically operate these devices when we needed.

We can reduce the wastage of electricity

## Brainstorming:

- Car Safety System with Airbag Notification
- Induction Motor Controller and Protection System
- DIY Bluetooth Gamepad for Android Gaming
- EV BMS With Charge Monitor and Fire Protection
- Path Planner Robot for Indoor Positioning
- Car Accident & Alcohol Detector & Recorder Blackbox
- IOT Weather Reporting System using Arduino and Ras Pi
- Lifi Data Transfer System
- Ultrasonic Glasses for the Blind
- Social Distancing ID Card
- Industrial Production Line Counter System
- Arduino Stepper Motor Controller
- Portable PM10 PM2.5 Pollution Analyzer
- Smart Digital School Bell with Timetable Display
- Industrial Production Target Counter Display System

# Prototyping:

## TEMPERATURE SENSOR

### Tools Required:-

1. Sensor
2. Adapter
3. Cooling fan
4. Copper wires.
5. Arduino board.

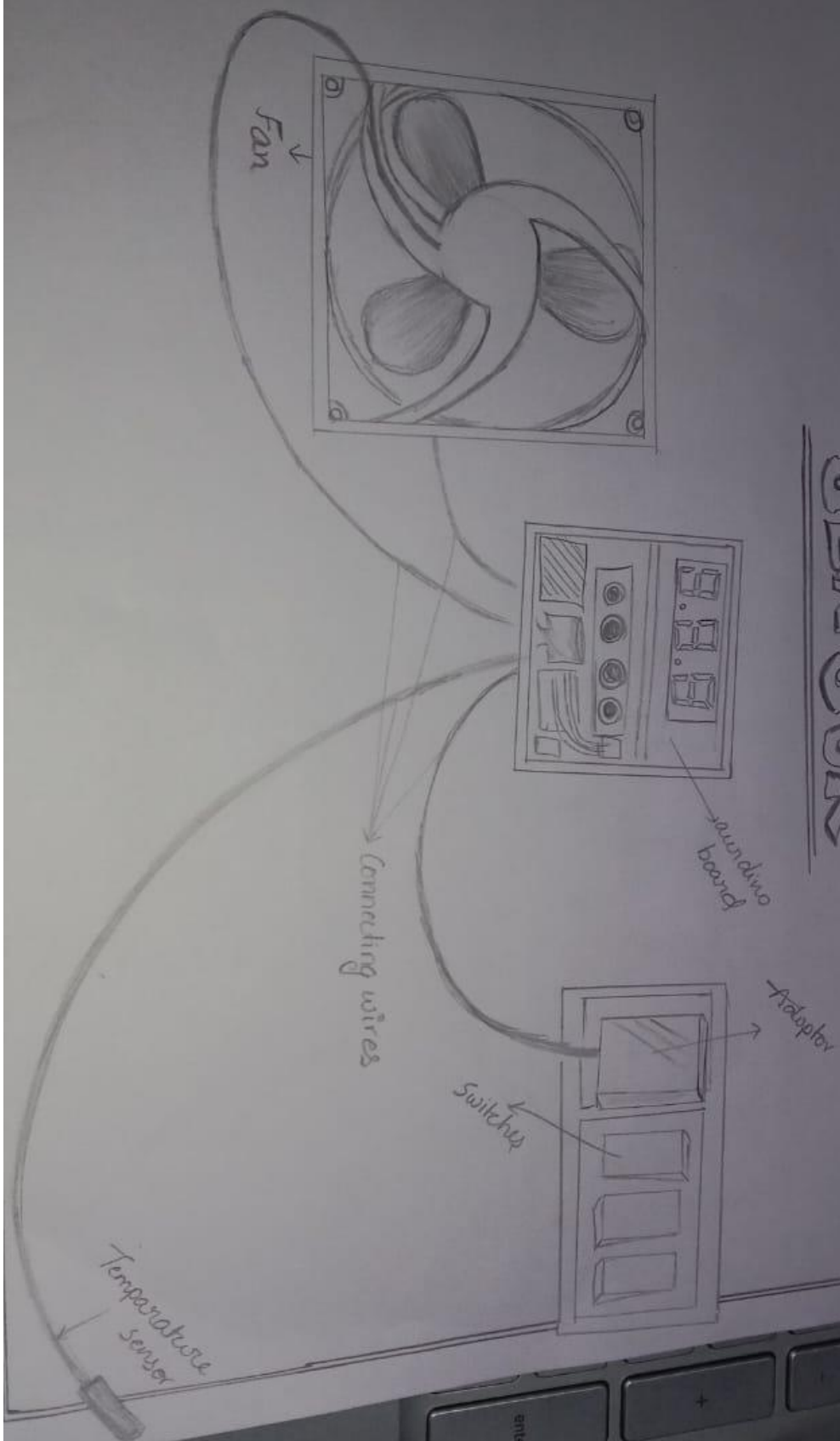
### Procedure:-

1. Collect all the tools that required for project temperature sensor.
2. Take the sensor and attach to the Arduino board.
3. Add the cooling fan to the Arduino board that was connected through with copper wires.
4. Add the Adapter to the Arduino board.
5. When the temperature sensor is attached to certain devices like Air conditioners, ventilators, coolers, fans etc.,
6. This sensor will activated and detect the temperature and on the device to cool down the room.

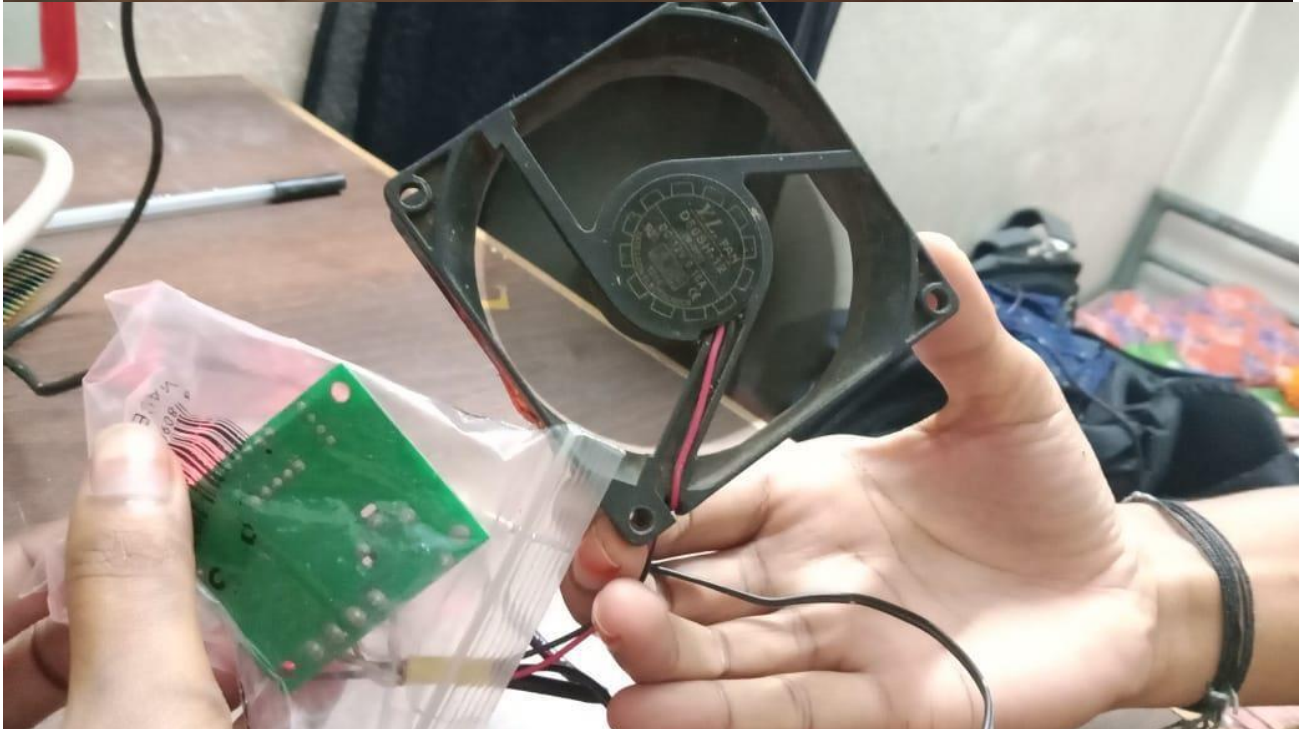
7. It will off the device after the certain temperature.
8. In this form we can use the electricity in minimum usage.
9. Electricity problem also solved and condition of room temperature in houses and offices also Industries also solved.
10. This temperature sensor helps to prevent the usage electricity in low maintainence.

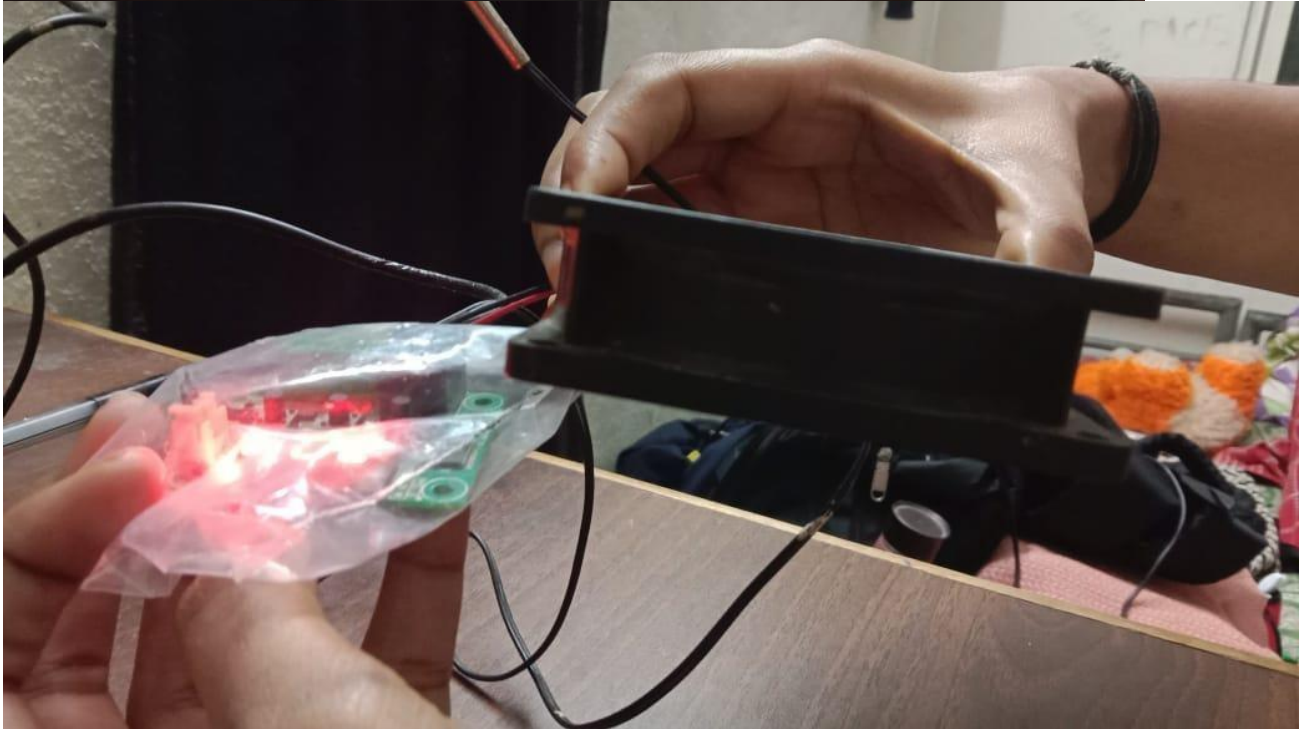


# TEMPERATURE SENSOR



## Prototype Testing:











## Story Telling:

We tried many ideas before the temperature sensor project.

In our team one of the members rises this idea about reducing of electricity and we discussed and work on it.

In this generation our world is running on artificial intelligence on internet of things.

It makes people do not depend and no need to monitor on the devices in offices, colleges, home, etc.,

We attached the Arduino board to sensor and the ventilator fan, and it connects to adapter.

We arranged certain temperature to Arduino board, based upon temperature the sensor starts to work.

## Tools Used:

1. Temperature sensor
2. Air cooler fan
3. Arduino board
4. Copper wires
5. Adaptor

## Conclusion:

1. This is the plan for executing the Temperature sensor from start to end.
2. We have learned about the temperature sensor by using inter net of things.
3. Also, about the graphical design of application.
4. How is it useful for people and organisations.
5. Feedbacks from people and managers of organisations.