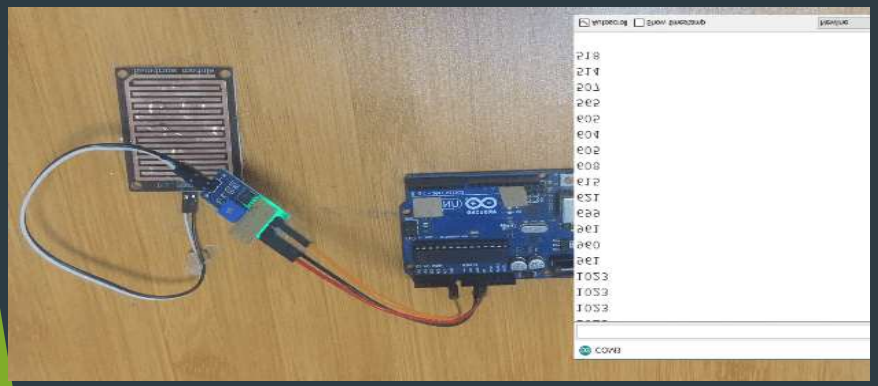
MLR INSTITUTE OF TECHNOLOGY

TITLE:AUTOMATIC RAIN SENSING WINDSHIELD OF CAR WIPER



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Topic contents:

ABSTRACT:

*The idea behind “AUTOMATIC RAIN SENSING WINDSHIELD OF CAR WIPER” is to control the car wiper at the time of rainfall.

*Without switch on the wiper we can automatically turn on wiper of the car using rain sensor detector which senses the rainfall outside the car glass.

*In this project,you can control and monitor the automated car wiper easily.

❖ INTRODUCTION

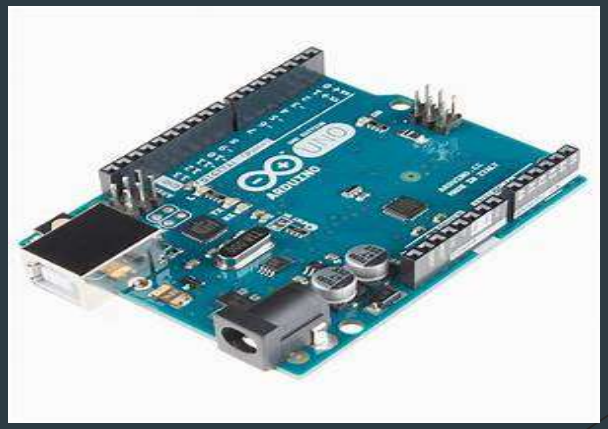
- The Rain Tracker automative rainsensor,senses rain or snow hitting the windshield, and automatically runs the wipers at the right speed.
- we don’t have to take our hands off the wheel,or constantly adjust the speed of the wipers as road conditions change.
- A rain sensor or rain switch is a switching device activated by rainfall.
- In this the sensing projects we are gone use servomotor for deflection of angle as a wiper.

*OBJECTIVE

“The rain sensor is used to detect the intensity of rainfall on the windshield.It improves safety by decreasing driver distraction.Automatically activate windshield wipers once rainfall is detected “.

COMPONENTS REQUIRED:

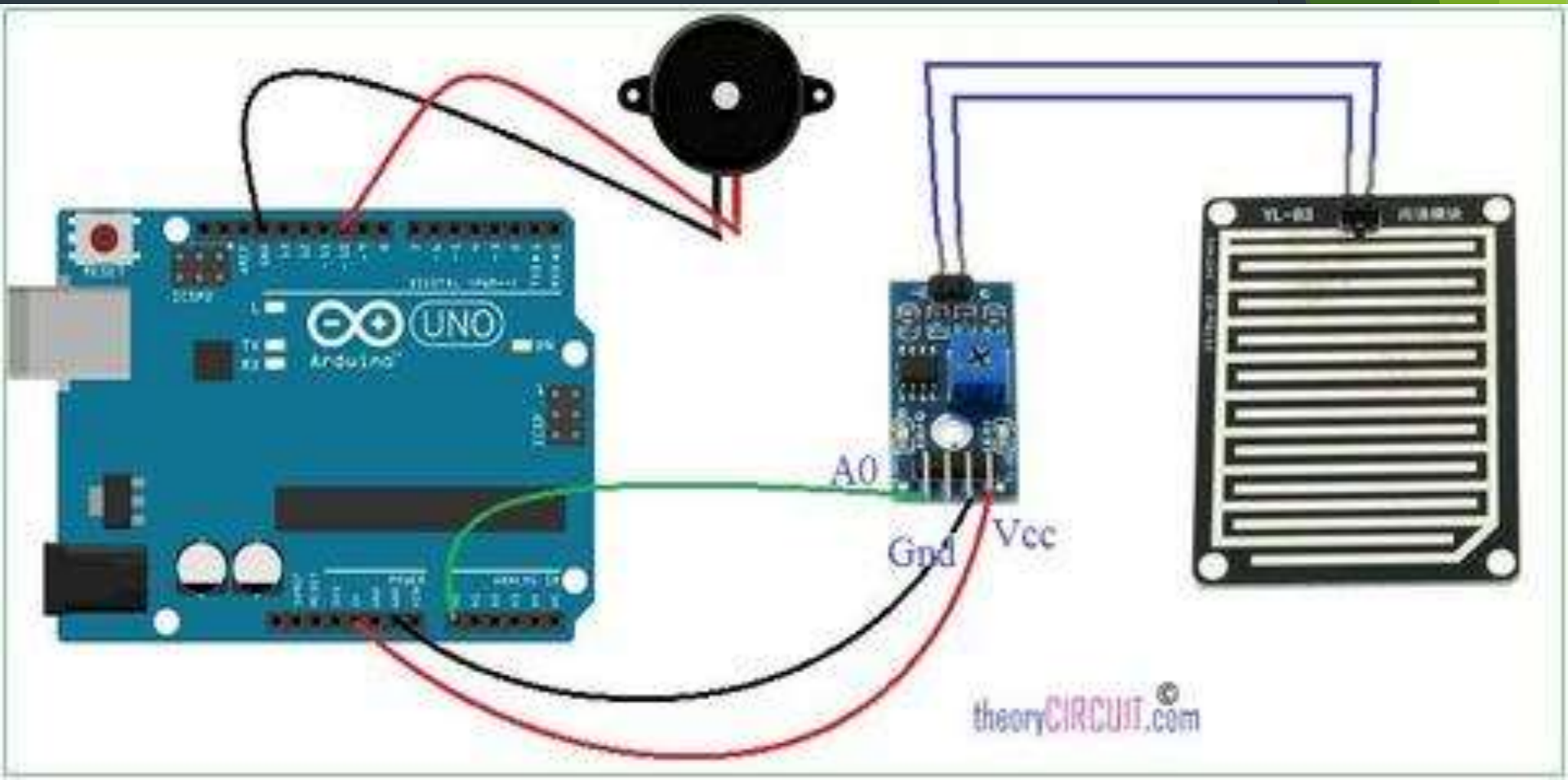
- ✓ ARDUINO UNO BOARD.
- ✓ RAIN SENSOR
- ✓ USB CABLE PORT
- ✓ MALE TO FEMALE JUMPER WIRES.
- ✓ SERVO MOTOR.
- ✓ CARD BOARD PIECE.



❖ Working

The circuit is using a handmade sensor to detect raindrops
The sensor is fixed in the vehicle glass .
In this project ,first we need to collect all the equipment as required.
Then connect them as like as circuit diagram.
Compile the code then u can see deflection of wiper through certain angle when there is any rainfall.
The rainsensor senses the rainfall and giving control signal to the control unit .
The control unit activates the wiper motor automatically.this operation is called “automated rain operated wiper”.

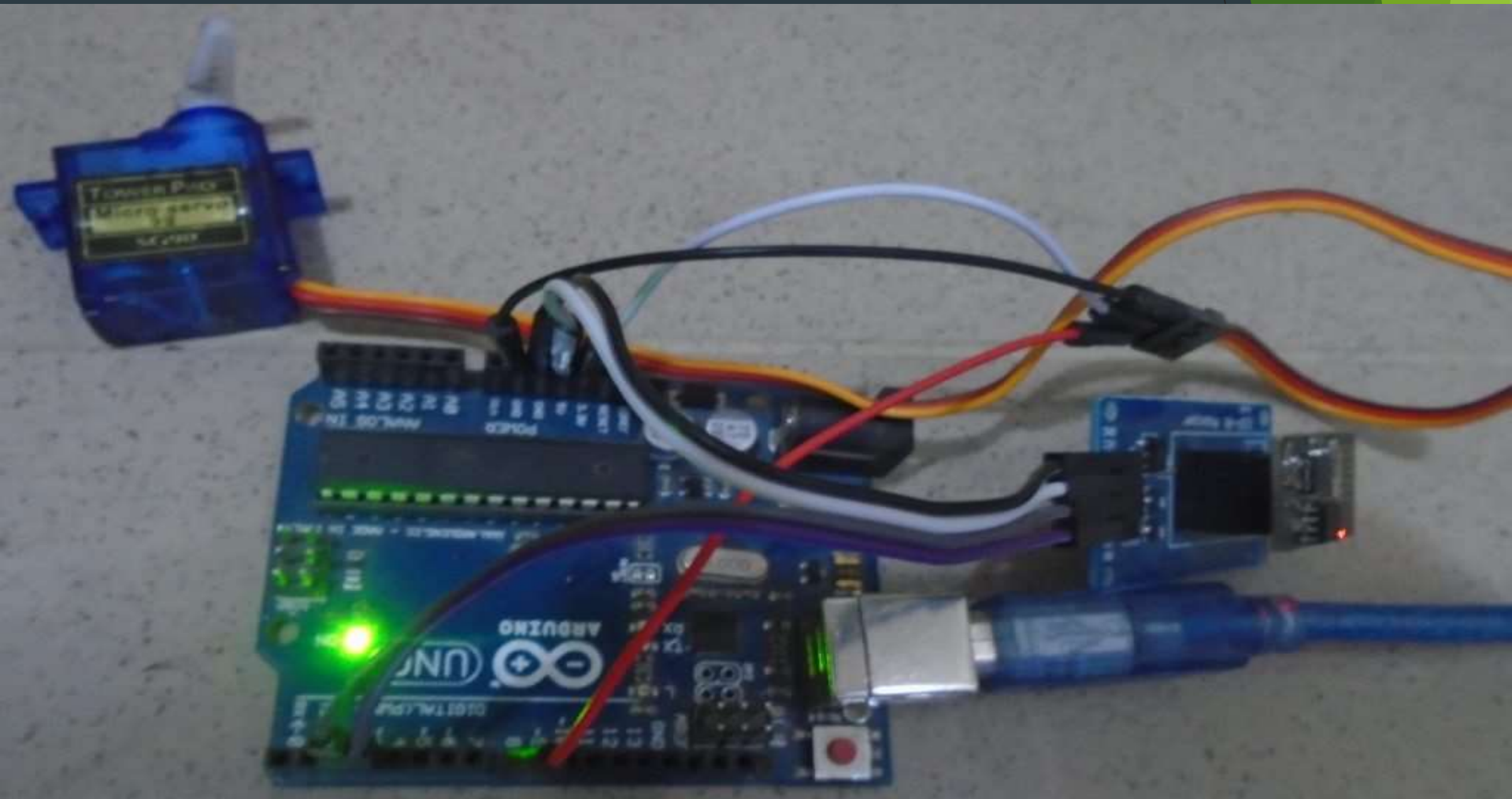
CIRCUIT DIAGRAM:



CODE:

```
#include<servo.h>
//Declare the Servo pin
 int servoPin = 4;
 int sensor = 2;
//Create a servo object
Servo Servol;
void setup()
{
  //We need to attach the servo to the used pin number
  Servol.attach(servoPin);
  pinMode(sensor, INPUT0;
}
Void loop()
{
 int x= digitalRead(sensor);
if( x ==0)
{
   Servol.write(0);
   delay(1000);
   Servol.write(145);
   delay(1000);
}
else{
  Servol.write(0);
}
}
```

WORKING DIAGRAM:



❖ ADVANTAGE:

Automative safety and convenience

Hands free calling

Automatic windshield wipers

High accuracy

DISADVANTAGES:

- The cost of overall system increases as additional components are needed along with rain sensor
- It is useful only in rainfall case.
- It something is over that then the detector will not work until it gets wet.
- There are problems that you will face when you will make this circuit.

CONCLUSON:

- The automated rain wiper system is used to detect rainfall and activate wiper automatically with out driver interaction

Drivers safely focus on their primary task of driiving.

Iif we apply any kind of sensor on glass which senses the act of sprinkling water,by automation,the wiper will be operating automatically .

Rain sensing wipers are great convenience feature in a luxury car.

More useful in marine applications.

Fit in existing house area .

It is use in aircraft.

THANK YOU