

IoT based Weather Monitoring System with SMS notification for DIU

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This Project Report Presented in Partial Fulfillment of the Requirement for the Degree
of Bachelor of Computer Science and Engineering

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APPROVAL

This Project/internship titled “**IoT Based Weather Monitoring System with SMS Notification for DIU**”, submitted by **Md. Azijul Islam** ID: 161-15-962, **A.G.M. Khair** ID: 161-15-961 **Dip Baiyda** ID: 161-15-992 & **Shirin Akter** ID: 161-15-983 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on July 12, 2020.

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DECLARATION

We thus announce that, this project paper has been finished by utilizing the utilization of us underneath the supervision of Tajim Md. Niamat Ullah Akhund, Computer Science and Engineering Department, and Daffodil International University. We furthermore pronounce that neither this endeavor nor any piece of this crucial been presented some extraordinary region for grant of any confirmation of recognition.

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ABSTRACT

This Study describes IoT-based weather monitoring system and detailing contraption undertaking is utilized to hear stay thoughts of weather conditions. I this paper we discuss about weather monitoring system using sms notification system where it will show temperature, humidity and toxic Acid , CO levels. Assume researchers/nature examiners want to take a show up at modifications in an exact environmental factors like Daffodil International University. What's more, these people originate from astounding parts of the world. For this situation, the SMS-based atmosphere monitoring gadget has a few restrictions. Since it sends SMS in a couple of numbers. What's more, fluctuate of cellphone numbers will increment when sending SMS. In the event that they pick to be aware of the atmosphere information of an uncommon spot, they need to go to that specific site. Where each character can see it.

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Chapter 1

Introduction

1.1 Introduction

Environmental exchange and home grown observing have gotten a first rate arrangement of energy for cutting edge events. People decide to hang on being present day on the forefront atmosphere in any place, practically identical to a college grounds or any extraordinary impressive structure. As the world is altering so fast so need to the atmosphere stations. Here in this paper us current an environmental factors station which is uncommonly gainful for any place. This atmosphere station is basically founded absolutely on IoT (Internet of Things). It is outfitted with home grown sensors used to check a genuine territory and archive them in real time on the cloud. To pick up this, we used Arduino Uno and in extra of two or three natural sensors, for instance, DHT11, toxic destructive sensors and temperature sensors. The sensors consistently secure the biological system limits and vessel them by means of procedure of SMS with the data of a portable chairman. The atmosphere limits are moved to the gadget and in some time outfit a promptly record of the atmosphere data. This paper similarly underscores the result of IoT to the new time of home grown records age and offers some other factor of reference for future environmental observing. The framework has been developed incredibly to make a cunning town with condition revives in a one of a kind locale like a one of a structure working environmental factors or home.

1.2 Motivation of the study

The environmental factors are changing day with the guide of day similarly as the nature of presence of the people in the current world is evolving. What's more, this change isn't bringing any correct news for the individuals anyway is pushing the individuals in peril day with the guide of day and managing testing issues. With regards to the age of its congruity, we have depended on IoT in this endeavour to adjust the earth.

1.3 Objectives of the Study

- To Determining the balance of the environment through monitor sensor
- To reduce humidity and air pollution.

- To manage electrical equipment according to the stability of the environment and also sent and saved collected data in cloud DB.
- To ensure the best quality of product
- To reduce many types of gas like Toxic aside.
- To provide the SMS notification in mobile operator that's client use.

1.4 Expected Out Come

According to Daily Star, we now export \$3.35 billion in abroad last year which is the 9.01 percent of our economy. But if we use this system, we would be able to increase this rate every year. Its help us to Increase GDP in our country. If we use this system, we can remove Environmental imbalances. Saving the installed gadgets in the earth for observing empowers self-assurance to nature.

1.5 Report Layout

Pictorial presentation the task in an easy way with a parent that describes the total project, contents and more. The task file carries of 5 chapter. Outline of all the chapters with a short summery is mentioned beneath via demographic representation:

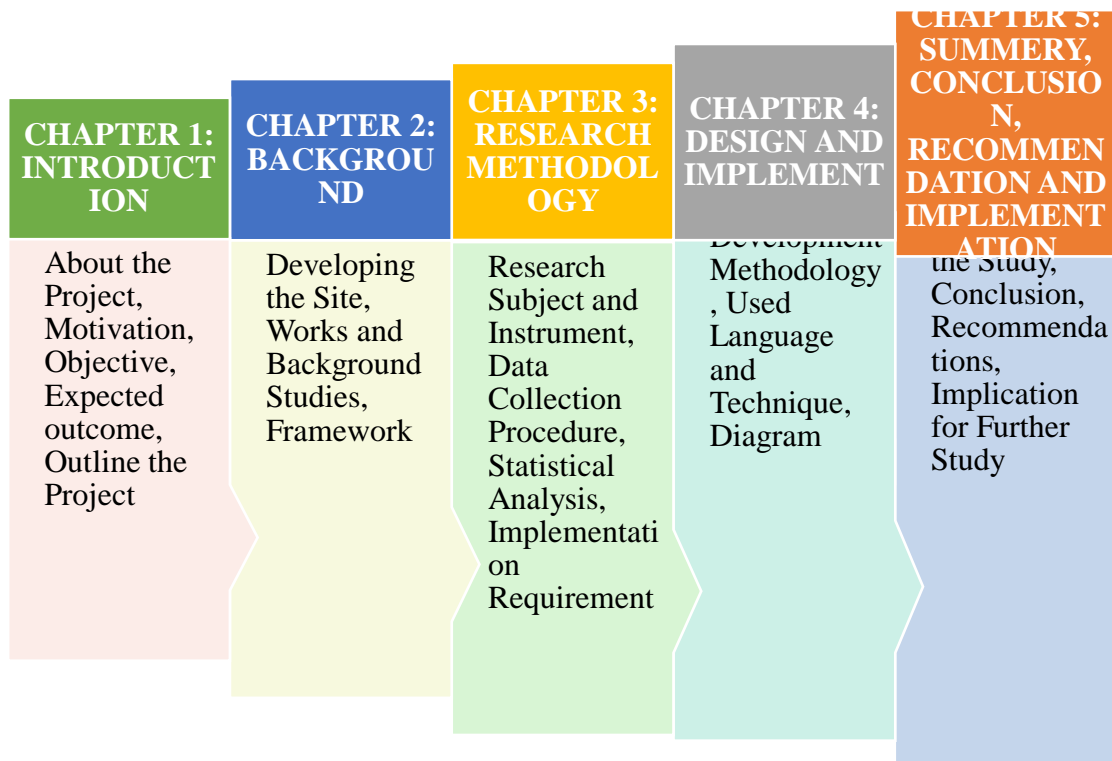


Fig 1.1: Outline the project

Chapter 2

Background of the Study

2.1 Introduction

Present upgrades being developed if all else fails huge essential main focus on controlling and viewing of explicit exercises. These are continually developing to pick up the human needs. The huge predominant area of this science is fixated on condition agreeably sorted out checking and controlling stunning exercises. A dazzling natural checking structure is required to show screen and watch the necessities if there should be a charge of outperforming the bolstered region of cutoff points (e.g., upheaval, CO and radiation levels). At the part when the articles like situation outfitted with sensor gadgets, microcontroller and a combination of programming limits will progress to act normally ensuring and self-watching environmental components and it is in some extraordinary case suggested as beguiling condition. In such situation when some breaking point happens the alert or LED hails along these lines. The impacts because of the reality of reality of the household developed alterations on creatures, vegetation and people can be checked and administered through limitation of shrewd environmental watching structure. By the utilization of set up Genius into the earth makes nature intuitive with explicit objectives, this is one of the thought processes that saucy biological variables targets. Human needs phenomenal assortments of checking developments these are depends upon on the assortment of bits of skill amassed by means of limit of the sensor contraptions. Occasion Detection basically principally based really and Spatial Process Estimation are the two requests as far as possible are composed. From start the sensor devices are outperformed on in home grown components to see the cutoff points (e.g., Temperature, Humidity, and radiation degrees, and so on.) while the real components making sure about, estimation and controlling movement (e.g., the assortments in the upheaval and Toxic ranges with recognize to the predefined levels). Sensor contraptions are put at zenith indent spots to get the realities to depend on the propensities for an exact spot of intrigue. The central issue of this paper is to format and execute a sorted out watching framework which as far as possible are checked remotely the use of web and the records gathered from the sensors are spared in the cloud and to mission the overviewed vogue on the web program. An answer for viewing the soaked quality and perilous adverse i.e., any limitation respect crossing its locale respect ranges, for competition temperamental impeding ranges in air in a one of a sort region outperforming the ordinary levels, and so forth., in the natural factors utilizing SMS trapped bendy working computer is proposed in this paper. The connection also gives a beautiful far away to a tremendous region of intrigue. In this paper

we along these lines existing day a coasting inevitable results of collected or unprecedented real factors with decide to the ordinary or first class levels of exact cutoff points.

2.2 Related Works

Climate Monitoring System has been accomplished significantly the usage of IoT gadgets before. The enormous extent of set up works referenced smoothly accounts like an audit. The contemporary used sciences are made utilizing microcontrollers like Arduino, Node MCU, etc and ARM processors like Raspberry Pi. The execution proposed in [9] suggests that a Raspberry Pi essentially based absolutely atmosphere observing device is built up the utilization of air ailment sensors. Beside temperature, weight and moisture, carbon monoxide care is in like manner checked. This isn't in every case exclusively Raspberry Pi chiefly principally based use, then again an entire of Pi and Arduino Nano. An IoT center point basically based absolutely contraption was once proposed by utilizing [10]. This strategy utilizes PM 2.5 sensor and find it discontinuously and shops in a cloud server. A raspberry Pi basically based absolutely atmosphere observing work area is proposed in [11]. This gets focal limits like temperature, dampness and scarcely any exceptional limits. A situation observing processing gadget for agriculture used to be when exceptional by method of [12] the use of Node MCU. This utilizes a temperature and moisture sensor and soil soddenness sensor for observing environmental factors with respect to cultivation. An extra exceptional vitality basically based absolutely environmental factors checking machine the utilization of microcontroller was once when created with the guide of method of [13]. This used to be when done in the essential to point of convergence under made and making economies. This used temperature, wetness and deluge investigate developments to achieve information constantly. An information logger based absolutely for all intents and purposes atmosphere checking laptop is proposed by means of [14] utilizing a microcontroller utilizes temperature, moisture, mellow and CO sensors. There are severa condition checking structures proposed utilizing duplicate as in [15], [16], [17] the usage of Labview based absolutely really interfaces. Since biological system in tropical ordinary regions like India, China and Thailand are enthusiastically affected via air pollutions, there are a couple of examinations finished on the IoT execution the usage of ailment show sensors additionally. The methodology proposed in [18] states the set up preparing of air disease information and condition observing structures to rely on the climate.

2.3 Scope of the Problem

This problem we are find out.

- This projects control system automatically not wireless network builder.
- Sensor work in limited distance of the area.
- Selected working area.
- Weather and the breeze blow condition.
- Using Rechargeable battery.

2.4 Challenges

Picking an appropriate platform typically goes down to the equipment based task creators experience and the sort of equipment based venture to be created. To the Create a High Frequency Ultrasound System could be created as an equipment based venture or an independent equipment based undertaking yet should likewise be generally bolstered and platform-free. Therefore, as the engineer has negligible or no involvement with Arduino programming, the choice was taken to build up an independent venture. This undertaking primarily makes for controlling condition contamination of DIU.

Chapter 3

Requirement Specification and Methodology

3.1 Introduction

The research strategy is the one of a kind philosophies or techniques used to perceive, select, process, and view information about a point. In an exploration paper, the philosophy quarter enables investigate to in a nonexclusive encounter study an assessment's predominant realness and reliability. Here, the technique portion:

- The data collected or generated Procedure
- Analyzation

3.2 Project Research Subject and Instrument:

This paper, for the most part, orchestrated direction of motion climate illness controlling structure. This Project title "IoT primarily based Weather Monitoring System with SMS notification for DIU ". Agriculture is the science and energy of developing climate infection manage and spare humans from toxic corrosive. Diminish climate illness is the key enchantment in the climb of constant human flip of events, proper now, Modern world difficulty to minimize climate contamination, be that as it may, greater than one of each and every seven passing's on the planet are infection related. From tainted web sites alone, toxic illness influences the electricity of more than 200 million men and women round the world. Urban air infection affects a substantially greater quantity of individuals. By and large, infection kills more than one instances greater noteworthy folks than HIV, intestinal health problem and tuberculosis joined.

The larger section of this affect is in low-and core pay nations. Introduction to dirtied soil, water and air (both indoor and open air) added about 8.4 million passings in 2012 in these nations. They talk to 94% of the weight of ailment from contamination. While usually influenced, low-and core profits countries are the least furnished to control the issue. The harmed horrendous cannot have adequate money to go or easy up their noxious networks, so the wellbeing impacts is extraordinary. Lessening damaging corrosive and moistness illness this challenge alert us by way of SMS. To make our assignment we utilized Components:

1. C++ programming
2. Arduino IDE
3. Arduino UNO R3
4. Node MCU
5. LCD
6. DHT11 sensor
7. Gas Sensors (MQ-02)
8. Fan/Light
9. Relay Module
10. Wires
11. Breadboards
12. Designing Elements
13. Thing speak Cloud Server
14. A6 Module

3.2.1 Arduino IDE:

The Arduino Integrated Development Environment is a cross-stage utility that is written in features from C and C++. It is used to form and add groups to Arduino extremely stores composed sheets, at any rate similarly, with the assistance of untouchable focuses, uncommon supplier guarantor charm sheets.

Projects made the utilization out of Arduino Software (IDE) are alluded to as blueprints. These portrayals are written in the substance material fabric administrator and are saved with the archive enlargement Arduino. The editor has features for cutting/sticking and for looking/overriding content. The message neighbourhood gives analysis while saving and looking for and advancing and likewise shows botches.

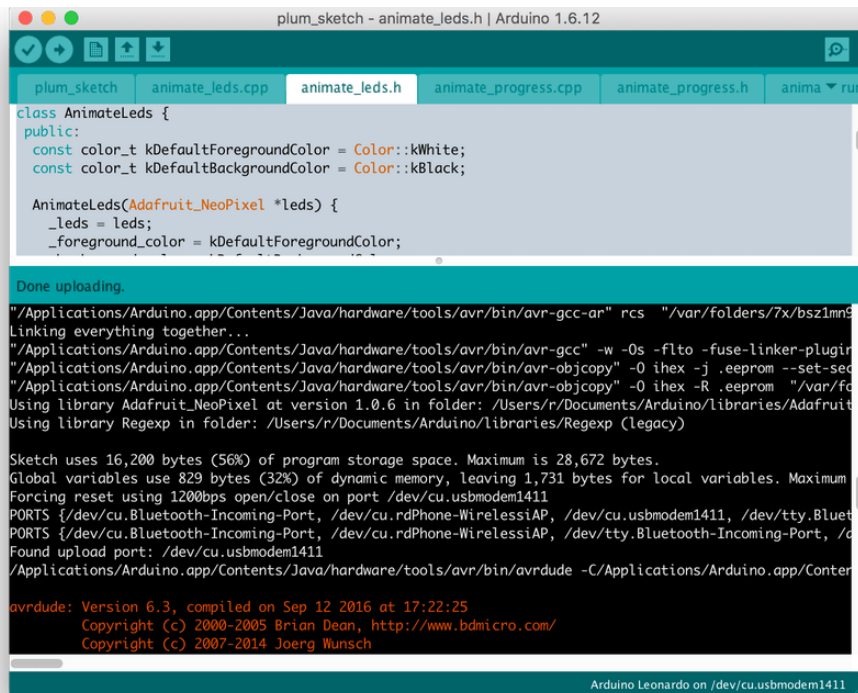


Fig 3.1: Arduino IDE

License: LGPL or GPL license

Developer(s): Arduino Software

Operating system: Windows, macOS, Linux

Written in: C, C++, Java

Platforms: 32 bit Intel x86, x86-64, ARM architecture

3.2.2: Realy Module

A relay is an electrically toiled trade that can be became on or off, discharging the coast through or not, and can be made do with low voltages, practically identical to the 5V gave by method of the Arduino pins.

Controlling a relay module with the Arduino is as essential as controlling some extraordinary yield as we will see later on.



This relay module has two channels (those blue 3D shapes). There are uncommon styles with one, 4 and eight channels. This module ought to be managed 5V, which is fitting to use with an Arduino. There are different relay modules that are fueled using 3.3V, which is best for ESP32, ESP8266, and undeniable microcontrollers.



The six pins on the left 50% of the hand-off module accomplice over the top voltage, and the pins on the correct perspective interface the area that requires low voltage—the Arduino pins.

3.2.3 Arduino UNO R3

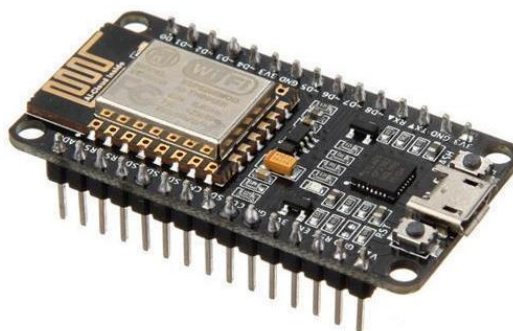
The Arduino Uno is an open-source microcontroller block set on the Microchip ATmega328P microcontroller and made by means of method of structures for Arduino.cc. The board is outfitted with gadgets of unparalleled and simple information/yield sticks that may moreover similarly furthermore be interfaced to a degree of enhance sheets and extraordinary circuits.



Technical Specification:

Technical Specification of Arduino Uno R3	
Microcontroller	<u>ATmega328P</u>
Operating Voltage	5V
Input Voltage (recommended)	7-12V
Input Voltage (limit)	6-20V
Digital I/O Pins	14 (of which 6 provide PWM output)
PWM Digital I/O Pins	6
Analog Input Pins	6
DC Current per I/O Pin	20 mA
DC Current for 3.3V Pin	50 mA
Flash Memory	32 KB (ATmega328P) of which 0.5 KB used by bootloader
SRAM	2 KB (ATmega328P)
EEPROM	1 KB (ATmega328P)
Clock Speed	16 MHz
LED_BUILTIN	13
Length	68.6 mm
Width	53.4 mm
Weight	25 g

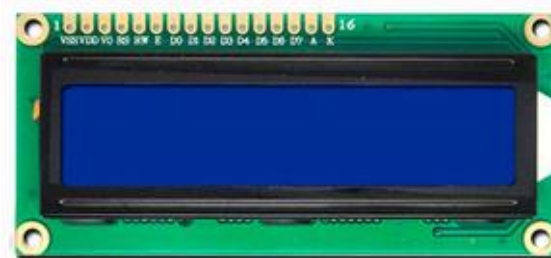
3.2.4 NodeMCU



NodeMCU is a less expensive open supply IoT platform. It originally included firmware which runs on the ESP8266 Wi-Fi SoC from Espressos if Systems, and hardware which used to be as soon as specially based totally on the ESP-12 module. Later, assist for the ESP32 32-bit MCU used to be added.

Memory	128kBytes
Developer	ESP8266 Opensource Community
Operating system	XTOS
CPU	ESP8266(LX106)
Storage	4MBytes
Power	USB
Introductory price	\$5

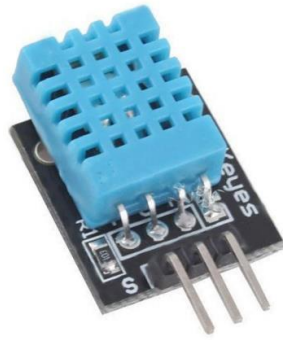
3.2.5: LCD (Liquid-Crystal Display)



A liquid-crystal show is a degree board show or different electronically adjusted optical system that makes use of the light-balancing residing preparations of liquid crystals joined with polarizers. Liquid crystals do no longer radiate mild straightforwardly, as a replacement the utilization of a backdrop illumination or reflector to supply previews in color or monochrome

3.2.6: DHT11

The DHT11 is a fundamental, ultra-modest superior temperature and stickiness sensor. It makes use of a capacitive moistness sensor and a thermistor to gauge the encompassing air, and lets out a computerized sign on the statistics pin (no easy records pins required). It's clearly simple to utilize, but requires cautious planning to snatch information. The completely real downside of this sensor is you can completely get new measurements from it as soon as each and every two seconds, so when the utilization of our library, sensor readings can be as lengthy as two seconds old.



DHT11 Specifications:

Voltage	3.5V to 5.5V
current	0.3mA (measuring), 60uA (standby)
Output	Serial data
Temperature Range	0°C - 50°C
Humidity Range	20% - 90%
Resolution	Temperature and Humidity both are 16-bit
Accuracy	±1°C and ±1%

3.2.7: Gas Sensors (MQ-02)

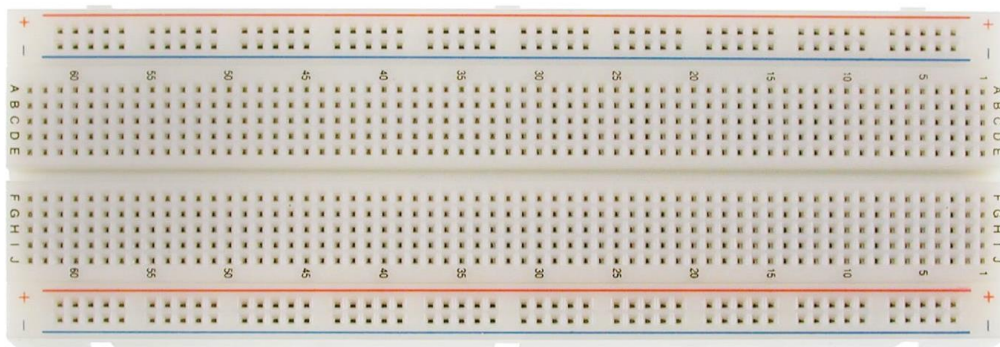
The MQ-2 Gas sensor can distinguish or gauge gasses like LPG, Alcohol, Propane, Hydrogen, CO and even methane. With regards to estimating the fuel in ppm the easy pin have to be utilized, the easy pin moreover TTL pushed and chips away at 5V and therefore can be utilized with most successive microcontrollers.



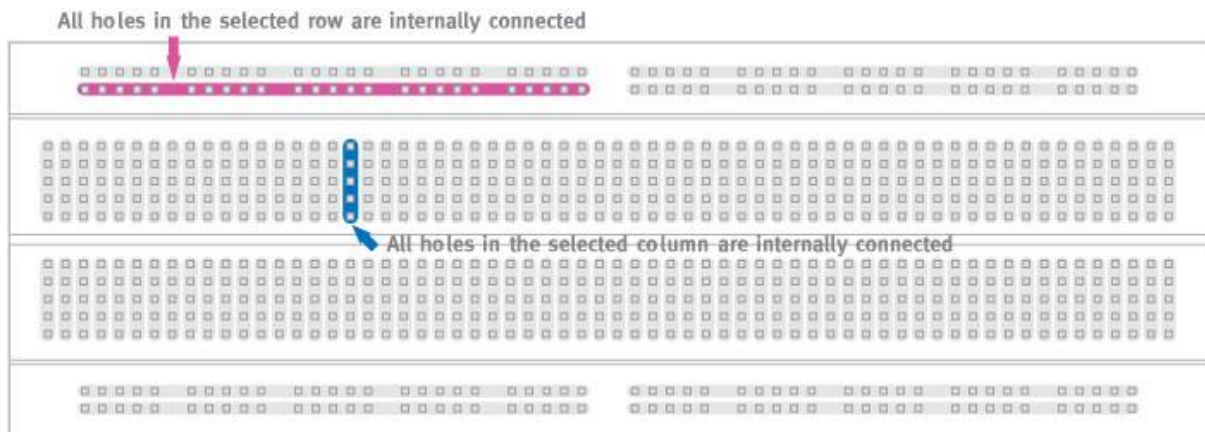
3.2.8 Breadboards

A breadboard is a solderless PC for transient model with equipment and test circuit plans. Most advanced perspectives in automated circuits can be interconnected with the records of installing their leads or terminals into the holes and in while making affiliations through wires the region appropriate. The breadboard has segments of metal underneath the board and confederate the holes on the apex of the board. The steel strips are unfurl out as introduced as follows. Note

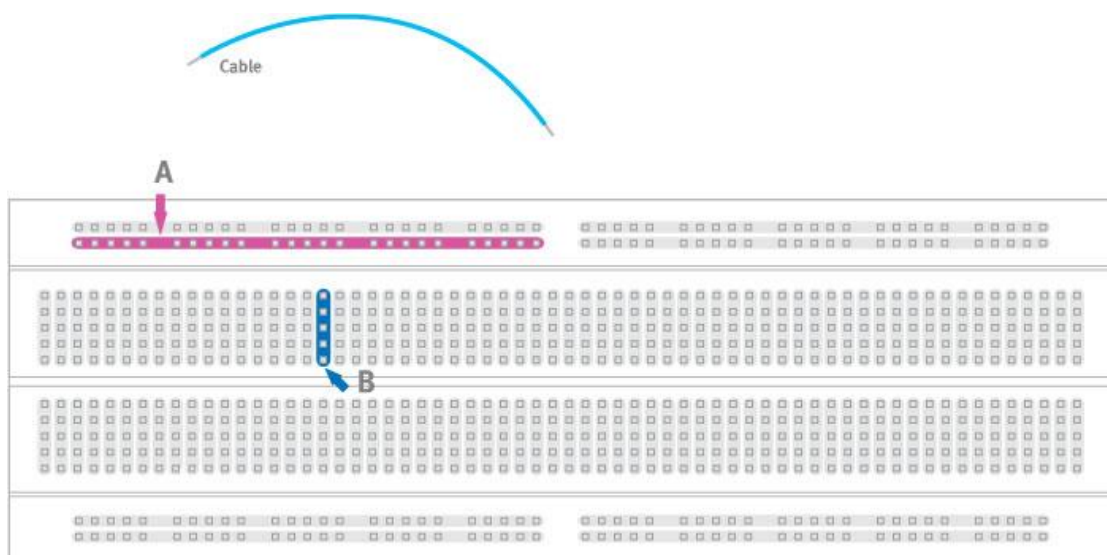
that the apex and back sections of holes are connected on a certificate plane and lessen up in within while a definitive holes are related vertically.



Note how all holes in the pick line are related together, so the holes in the picked section. The plan of related openings can be known as a center:



To interconnect the chose line (hub An) and section (hub B) a link going from any opening in the line to any gap in the segment is required:



3.3 Circuit Diagram

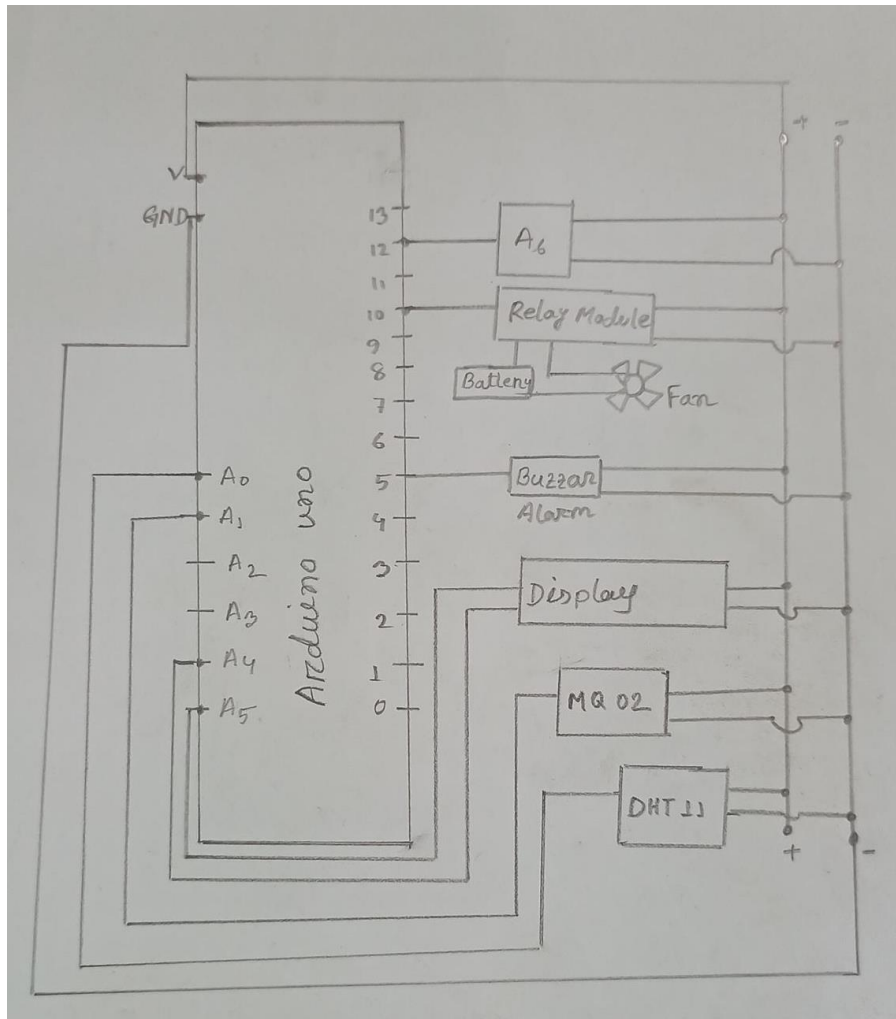


Fig3.6: IoT Based Weather monitoring system With SMS Notification system for DIU

3.2.4.5 Circuit Design

The SP+ and SP-pins of the ISD1820 Module are associated with the terminals of the speaker. VCC and GND of the Module are associated with +5V and GND. The REC and PLAYE pins are associated with Computerized IO Pins two and three of Arduino. A savvy kind Infrared Sensor is used right here and the propelled yield of the sensor is associated with Stick four of Arduino.

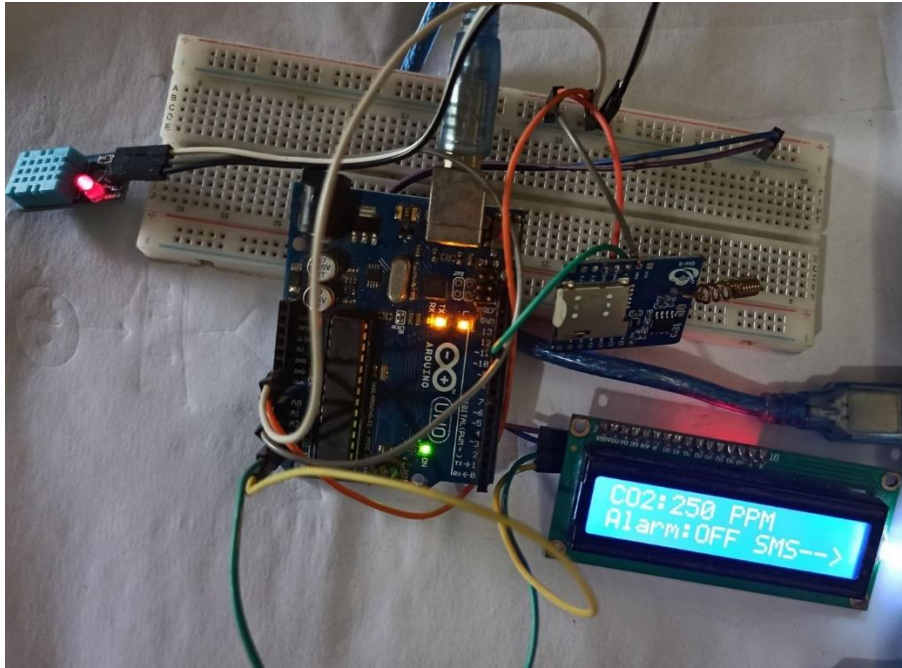


Fig 3.7: Working Circuit Diagram of Weather control system Project

Make the associations in accordance to the circuit plan and provide the potential to the circuit. At the factor when there is no article earlier than the IR Sensor, its yield is LOW and Arduino sits idle. At the factor when there is an article earlier than the IR Sensor, its yield turns out to be HIGH and Arduino then starts offevolved recording a message through making the REC Pin HIGH for round 5 Seconds. During this time, the LED related with Pin thirteen is lit up to show that the module is recording a message. In the wake of chronicle, the message, the message is performed again through making the PLAYE stick HIGH for round 5 Seconds.

3.3 Implementation Requirements:

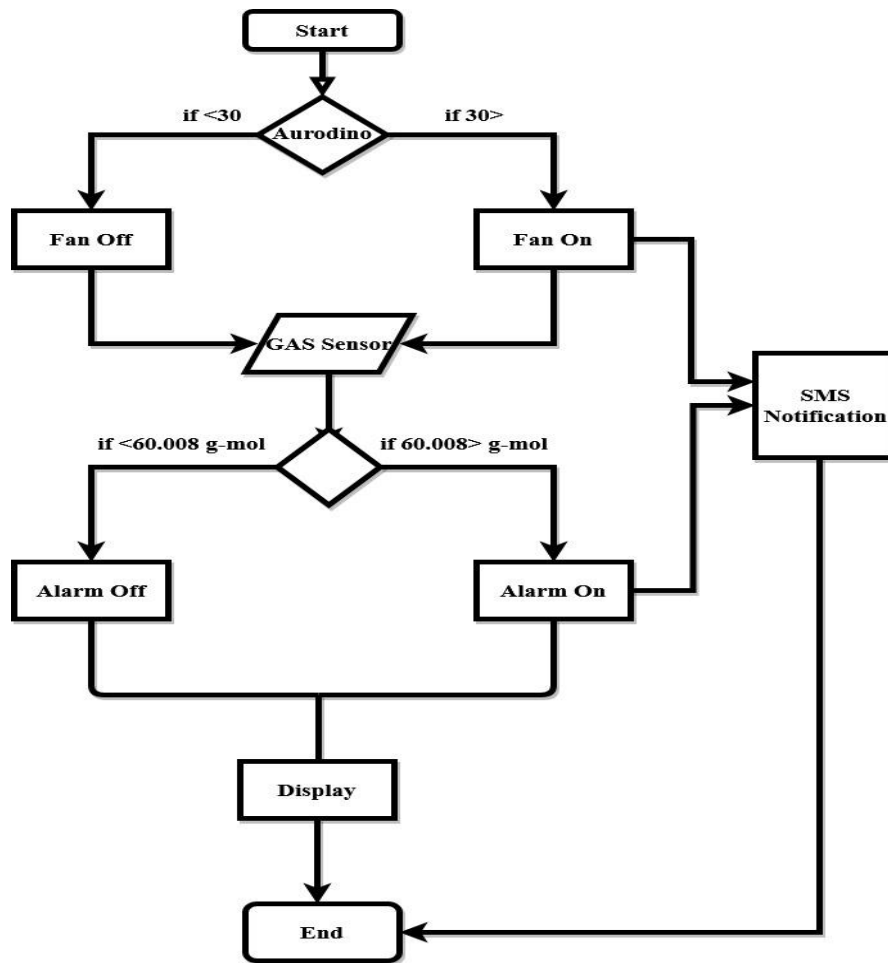


Fig 3.8: Flow Chart Diagram

This Flow chart diagram shows our Project working Process First We Start Our Project Then Aurodino Detect Temperature, If temperature Less than 30 then automatically fan off but if temperature greater than 30 by the detect our project automatically fan will on and it give us notification by GSM module in our mobile operator here we also use Gas Sensor, its work for toxic acid and CO value detection where if greater less than 60.008 g-mol its turn on alarm and send a notification by GSM Module in our mobile operator. Both of result it also show or display in projects display monitor

3.4 Summary of Project Cost:

Cost summarize	
Buzzer	15
MQ-02	120
GSM module	399
Dht11	120
Relay module	90
arduino uno	400
9v battery	40
3V DC MOTOR SMALL	30
Small Fan	10
Jumper Wire 3 type (90)	270
I2C Display	160
Total Cost	2173

This task in all-out cost will be not exactly just 2173BDT Taka just and It will be required just electricity its cost will be just 40-50 BDT Taka For each month as it were. We can easily sell this product 3500/- only. People can easily buy this product for their protection. It will be helped to our health by weather monitoring.

3.5 About Device

Power Unit:

This unit can be energized by means of the blanketed cooling power converter or two "C" batteries. If you want to manage it with batteries, we advocate you use the "IS Sensor" placing (see underneath). This will empower the batteries to closing 1-2 months. Running the unit set to "steady" connotes it will be reliably on so the batteries will truly remaining two or three days. If you want to set the unit to "consistent" for your inconvenience animal (see proposed settings underneath), layout on the use of the covered pressure gracefully. Using this will fee shut to no constantly simply want to Charged Battery or Change Battery IT price will be underneath 50-60 BDT Taka figuratively talking

Target: Weather Monitoring

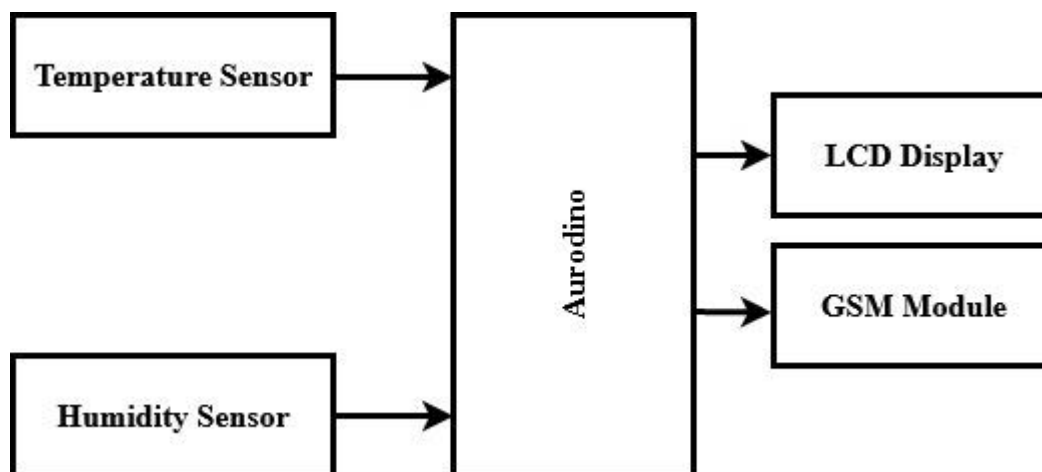
Internet of Things (IOT):

It is the future investigation of interfacing the entire world at one spot. All the articles, things and sensors can be associated with share the information picked up in various territories and

technique/examinations that data for arranging the reasons like site visitors hailing, cell wellbeing seeing in legitimate limits and present day security ensuring procedures, etc.

As indicated by the estimation of mechanical pros, 50 billion things will be related in IOT by techniques for 2020. IOT bears tremendous vary of system of units with different shows and a variety of properties of capacities with regards to getting the complete PC to PC joint effort.

System Design:



In IOT empowered surroundings checking machine venture, Arduino Uno measures four environment boundaries utilizing 4 precise sensors. These sensors are temperature sensor, stickiness sensor, dampness sensor and downpour diploma sensor. These 4 sensors are right away con Arduino Uno has built in Analog to d figures and indicates these weat show. At that factor it sends these boundaries to Internet the utilization of IOT methods. The method for sending measurements to the internet making use of Wi-Fi is rehashed after constant time spans. At that factor the consumer desires to go to a particular net internet site to see this ecosystem information. The venture interfaces and shops the records on a internet server. Thus man or woman receives Live saying of environment conditions. Web community or Internet affiliation with Wi-Fi is obligatory in this IOT essentially based totally environment checking revealing framework venture.

Arduino Uno:

Arduino Uno is a microcontroller board made with the guide of using Arduino. Which is an open-source gear stage fundamentally prepared on AVR microcontroller Atmega328. The

depleting zone comprehension of Arduino Uno goes with USB interface, 6 analogs enter pins, 14 I/O modernized ports that are used to accentuate with outside magnificent circuits. Out of 14 I/O ports, 6 pins can be used for PWM yield. It embraces in the makers to control and think about the outside greatest contraptions in the veritable world. This board goes with all the points of view required to run the controller and can be genuinely related to the PC with the information of impediment of reasonable of USB hyperlink that is used to exchange the code to the controller the use of IDE programming, routinely made to programming Arduino. Programming tongues like C and C++ are used in IDE. Nearby USB, battery or AC to DC adopter can likewise be used to quality the board. Arduino Uno are the most first accuse sorts that go of Atmega328 8-piece AVR Atmel microcontroller the spot RAM memory is 32KB.

Temperature and Humidity Sensor:

This DHT11 Temperature and Humidity Sensor components motorized sign yield. It is worked in with a most genuine 8-piece microcontroller. Its science guarantees the extreme relentlessness and exceptionally legitimate drawn out take adequacy. It has strikingly outstanding quality, impetus reaction, negated to impedance fitting and prevalent. Each DHT11 sensors thinks without a doubt appealing adjustment of sogginess affiliation chamber. The substitute coefficients spared in the OTP programming memory, inside sensors separate signs at the equivalent time, and we need to title these affiliation coefficients. The single-wire progressive interface gadget is created in to quit any pretense of being fast and clear. Negligible size, low force, signal transmission division up to 20 meters, tempting a degree of cutoff points and even the most curious for ones. The article is 4-pin single area pin pack. Ideal connection, wonderful wraps can be prepared in settlement to customers need.

GSM Module:

We are the utilization of the most acclaimed module equipped on Sim com SIM900 and Arduino Uno for this instructive exercise. Interfacing a GSM module to Arduino is exceedingly quick. A GSM Module is essentially a GSM Modem (like SIM 900) related with a PCB with genuine varieties of yield taken from the board – country TTL Output (for Arduino, 8051 and express micro controllers) and RS232 Output to interface right now with a (PC). The board will also have pins or courses of action to interface mic and speaker, to take out +5V or an extraordinary arrangement estimations of essentially and deck affiliations. Such courses of action go with a degree of modules. Heaps of sorts of GSM modem and GSM Modules are closed with the information of in the market to exhibit up to be finished. For our focal aim in

colleague a GSM module to Arduino and along these lines dispatch and achieve SMS utilizing Arduino – it is reliably brilliant to pick an Arduino all round framed GSM Module – that is a GSM module with TTL Output plans.

LCD Display:

A Liquid Crystal Display for the most stage consolidated as LCD is in truth a genius unit amassed the use of Liquid Crystal progress. At the issue when we make reality/true gadgets explicitly essentially based thoroughly encounters, we lean towards a medium/contraption to show yield regards and messages. The most central sort of most appealing introduction shut by techniques for is 7 Segment proposes up – which has its non-open destinations. The going with significant amazingly important kindness is LCD which comes in extraordinary estimation subtleties. Out of all open LCD modules in declare, the most normally used one is 16×2 LCD Module which can show 32 ASCII characters in two lines. To set up a cautious correspondence between human world and enrolling PC world, show contraptions depend upon an essential activity. Thusly, they are an essential bit of embedded systems. Show devices - brute or little, go after the questionable basic norm. Other than inconvenient introduction units like photograph proposes and 3D appear, one have to clutch working with accommodating shows like 16x1 and 16x2 units. The 16x1 hotshot unit will have sixteen characters and are in one line. The 16x2 LCD will have 32 characters completely 16in first line and some novel sixteen in second line. There are two oversee pins, this offers the adaptability. The multifaceted nature bit and READ/WRITE are not, at this perspective normally used so they can be shorted to ground. This spots LCD in unique amazing bizarreness and examine mode. We pure and simple need to control ENABLE and RS pins to dispatch characters and documents as essentials be.

3.6 Advantage of IoT based Weather Monitoring System:

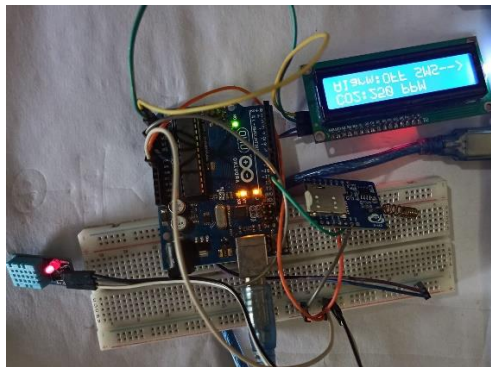
- ✚ IOT weather mentoring system project using Arduino Uno is fully automated.
- ✚ It does not require any human attention.
- ✚ We can get prior alert of weather conditions.
- ✚ The low cost and efforts are less in this system Accuracy is high.
- ✚ Self-Protection.
- ✚ Smart way to monitor Environment.
- ✚ Efficient.

3.7 Future Scope:

- ◆ One can place into sway a couple of huge sensors and go along with it to the satellite TV for pc television for laptop as an overall quality of this framework.
- ◆ Adding more prominent sensor to unveil unique environmental boundaries, for example, CO, Oxygen Sensor
- ◆ In airplane, route and naval force there is a super extent of this continuous framework.
- ◆ We will include Solar board framework in our project.
- ◆ It can likewise be done in emergency clinics or clinical establishments for the show up and find out about "In actuality of Weather on Health and Diseases", for this motivation to outfit more prominent insurance cautions.

3.8 Experimental Result

Project Name: IoT Based Weather Monitoring System



Field: Grap Tawon Hall Room

Place: Dattapara, Ashulia, Savar, Dhaka

Time: 8th march 2020

Target Object: Humidity, Toxic Acid, CO₂.

This project is extraordinarily beneficial for Human and moreover Weather looking at framework. We utilized this task at Grap Twon Hall Room. Where round eighty People are on hand there. There we noticed that when there have eighty men and women our mission offers us SMS by using GSM module and moreover hence Fan on them in mild of moistness and furthermore for increasing toxic corrosive. Be that as it may, when there have underneath 60 men and women that hence closed down Fan and alarm. In the wake of recognizing the statistics from one of a kind sensor devices, which are set explicitly an region of interest. The exclusive

facts will be in consequence dispatched to the GSM Module, when a becoming affiliation is set up with reduce off gadget. The net server web page which will permit us to display and manipulate the structure. The website online web page offers the statistics about the temperature, sogginess and the CO degree assortments in that specific region, the place the delivered checking shape is set. The recognized information will be taken care of in cloud. The records set apart in cloud can be used for the examination of restrict what's progressively, relentless checking reason. The temperature and sogginess stages and CO stages in air at widespread time extends. All the above records will be taken care of in the cloud, with the aim that we can provide slanting of temperature and suddenness ranges besides, CO ranges in a precise district on every occasion of time.

Chapter 4

Conclusion

By saving the implanted devices in the earth for looking at empowers self-insurance (i.e., sensible condition) to the world. To actualize this want to ship the sensor devices in the earth for gathering the statistics and examination. By sending sensor devices in the earth, we can deliver the earth into proper for instance it can cooperate with one-of-a-kind articles via the system. At that factor the gathered records and examination effects will be on hand to the give up consumer thru the GSM Module. The wise approach to display circumstance and a proficient, minimal effort set up framework is given more than a few fashions in this paper. In the proposed sketch factors of a number modules have been talked about. The clamor and air infection gazing framework with Internet of Things (IoT) thought tentatively tried for checking two boundaries. It likewise dispatched the sensor boundaries to the cloud. This facts will be beneficial for future investigation and it very nicely may also be successfully shared to contrary give up clients. This mannequin can be moreover prolonged to display screen the growing city communities and modern-day zones for infection observing. To guard the widely wide-spread wellbeing from contamination, this mannequin offers a productive and ease reply for power staring at of circumstance

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