A

Report On

Summer Internship

(Course Code : EC3292)

At

Anand Techno Creation,Satara

Submitted

in partial fulfillment of the requirements for the degree of

Bachelor of Technology

in

Electronics and Telecommunication Engineering

by

Snehal Prakash Pawar (1905024)

Under the Guidance of

Prof. V. S. patil

Electronics and Telecommunication Engineering Department

K. E. Society's

Rajarambapu Institute of Technology, Rajaramnagar

(An autonomous Institute, Affiliated to Shivaji University)

A.Y. 2021-2022


Internship Award 2021
CERTIFICATE
OF INTERNSHIP
This certificate is presented to
Pawar Snehal Prakash
In recognition of his/her efforts in completing the one moth industry internship on
IoT Project Development using Industry Grade Microcontroller
from 28th June 2021 to 28th July 2021. We appreciate his/her dedication for completing all the tasks assigned during the period of internship. Given this day of July 28, 2021.
Mr. S. M. Arali
CEO
NRIT Incubation Center, RIT, Islampur
Dr. Anand B. Kakade
Founder and CEO
Anand Techno-Creations, Satara

DECLARATION

I declare that this report reflects my thoughts about the subject in my own words. I have sufficiently cited and referenced the original sources, referred or considered in this work. I have not plagiarized or submitted the same work for the award of any other degree. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute.

Sr. No.	Student Name	Roll No	Signature
1	Snehal Prakash Pawar	1905024	

Date: 24/11/21

Place: RIT, Rajaramnagar.

Guide Name : V. S. Patil

Signature :

ACKNOWLEDGEMENT

I take this opportunity to thank all those who have contributed in the successful completion of a Summer Internship at "Ananad Techno Creation,satara". I sincerely wish to express my gratitude to Mentor Prof…….. for full support, expert guidance, and encouragement and kind cooperation throughout the Internship work. I am greatly indebted to him for his help throughout project work.

I express my sincere gratitude towards Dr. Mahadev S. Patil, Head of the Department, Electronics and Telecommunication Engineering, for providing necessary facilities, guidance and support.

I respect and thank Dr.Ananad B.Kakade for providing me an opportunity to do a project in Ananad Techno Creation,satara and giving us all support and guidance which made me complete the internship duly. I am extremely thankful to him for providing such a nice support and guidance, although he had busy schedule managing the corporate affairs.

I thank Prof Prabhanjan More (Dept. TPO) for providing Summaer Internship & Project Opportunity in an Industry.

I am thankful to and fortunate enough to get constant encouragement, support and guidance from all Teaching staffs of Electronics and Telecommunication Engineering Department, which helped me in successfully completing internship.

Nevertheless, I express my gratitude toward my family members for their kind co-operation and encouragement which helped me in the completion of this internship.

ABSTRACT

This report describes my internship experience at the Ananad Techno Creation,satara and it divided into six chapters. Internship leads to the intern's individual development through challenging occupational coursework. The extra-curricular activities that helps us to develop work experience throughout the internship. Chapter one summarizes the projects that I completed. Chapter two includes company introduction to the Company's Background, Organization Charts, Company's History, company's business activities, mission, vision, etc. Chapter three provides the background and purpose of the duties that were assigned to me, which included develop an Alexa for smart pillbox. Chapter four describes task performed during internship like brief knowledge of developing Alexa skills with different ways. These Alexa skills are helpful for those peoples who face challenges of medications. Last two chapters include improvement in the future and summarize the whole contents of the report.

CONTENTS

Chapter 1
Introduction

Anand Techno Creations (ATC) Satara

is led by young & dynamic entrepreneur Dr. Anand B. Kakade. Imbibed since infancy in electronics and electrical technology, a Person with engineering power and the youngest professor, Masters in technology and Ph.D. from IIT Kharagpur, known for his skills in design and development of various innovative electronic products.

Keen interest in study and research of embedded design has basic and fundamental experience in antenna design and fabrication. He has special skills in identifying and providing solutions for problems due to electromagnetic interference. For its constant innovative and relentless efforts in new innovations, the founder has been recognized by various prestigious awards**.**

Chapter 2

One Month Virtual Internship Summary

Weak no.	Date	Technologies used/Task Completed
1.	28/06/2021-5/07/2021	1. Serial Communication in microcontroller. 2. I2C Protocol. 3. CCP(Capture/Compare/PWM)modules
2.	5/07/2021-12/07/2021	1. IOT Development Board 2. Basics of Analog to Digital Conversion. 3. HHT11 sensor. 4. I/O programming.
3.	12/07/2021-19/07/2021	1. Introduction To MIT App. 2. PCB Design
4.	19/07/2021-26/07/2021	1.Implement of Protocol 2.Transfer and receive data between Two Devices,

Chapter 3

Technical Contents

3.1. Introduction

we learnt from the internship that the actual design and implementation of the project which includes what the project flow is, how to make circuit more effective and useful.

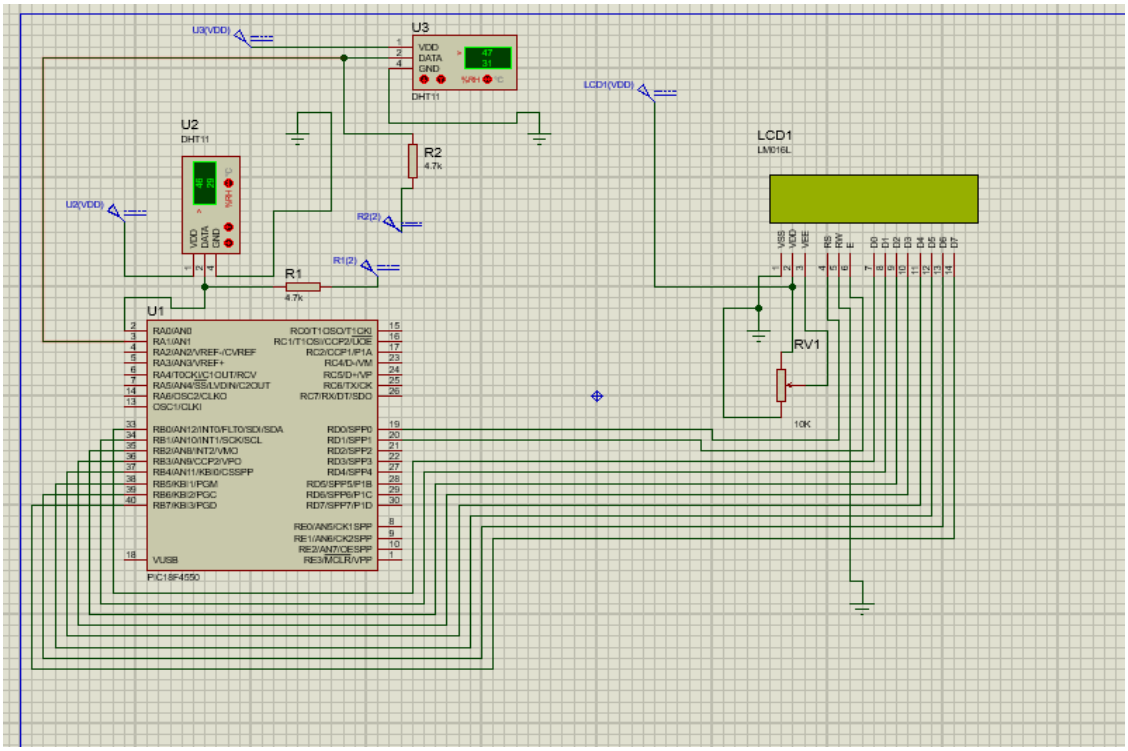


Fig . **Interfacing DHT11 Sensor Using Microcontroller.**

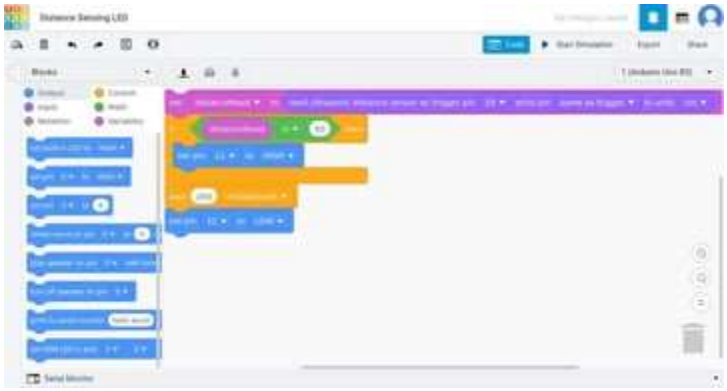
3.2 Tinker cad:

Tinker cad is a free-of-charge, online 3D modeling program that runs in a web browser.

Basic things which are needed:

1. Signing in Tinker cad and creating a account.
2. To get familiar with Tinker cad software.

Basic way of writing the Arduino Code in tinker cad:



As you can see in the above image, we'll be making a simple block program. To begin, select "Code" from the top right toolbar, which will open the code block editor. The list of blocks is color-coded by type.

1. Create the first block, which is a variable block. This creates a placeholder for a value (input), which in this case is the reading we get from the ultrasonic sensor. To accomplish this, the block should read "*set distanceRead to read ultrasonic distance sensor on trigger pin 10 echo pin same as trigger in units cm*".
2. Create the next block, an "if" statement, which is a type of control block that makes a decision. In our case, the decision is based on our distance reading. Our placeholder checks if the value is greater than 50 cm: "*if distanceRead > 50 then*". If it is, what's inside the block is executed: "*set pin 11 to HIGH*". This basically turns on the LED.

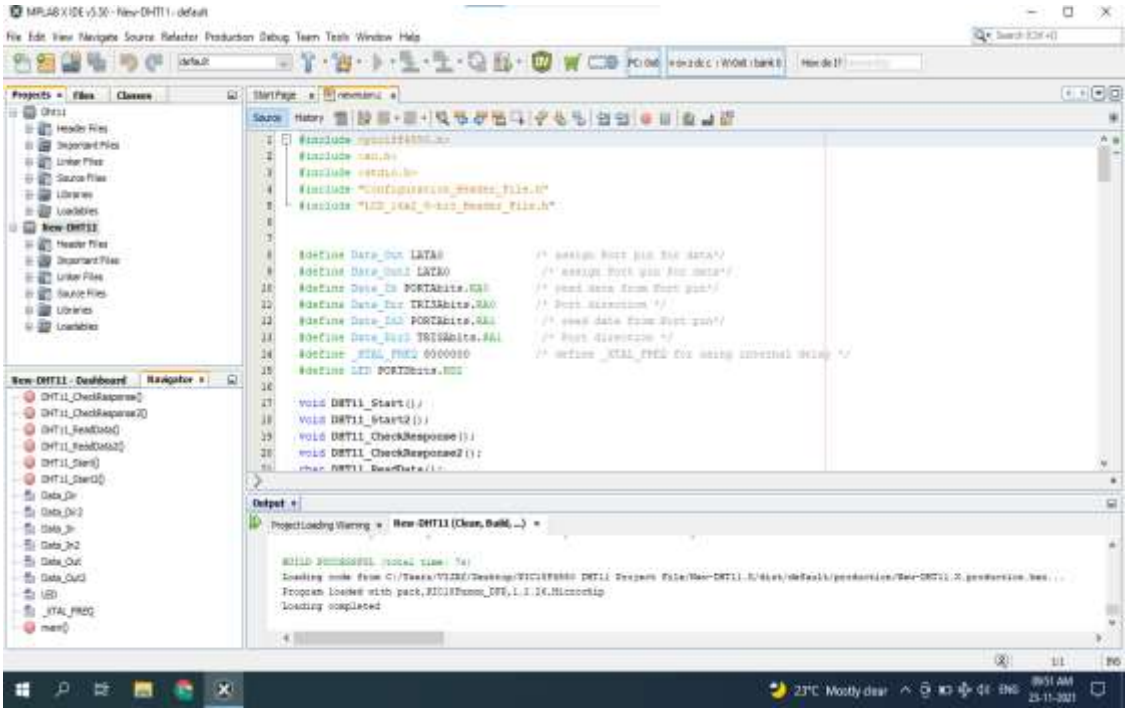
3. The last two blocks may seem strange, but they make sense when you understand how an Arduino works. When it turns on, its program runs continuously in a loop, meaning you need to reset the LED for the next time it goes around. That's why the last output block turns our LED back off. And in order to see our LED blink, we have to place a small delay between loops. Implement this functionality with the first block set to "*wait 200 milliseconds*" and the second to "*set pin 11 to LOW*".

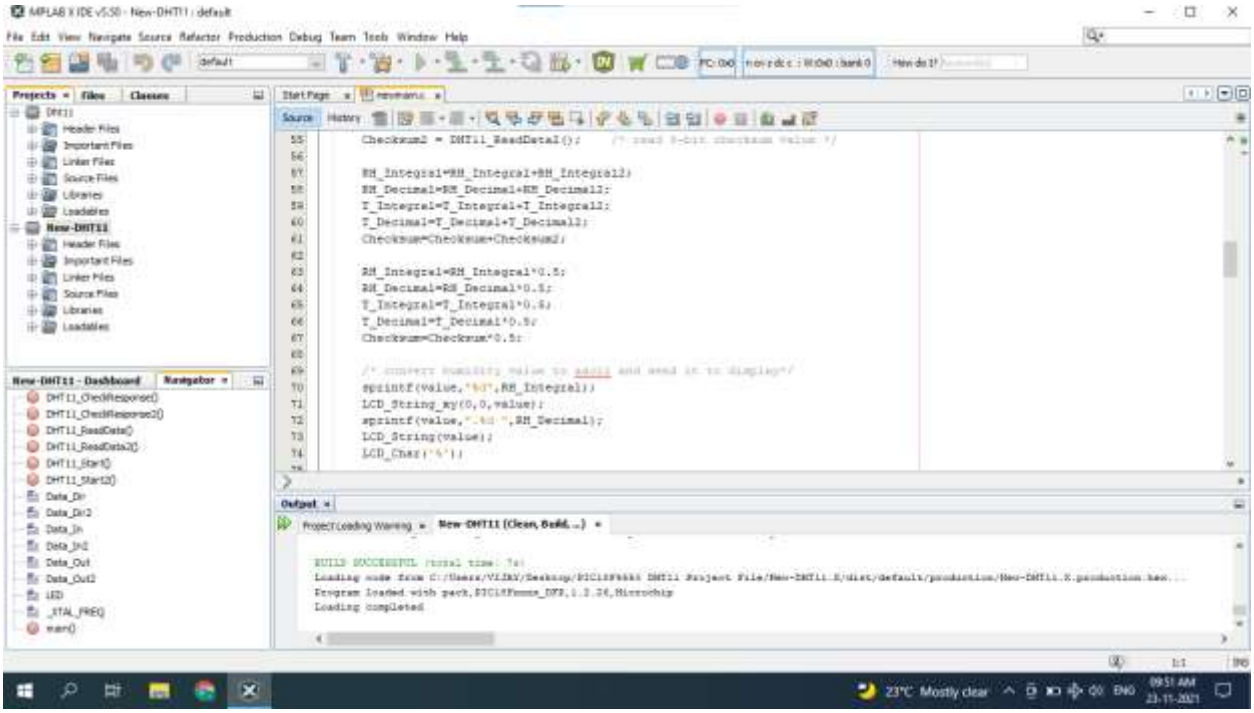
   Once you're done, select "Start Simulation" on the toolbar to turn on your Arduino Uno. To simulate an object in front of the ultrasonic sensor, select it and drag the dot that appears. Watch how the LED responds to our predetermined limit.

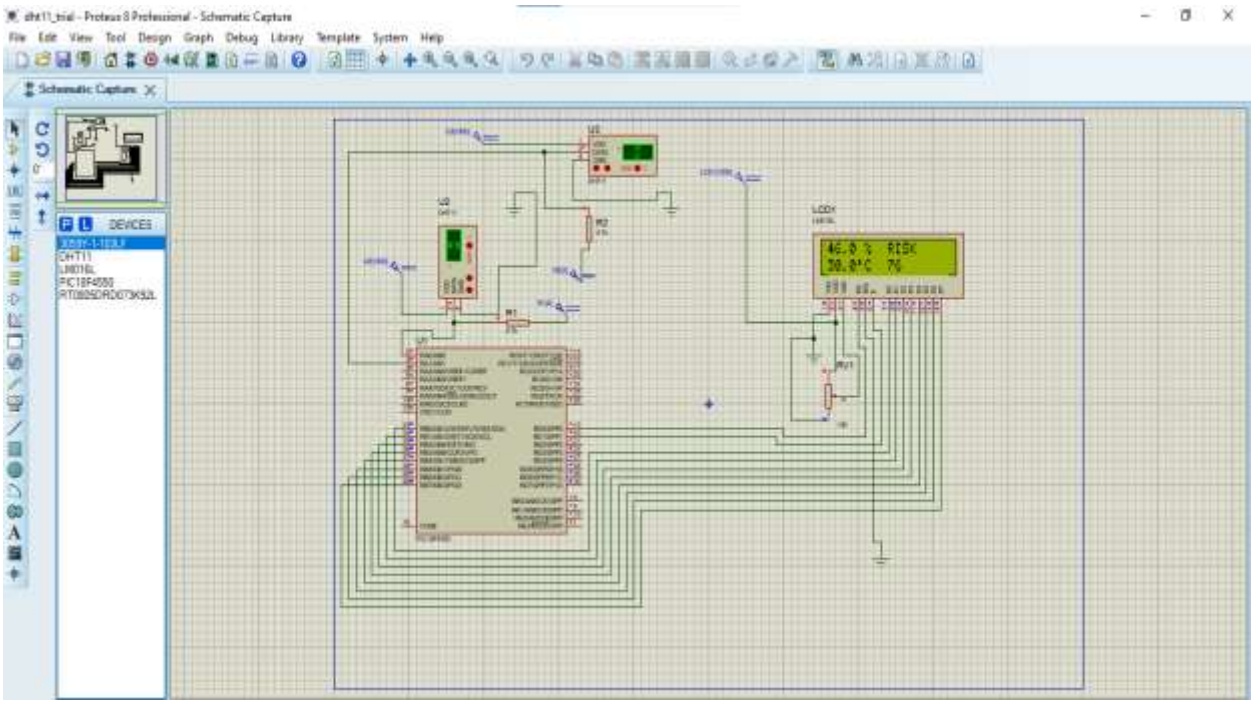
3.2.1 Simulation of Project:

For project we write code in text.

As shown in below screenshot:




MPLAB X IDE v5.50 - New-DHT11 : default
File Edit View Navigate Source Refactor Production Debug Team Tools Window Help
Projects
Files
Classes
New-DHT11
Header Files
Important Files
Linker Files
Source Files
Libraries
Loadables
New-DHT11 - Dashboard
Navigator
DHT11_CheckResponse()
DHT11_CheckResponse2()
DHT11_ReadData()
DHT11_ReadData2()
DHT11_Start()
DHT11_Start2()
Data_Dir
Data_Dir2
Data_In
Data_In2
Data_Out
Data_Out2
LED
_XTAL_FREQ
main()
Start Page
Source
History
Checksum2 = DHT11_ReadData();
RH_Integral=RH_Integral+RH_Integral2;
RH_Decimal=RH_Decimal+RH_Decimal2;
T_Integral=T_Integral+T_Integral2;
T_Decimal=T_Decimal+T_Decimal2;
Checksum=Checksum+Checksum2;
RH_Integral=RH_Integral*0.5;
RH_Decimal=RH_Decimal*0.5;
T_Integral=T_Integral*0.5;
T_Decimal=T_Decimal*0.5;
Checksum=Checksum*0.5;
sprintf(value,"%d",RH_Integral);
LCD_String_xy(0,0,value);
sprintf(value,".%d ",RH_Decimal);
LCD_String(value);
LCD_Char('%');
Output
Project Loading Warning
New-DHT11 (Clean, Build, ...)
BUILD SUCCESSFUL (total time: 7s)
Program loaded with pack,PIC18F-Xxxx_DFP,1.2.26,Microchip
Loading completed
23°C Mostly clear
ENG
09:51 AM
23-11-2021

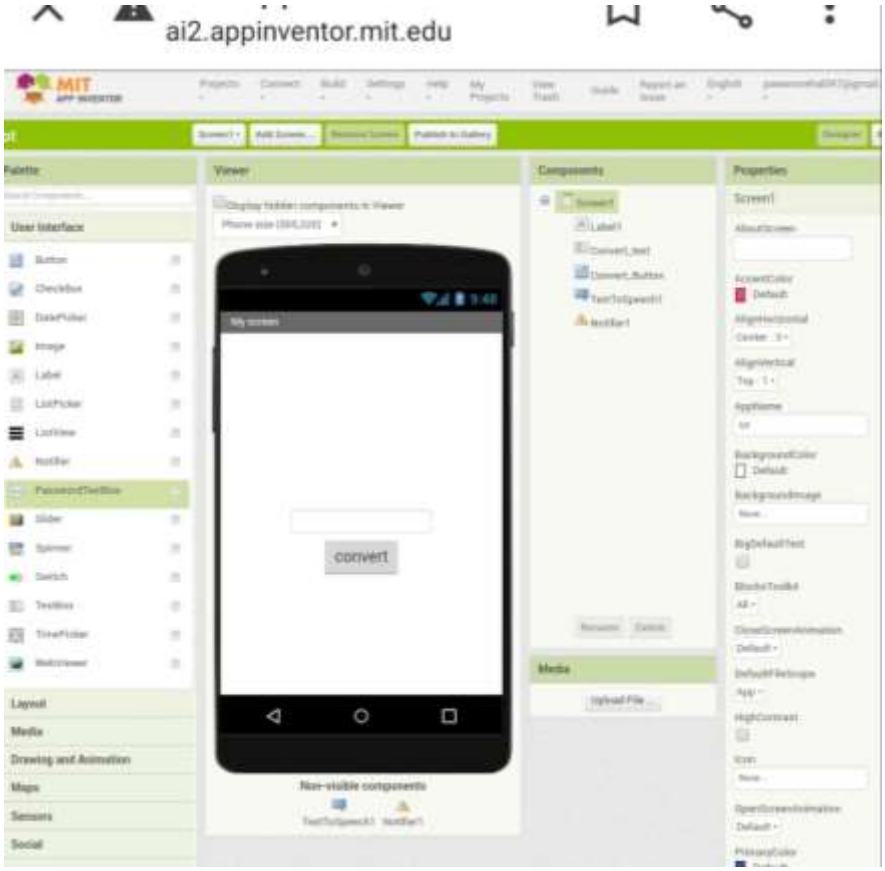

dht11_trial - Proteus 8 Professional - Schematic Capture
File Edit View Tool Design Graph Debug Library Template System Help
Schematic Capture
DEVICES
DHT11
LM016L
PIC18F4550
46.0 % RISK
30.0°C 7%

3.3: MIT app inventor

MIT inventor is freely available way to invent app in easy way

Basic requirements:

1. Good quality of network
2. Well familiar with MIT app inventor



In above image, we have designed the application to convert text message into voice

Chapter 4

Findings & Suggestions

Mini Project

Problem Statement:

Design any application with the help of MIT app inventor

Objectives:

- To improve technical skills and soft skills.
- To develop app with less complexity
- To build app in easy way.

Block Diagram:


Viewer
Components
Properties
Up
Down
Left
Right
Score 0
Media


ai2.appinventor.mit.edu
Game Over
Restart

Methodology:

- I have designed small application using MIT app inventor
- In 1st section there are 3 vertical arrangement
- 1st vertical arrangement is for starting page
- 2nd arrangement is main design, we use ball (as food) and image sprite (as snake) from drawing animation section.
- 3rd arrangement is showing Game over, we can restart game.
- In 2nd section develop code using blocks

Chapter 5

Conclusion

- I have learnt to build app using MIT app inventor
- MIT app inventor help to build app in easier way
- It decrease complexity of code and also save our time.

References

MIT App Inventor | Explore MIT App Inventor