

Electrical Appliance automatic operate using Lab view

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Abstract- In Day to day life we are Advancing the technologies with a great pace and In this Paper there is everything which is needed to be learn about How to use Labview And myRIO with sensors to make It is easy for everyone to learn about myRIO and LabVIEW by reading it and this will help them Understand the concepts better about the Labview and sensors and how connections are done with myRIO using LabVIEW. Labview is one of the easiest ways to test or making circuits and using sensors with the help of the MyRio and Labview. The Programming of LabVIEW can be done easily, and the results can be seen directly on it. So, This Paper is mainly made for everyone who want to understand the concept how they can use myRIO for connecting Temperature sensors and how it can be detected.

Index terms- Lab view software, myRIO hardware, Potentiometer, Breadboard, VI package Manager, Load.

INTRODUCTION

LabVIEW programming are called virtual instruments, or Vis, because their appearance and operation physical instrument, such as oscilloscopes and multimeters.

LabVIEW Vis contain three components the Front panel, the block diagram, and the icon.

In Labview, you build a user interface, or front panel, with controls and indicators. Controls are Knobs, push button and other input device. Indicators are LED and other displays. After user interface, you add code using VIs to control the front panel objects. In the block diagram make the code.

Labview Dialog Box

THEORETICAL CONSIDERATIONS

Lab view:

It is a system design development environment for a visual programming language. Its take from National Instruments (developer(s)). Different type of use in

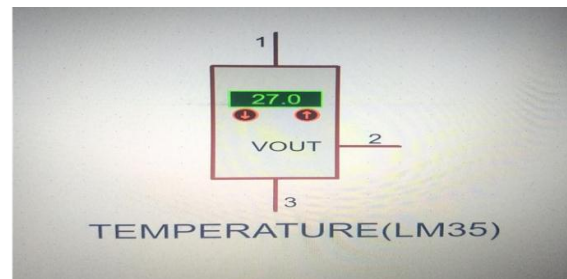
operating system Lab view offers a graphical programming and visualization make it simple to and hardware or Lab view interlink with other software. Represent complex logic on the diagram its programming languages is c, c++, or java. Most of the engineers who need to program make a project etc.

myRIO

myRIO is a real time embedded for evolution. myRIO is basically a short of micro controller introduced by National Instrument (NI), that is why it is sometime knows as NI myRIO. myRIO is a portable device abc students can easily use it for design and control of robots and may other system quit efficiently. It operate on the frequency 667MHZ. myRIO has dual core ARM cortex A9 programmable processor. FPGA support in myRIO help student to design real life developing system and to solve real problem quit fast as compare to other microcontroller FPGA support we can avoid the complicated syntax used in C language and in many other. We just have to create logic instead of writing the complicated code with the proper syntax.

Temperature (LM35)

LM35 Series are IC temperature device. The LM35 device 3 terminal one is GROUND, 2 is OUTPUT, 3 is SUPPLY. The LM35 device operating range is -55 degree C to 150 degree Cooperating voltage is 3V to 30V.

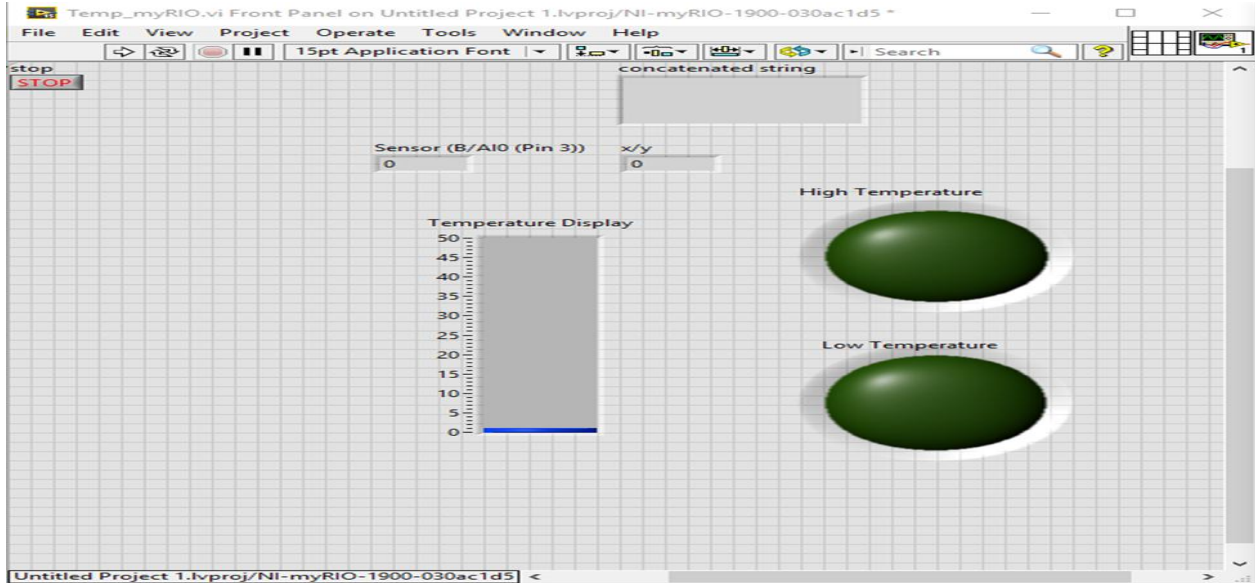


LED

Methodology

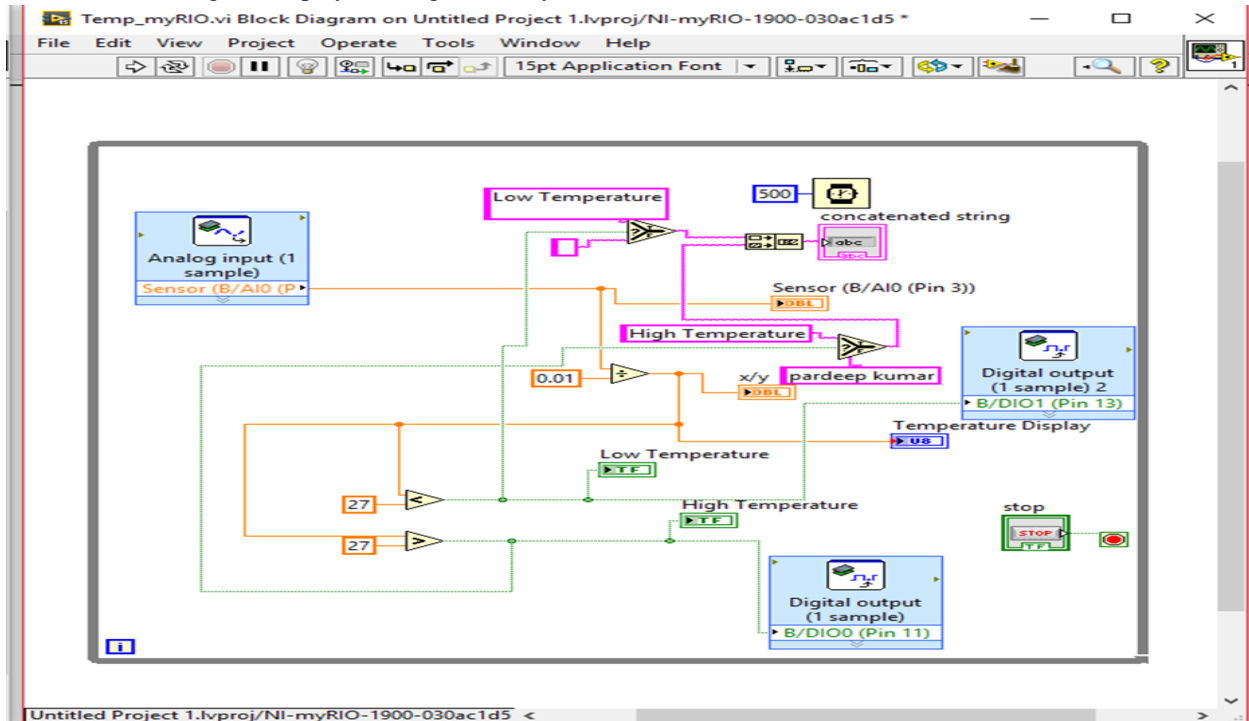
LED diode that convert electric energy into light. LED stand for “light emitting diode” we need a two small led one is RED, second is GREEN
 RED led need 3.2v, GREEN led need 3.2 to 4.5v.

This project is based on Lab view (myRIO) in lab view two window have one is for element display second is for block diagram. First connect myRIO with lab view.



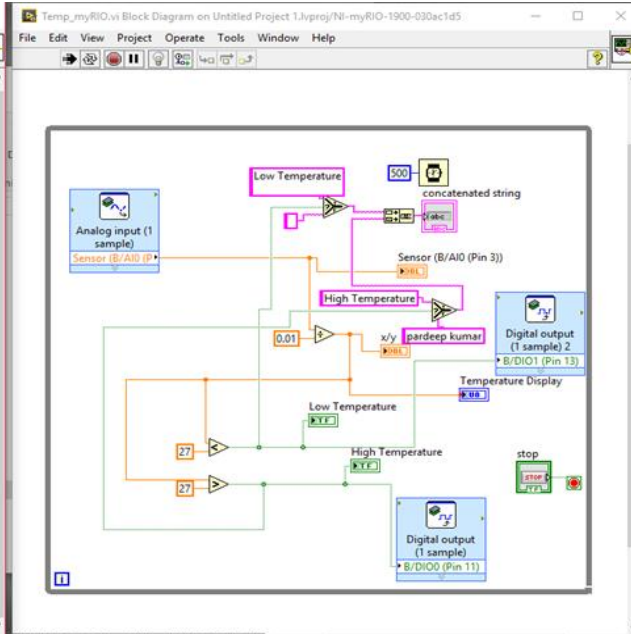
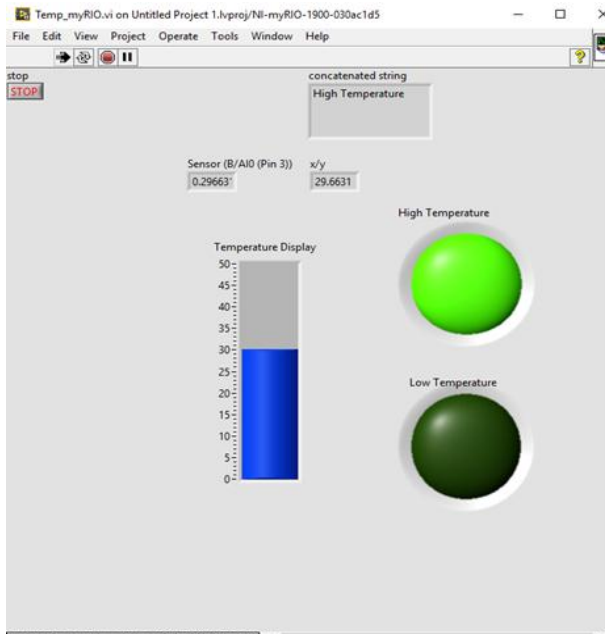
Front panel of lab view we are add content two led, one is for LOW temperature display, second is for HIGH temperature display, one is temperature display tube indicate how much temp increase, concatenated string is display message those you

write in block diagram when temperature increase than display “Temperature High” when temperature decrease than display in concatenated string “Temperature Low”.



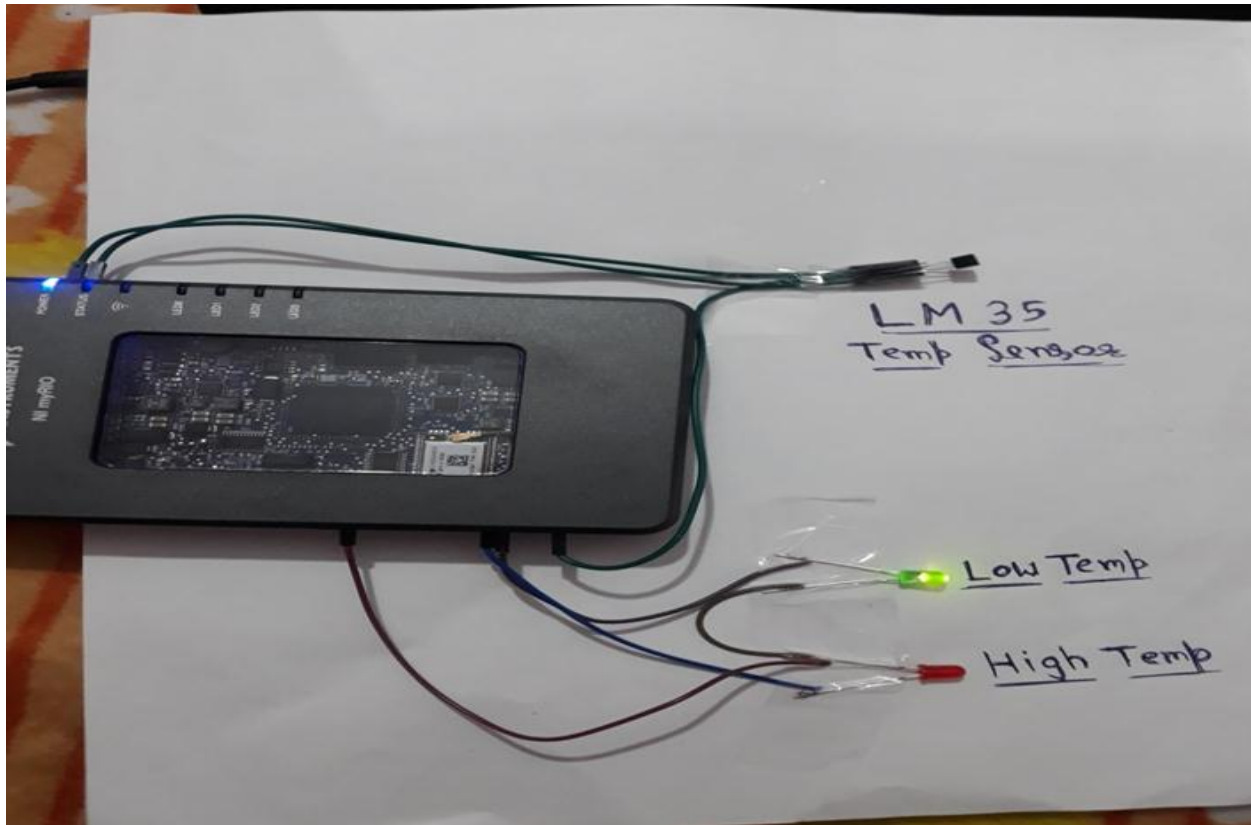
Block diagram screen show in fig in this we make a

programming it's so simple instead of c,c++ etc.



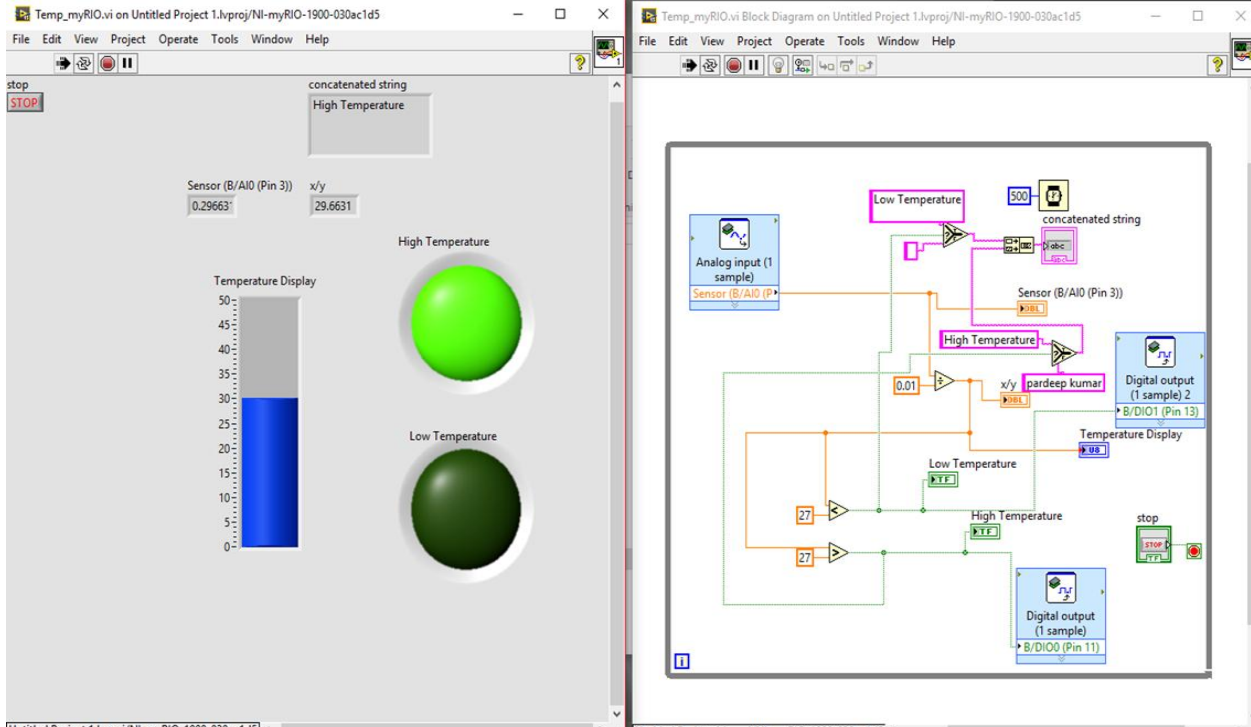
myRIO hardware system connect 2 LED, one is GREEN, second is RED with attach LM35 temperature sensor. In this circuit Green LED –ve Pin connect to B/DIO1(Pin 13) and GREEN led connect

to B/DIO1(Pin 11). LM35 Temperature have 3 pin one is for ground and second is for Signal and third is for Vcc. Second or Signal pin connect to B.



LM35 there have no heat nearby sensor than temperature is less than 28 degree C GREEN Led ON

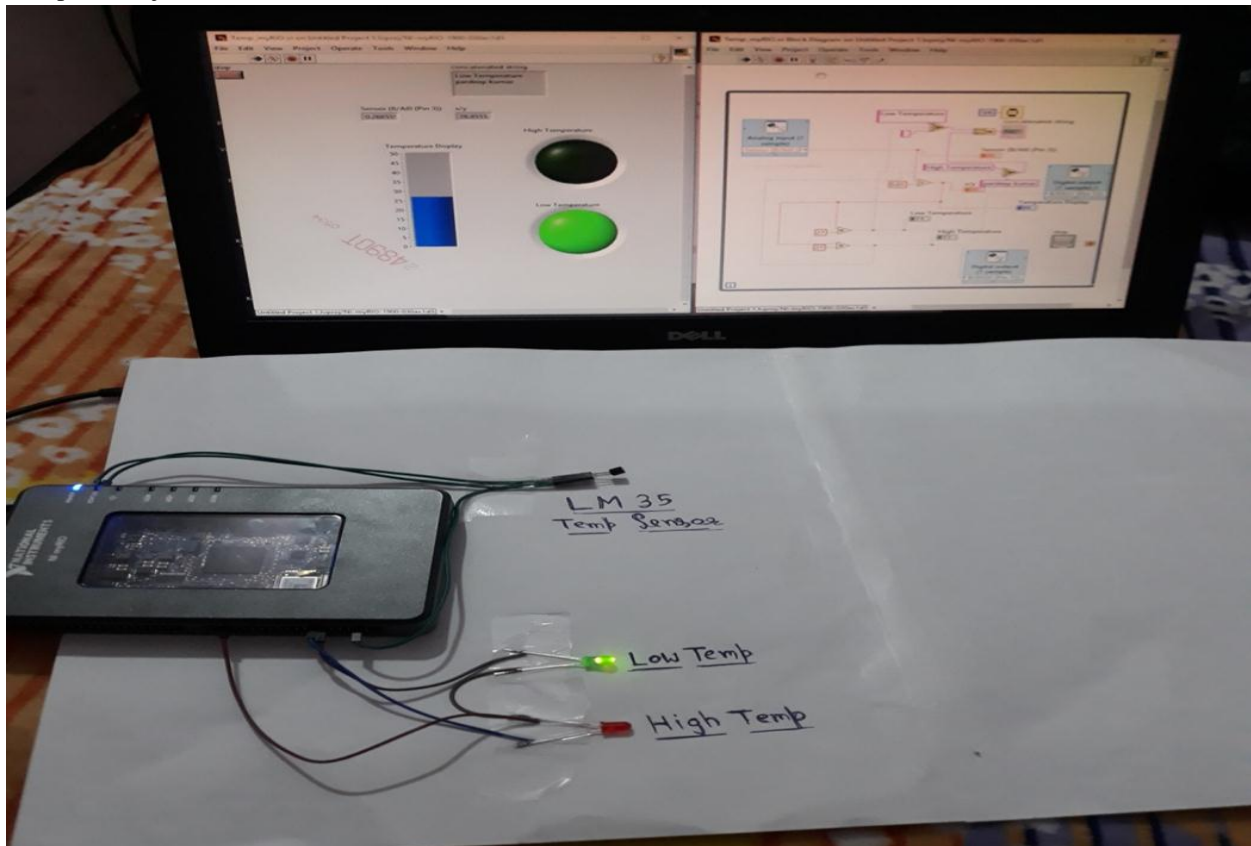
temperature show in Front panel concatenated string show message “temperature Low”.



when we touch LM35 sensor than the temperature is increase more than 28 degree C RED led ON show in

Front panel. concatenated string show message "Temperature High".

Complete Project



RESULTS AND CONCLUSION

Result: project is successfully complete this project implements on classroom, when classroom temperature is increase to rated value then Fan Speed control.

CONCLUSION

In many automations application home, collage, hospital, industrial area etc. Less power consumes, reduce the manpower, fully automation System.

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