

Low Cost Data Acquisition System Using Arduino -UNO Controller

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OBJECTIVES

- ▶ To create a low cost data acquisition system (DAQ) using
Arduino - UNO controller and LABVIEW as graphical user interface (GUI).
- ▶ To send the fetched data to the cloud for Anytime and Anywhere Monitoring.

LITERATURE SURVEY

Title of the paper referred	Description
1. Low Cost Data Acquisition System Using LABVIEW	DAQ (Data Acquisition) system is a system which acquires the data i.e. input/output parameters from the field with the help of sensors associated with the system, it analyses the data and generate control action required for operating and also monitor the acquired data on GUI.
2. Interface Lab VIEW with Arduino	To interface Lab VIEW with Arduino , you require the following software's and hardware's, <ul style="list-style-type: none">•LABVIEW (software)•NI VISA(software)•VI packet manager (software)•Arduino IDE (software)

EXISTING SYSTEM

- ▶ Data Acquisition system of very high cost.

PROPOSED SYSTEM

- DAQ (Data Acquisition) system is a system which acquires the data i.e. input/output parameters from the field with the help of sensors associated with the system, it analyses the data and generate control action required for operating and also monitor the acquired data on GUI. The DAQ system is basic need for controlling and monitoring of a Mega system in modern industries. So the main objective of this paper is to develop a low cost DAQ system for controlling and monitoring a system using ARDUINO-UNO controller and Lab VIEW GUI. In other way if we want, we can also monitor the data on mobile phone with an Android application.

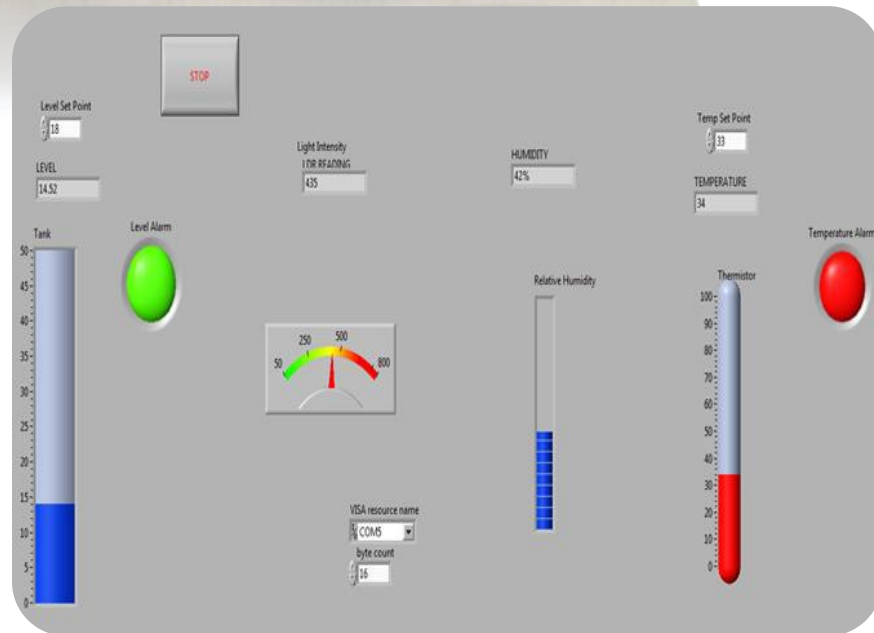
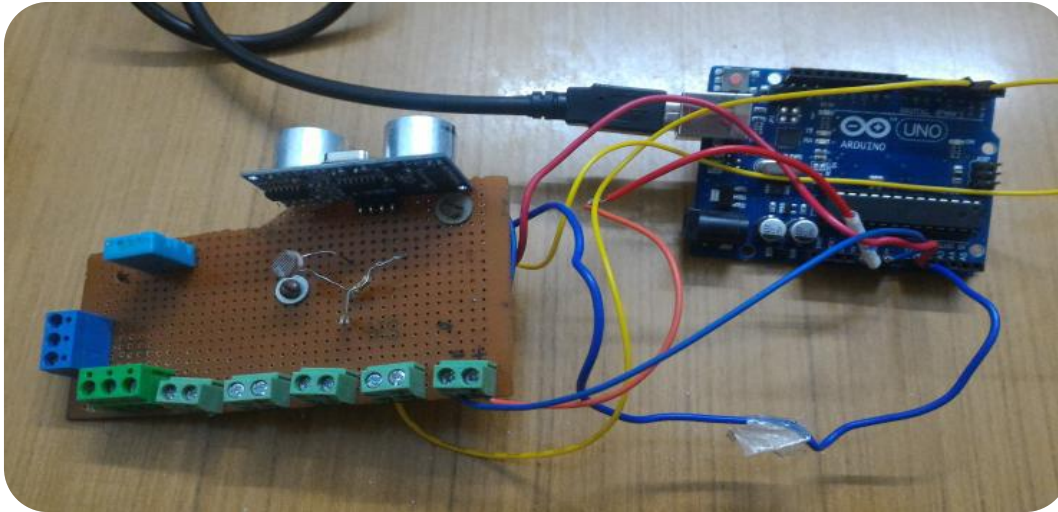
GENERAL BLOCK DIAGRAM OF PROPOSED SYSTEM



COMPONENTS USED

- ▶ ARDUINO-UNO
- ▶ LABVIEW as graphical user interface (GUI)
- ▶ Sensors (such as Ultrasonic , LDR, Temperature
And Humidity Measurement, etc)
- ▶ LAPTOP

SIMULATION OUTPUT / HARDWARE CONNECTIONS



REFERENCES

- ▶ https://www.researchgate.net/publication/288182065_Low_Cost_Data_Acquisition_System_Using_LABVIEW
- ▶ <https://circuitdigest.com/microcontroller-projects/arduino-labview-interfacing-tutorial>



THANK YOU!