H006
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Subject- Virtual Instrumentation

EXPERIMENT NO. 9

Aim: Create a VI to interface Arduino with LabView

Software Used : PC with software (NI LabVIEW)

Theory:
LIFA, which stands for "LabVIEW Interface for Arduino," is a library that enables the use of Arduino microcontrollers with LabVIEW, a graphical programming language commonly used in data acquisition, analysis, and control applications.

The LIFA library is a set of VIs (Virtual Instruments) that provide LabVIEW users with a straightforward and easy-to-use interface for interacting with Arduino boards. The library allows LabVIEW programmers to send and receive data from an Arduino board via USB, as well as control the various inputs and outputs of the board.

LIFA includes a number of pre-built VIs that can be used to perform a variety of functions with an Arduino board, such as reading analog and digital inputs, setting digital outputs, and sending and receiving data over a serial connection.

One of the main advantages of using LIFA is that it provides an easy way for LabVIEW users to integrate Arduino boards into their applications without having to write any low-level code. This can save a significant amount of time and effort compared to writing custom code for communicating with an Arduino board.

Overall, the LIFA library is a powerful tool for LabVIEW users who want to leverage the capabilities of Arduino boards in their applications. By providing an easy-to-use interface for interacting with these devices, LIFA makes it possible for users to rapidly prototype and deploy systems that combine the strengths of both LabVIEW and Arduino.

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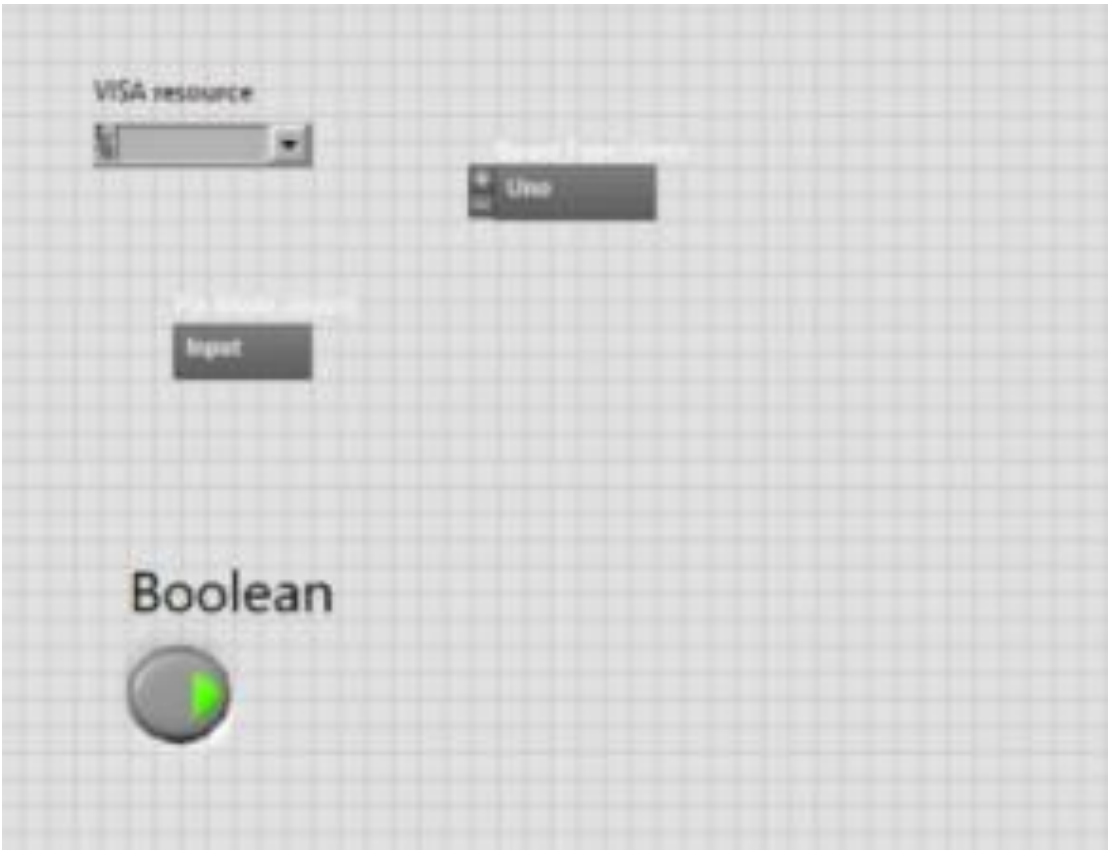
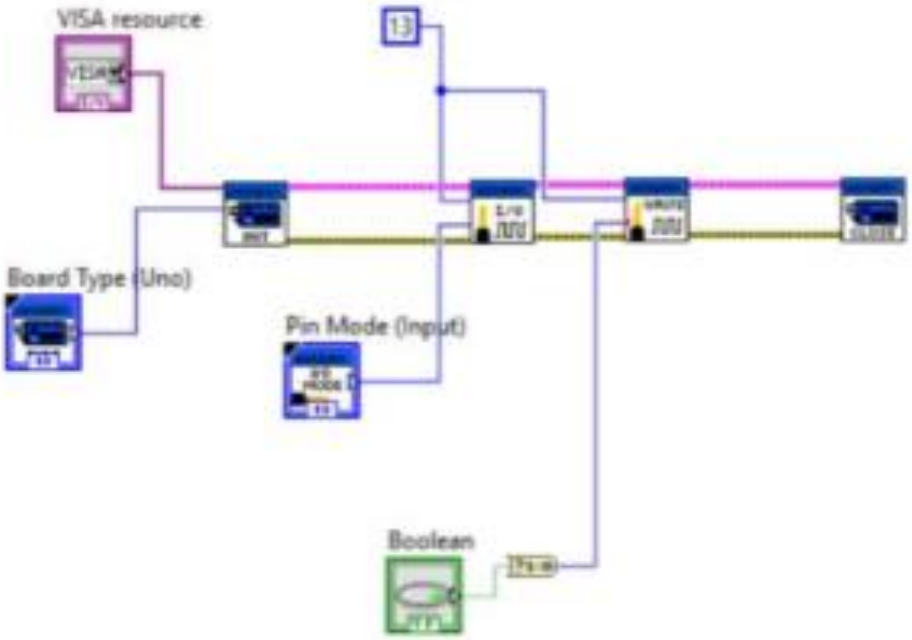
Front Panel:



Block Diagram:



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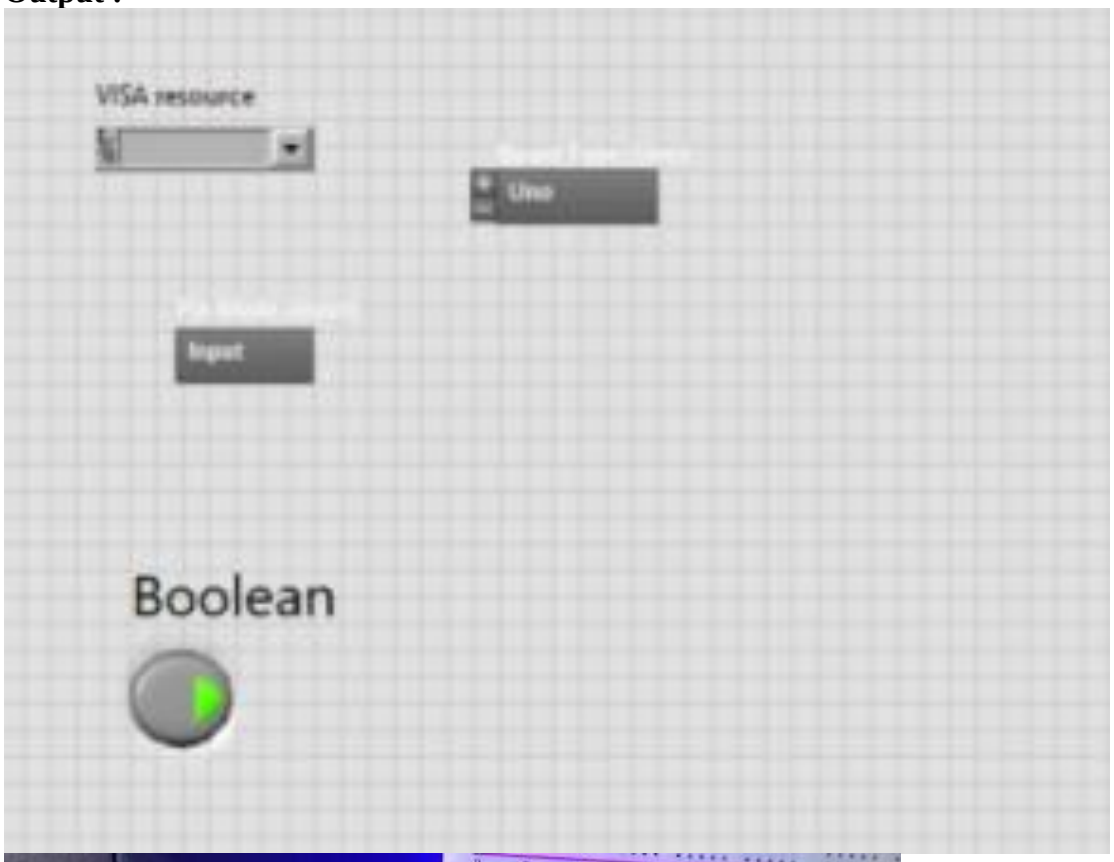
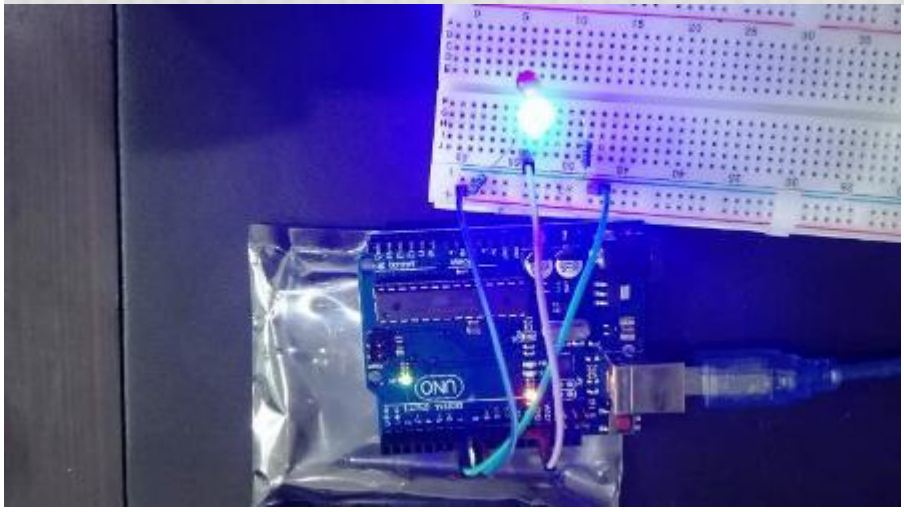
Output :





Conclusion: The experiment was successfully performed in LabView.