

## LabVIEW

**Course Name :** LabVIEW

**Certification :** By UVSoftsTechnologies Pvt. Ltd.

**Projects:** 14 Projects Covered in 30 Days.

### Introduction:-

Theory:-

- Introduction to LabVIEW.
  - What is a LabVIEW?
  - Why we used LabVIEW?
  - ADVANTAGE OF LabVIEW.

Theory:-

- Introduction to LabVIEW Software.
- Lab VIEW Environment
  - FRONT PANEL
  - Block Diagram

Theory:-

- Passing data and Debugging
- Controls Palette
  - Numeric
  - Boolean
  - String& Path
  - Array &Matrix
  - Graph

Theory:-

- Numeric Sub Palette
  - Numeric control
  - Numeric indicator
  - Thermometer
  - Meter
  - Gauge

Theory:-

- Boolean Sub Palette
  - Button
  - Rocken
  - Round led
  - Toggle

Theory:-

- Function Palette
  - Structures
  - Array
  - Cluster
  - Boolean
  - Timing
  - Comparison

Theory:-

- Structures and Loops
  - For loop
  - While loop
  - Case Structure
  - Formula node

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Theory:-

- String & Path Sub Palette
  - String control
  - String indicator
  - Combo box
  - File path indicator

Practical:-

- Basic Calculator
- Advance Calculator

Theory:-

- Numeric function

Practical:-

- Temperature convertor

Theory:-

- Array function
  - Array Size
  - Index Array
  - Initialize Array
  - Array to Cluster
  - Cluster to array
  - Array to matrix
  - Matrix to Array

Theory:-

- Boolean Functions
  - And function
  - NOT function
  - OR function
  - Exclusive OR

Practical:-

- Analog clock

Practical:-

- Dice
- Digital Clock
- Fire alarm

Theory:-

- String function
  - String Constant
  - Format Date
  - Path/Array/String
  - To upper Case
  - To Lower Case

Theory:-

- Comparison Functions
  - Equal
  - Not equal
  - Greater
  - Less
  - Equal to Zero

Theory:-

- Timing and Conditions
  - Timed Delay
  - Tick count

Theory:-

- ActiveX
  - Initialization of joystick
  - Initialization of mouse
  - Initialization of keyboard

Practical:-

- Mouse tracking

Theory:-

- Data Communication Functions
  - Protocols
  - Local Variable
  - Global Variable

Theory:-

- Accessing of windows functions
  - Using the web function in Lab VIEW
  - Using the video player in Lab VIEW

Practical:-

- web browser
- video player

Theory:-

- Introduction of microcontroller
  - Atmega-8
  - Atmega-16 & AVR Family

Theory:-

- Introduction of embedded C

Theory:-

- Introduction of real time practical's
  - LED
  - Motor
  - L293D

Theory:-

- Introduction of real time practical's
  - USART

Theory:-

- Instrument I/O VIs and Functions
- Serial Communication in Lab VIEW

Practical:-

- Motor Control through in LabVIEW

Practical:-

- LED Animation with LabVIEW
- Line follower robot with LabVIEW
- slideshow

### **Number of Projects Covered in BASIC MODULE:-**

- Basic Calculator
- Advance Calculator
- Temperature convertor
- Analog clock
- Dice
- Digital Clock
- Fire alarm
- Mouse tracking
- web browser
- video player
- Slideshow
- Motor Control through in LabVIEW
- LED Animation with LabVIEW
- Line follower robot with LabVIEW.

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