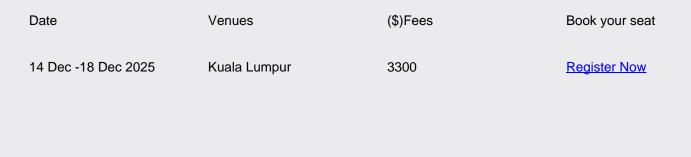


First Select SCADA system & HMI Programming



Objectives

- Understand how SCADA system work
- How to make GUI for SCADA system
- Make SCADA database
- Make system alarm data base
- Plot all variables and store the values
- Make security for the system
- Make the system animation with visual basic script
- Connect scada with any PLC
- Connect scada with internet
- Deal with HMI
- Remote control management
- Control from mobile

Course Outline

Introduction

- What is scada system?
- Scada system content
- Difference between scada and DCS
- Indusoft web studio Overview
- Installation and register of the software
- 2- Graphic Design editor
 - Build a simple application
 - Slider, bar graph, button, lamp
 - Ribbon
 - Quick Access Toolbar
 - Project Explorer
 - Database Spy
 - Output Window

- 3- Tags
 - What is a Tag
 - Internal Structure and Data Flow
 - Boolean, Integer, Real, String
 - Array, Class, Pointer
 - Tag Properties
- 4- Screen Groups
 - Creating Screen Groups
 - Header
 - Navigation
 - Main
 - Displaying Logo in Header
- 5- Shapes and Formatting
 - Shapes
 - Formatting tools
 - Height and Width
 - X,Y Position
 - Layer
 - Alignment
- 6- Active Objects
 - Text
 - Button
 - Push Button
 - Check Box
 - Radio Button
 - Combo Box
 - List Box
 - Smart Message
 - Message Display
 - Multistate Indicator
 - Multistate Pushbutton
 - Text Box

- Command
- Hyperlink
- Bargraph
- Text Data Link
- Color
- Position
- Resize
- Rotation
- Command Config
- Hyperlink Options
- Stacked Bargraph
- Text
- Color (By Limit, By Color)
- Position Reference
- Custom Rotation point
 - Rotating imported graphic

Grid Object

- Data Source
 - Class Tag
 - Text File
- Columns
- Conditional Filtering
- Inserting New information
- 9- Trends
 - Real-Time
 - Historical
 - Trend Worksheet
 - Numerical (X/Y plot)
 - SPC (Statistical Process Control)
- 10- Alarms
 - Alarm/Event Control Object
 - Alarm Worksheet
 - Tag Properties
 - History
 - File Location
 - File Format

- Linked Symbols
- Project vs. System Symbols
- Custom Properties/Categories
- Creating Your Own Symbols

- 12- Built-in Scripting
 - Math and Logic Functions
 - Interfaces
 - Overview of Common Functions
- 13- VBScript Interfaces
 - Interfaces
 - Sub and Functions
 - Variables and Scope
 - Additional Resources
- 14- ActiveX and .NET Controls
 - Active-X Slider and Web Browser
 - .Net Progress Bar
 - Interacting with the Controls

15- Scheduler

- Event Types
 - Calendar
 - Clock
 - Change
- What Fields to Use
- Example Uses
- 16- Tank Demo
 - Adding Tags and Class
 - Tank, Valves and Selection
 - Simulation VBScript
 - Contents of Tanks
- 17- Recipes
 - Functions
 - Save
 - Load

- Delete
- Init
- VBScript to Select
- .XML

18- Reports

- Worksheet
- Function
 - Disk
 - ∘ Prn
 - PDF
- Printing as TXT, RTF, HTML, CSV, and PDF
- 19- Web Thin Client
 - One of 3 Thin Clients
 - Topology
 - Publish Screens as HTML
 - Configure Settings
 - Configuring Microsoft IIS
- 20- Secure Viewer
 - One of 3 Thin Clients
 - Installation
 - Configuration using:
 - Microsoft IIS
 - Shared Folder
 - Tag to Determine if Client or Server
- 21- Mobile Access
 - One of 3 Thin Clients
 - 2 Parts
 - Tabular
 - MA (HTML5)
 - Configuration
 - Alarms, Process Tags, and Trends
 - Webinar Video

22- Events

- Event Settings
- Alarm/Event Control Object
- File Format
- Proprietary or Database Selection

23- Access Database

- Default Database Configuration
- Creating an Access Database
- Configuring Alarm and Events
- Additional DB Interfaces

24- SQL Database

- Default Database Configuration
- Creating an MS SQL Express Database
- Configuring the Grid Object
- Configure Connection
- Create VBScript with SQL Statements
- Using Output Window
- Database Worksheet

25- Translation

- Development Environment
- Runtime
 - Translation Table
 - Set Language Function
- Web Thin Clients and Secure Viewer Can Use Different Languages

26- Security

- Security Overview
- Configure Groups/Users
- Security with Objects
- Password Protecting Screens and Documents
- Security Webinar Video Online

27- OPC

- What is OPC?
- What Technologies Does IWS Support?
- Optional
- OPC Foundation Member since 1998
- See OPC Webinar Online

28- Remote Management

- Remote Agent
- Remote Management Connection
- Downloading to a Remote Runtime
- Remote DBSpy and Log win

29- Driver

- Driver Worksheets
 - Main Driver Sheet
 - Standard Driver Sheet(s)
 - Status
 - Manual
- Scan and Scaling
- Priority
- Troubleshooting
- Import Wizards
- Tag Integration

WORKSHOP STYLE

The workshop will be of five day's duration consisting of interactive learning sessions, videos, examples and role-play exercises to provide the delegates with the knowledge and experience of using the key learning issues and techniques.

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