

COMPLETE ANALYTICS

Course Content – Excel VBA

Introduction to VBA and Macros

- The fundamentals of VBA and Macros
- The difference between VB and VBA
- Preparing a workbook for Macros
 - Displaying the Developer Tab
 - Setting the Macro Security level
 - Saving a file containing Macros

Recording Macros

- Recording a Macro
- Creating a macro by using Absolute and Relative Reference
- The Macros Dialog box
- Running a Macro by using Keyboard shortcut and Quick Access toolbar
- Creating Objects to Run Macros, Assigning a Macro To An Object

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The Excel VBA IDE (Integrated Development Environment)

- Launching Microsoft Visual Basic
- Microsoft Visual Basic interface/ Editor
 - Menu bars and Tool bars
 - The Project Explorer window
 - Code Window
 - Object Browser
 - Properties Window
- Running Procedures From The Editor

VBA Fundamentals

- VBA: An event driven language
- VBA: An object-based language
- Procedures: Function and Sub
- Code Modules
- Basic Data Input and Output – Message Box and Input Box

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Excel Objects

- Objects Defined
- Objects - The Application Object, The Workbook and Window Objects, The Worksheet Object, The Range Object
- Collection Objects
- Hierarchy of Objects
- Objects: Methods and Properties
- Using Object References (Selecting column, row, range; setting value)

Variables and Data Types

- Declaring and using Variables
- Implicit & Explicit Declarations
- Variable Types
- The Scope of Variables - Procedure Level Scoping, Module Level Scoping, Public Scoping of Variables
- Passing Variables By Reference, Passing Variables By Value
- Avoiding Variant Data Types
- Using Arrays

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Programming Techniques

- Programming convention
- Program structure and syntax
- Writing VBA Code
- Code indentation
- Comments

Procedures and User-Defined Functions

- Creating a Procedure
- Making Sense Of IntelliSense
- Passing Data Between Procedures
- Calling Procedures from Other Procedures
- Basic data input and output – Message Box and Input Box
- Creating a User Defined Function
- Passing Arguments to Functions
- Calling Functions from Other Procedures
- Calling Functions directly in Excel

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Events

- Workbook Events
- Worksheet Events

Control Structures & Program Flow

- Determining the Flow of a Program
- If (ElseIf, Else)
- Select Case()
- For ... Next Loop, For ... Each Loop
- Do ... Loop , Do ... Until , Do ... While
- With ... End With
- Nesting Code

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User Forms

- Creating and displaying a user form
- Form Controls
 - Basic controls – Label, Text-Box, Command-Button, List items – List-Box, Combo-Box
 - Mouse-controlled items – Check-Box, Option-Button(Radio Button), Toggle-Button
 - Display items – Frame, Tab-Strip, Multi-Page, Scroll-Bar, Spin-Button, Image
- Setting Form Properties, setting Form control Properties
- Use of form events, procedures and functions
- Running and displaying a user form

Programming Custom Forms

- Initializing The Form
- Closing the Form
- Creating Error Checking Procedures, Running a Form From a Procedure

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Debugging Code and Error handling

- Understanding errors
- Identifying compile-time, run-time and logical errors in code
- Using debugging tools
- Setting Break Points In The Editor
- Stepping Through a Procedure
- Using break mode during run mode
- Understanding VBA's error trapping options