

VISUAL BASIC FOR APPLICATIONS (VBA) & MACROS TRAINING:

Microsoft Visual Basic for Applications (VBA, Macros) when used with Microsoft Excel can build powerful automated business tools quickly and with minimum cost. We provide the most advanced and professional corporate training in VBA macros for excel. If you sit in front of a computer screen all day creating reports in Microsoft Excel, you know the power of this software package. But if you aren't using macros yet, you don't know the half of it. They automate common and repetitive keystrokes that you use in Excel to create and edit spreadsheets. By reducing the number of keystrokes required to perform common commands, macros speed up your production and reduce the time you have to spend staring at an electronic spreadsheet each day. VBA, a general purpose programming language, that comes along as standard with the Excel or Office can be used to perform various business tasks like-

Automate Report Generation
 Automate Chart creation
 Creating Dashboards
 Communicating with MS Access Databases
 Analyzing Business Data
 Reconciling Data
 Timesavings
 Create our Own Functions

Syllabus for Excel VBA & Macro (Foundation Level)**INTRODUCTION:**

- Introduction about VBA
- Difference between VBA & Macro.
- Security concepts involved in Excel 2003 & 2007
- Tips for getting skilled in VBA
- Why we should limit use of a Macro Recorder for program development?

CHAPTER 1

- Using Visual Basic Editor
- Rules for naming a Subroutine/Function.
- Introduction to Object, Properties & Methods
- Understanding Library, Class & Collections
- Linking the Concept of Object, Properties & Methods with Object Browser
- Using Immediate Window.
- Assigning macro to a control.
- Using Input box & Message box
- Breaking long statements to multiple lines.
- Entering multiple short statements in one line.
- Concepts
 - o Difference between ActiveCell & Selection
 - o Difference between ThisWorkbook & ActiveWorkbook
 - o Difference between Selected Sheets & Active Sheet.
 - o What does Sheet Object includes?
 - Examples:
 - o Creating a new book,
 - o Entering arrays of data both horizontally & vertically.
 - o Inserting rows,
 - o Finding needed data & Inserting rows dynamically,
 - o Inserting, Moving & Naming Worksheet,
 - o Inserting Worksheet Name dynamically,
 - o Creating various form controls like Command button, Group box & Option button,
 - o Formatting Cells,
 - o Showing/Hiding Columns,
 - o Showing/Hiding/Very Hiding Sheets,
 - o Sorting data, Four Methods of Copying Data, Importing Data.
 - o Importing Text data using QueryTable property
 - Extra Questions:
 - o Getting Last Sheet,
 - o Knowing & Changing Sheets Name,
 - o Showing Print Preview of Sheet, Range & Workbook,
 - o Adding, deleting & modifying Comment,
 - o Doing spell check,
 - o Clearing the content of cells,



- o Replacing the content,
- o Auto fitting columns and rows,
- o Merging & Unmerging cells,
- o Printing range, sheet & pages,
- o Protecting & un protecting sheet, workbook with or without password,
- o Adding background picture,
- o Showing/Hiding Gridlines, Formula bar etc.,
- o Formatting all or few characters in cell,
- o Adding borders.
 - Using Offset Property.
 - R1C1 Formula reference.
 - Test for Offset & R1C1
 - Resize Property
 - Overcoming the limitation of most popular method of getting last row.
 - Example:
- o Getting the last row
- o Getting last column
- o Entering correct formula in every cell,
- o Creating Multiplication Table,
- o Adding total to table,
- o Running Total,
- o Bank Balance statement.
- o Copying Data except heading.
- o Converting Pivot like data to Database format.
 - Test on Resize.
 - Referring to Non contiguous cells
 - If/End If Condition.
 - Using Names while addressing to ranges.
 - Adding Spinner Control
 - Example:
- o Transferring Template data to Database.
- o Displaying, Editing & Deleting records from Database
- o Getting correct data from dynamically changing data.
 - Learning various ways of referring
- o Ranges
- o Sheet
- o Workbook
 - Importance of using an Object Variable in program.
 - Changing Object name of Sheet & Workbook.
 - Handling situations when Object returns Nothing.



CHAPTER 2

- Error Handling Methodologies
- Suppressing unwanted dialogs display during program execution.
- Creating Subroutine with Arguments & calling them.
- Understanding Enum, Creation & Advantages
- Examples
- o Subroutine to create sheets without returning error.
- o Creating Functions for getting LastRow & LastColumn
- o Creating Subroutine for creating Borders
- o Creating Subroutine for Cell Formatting.
 - Creating, Installing & Removing Addins to boost efficiency.
 - Creating References.
 - Various productivity tools in VBE
- o Executing user statement like inbuilt statement
- o Displaying all variable definitions
- o Soft Stopping the code
- o Hard Stopping the code
- o Conditional Stopping the code
- o Change Stopping the code
- o Keeping track of important elements of code.
- o Reaching Cursor position
 - Repeating codes in known limits
 - Repeating codes by adding a Step to it.

- Understanding Chr Function
- Examples:
 - o Adding series
 - § Vertically,
 - § Horizontally,
 - § Front Diagonally &
 - § Backward Diagonally.
 - o Create a One Color & Three Color Band.
 - o Enter Alphabets from A-Z
 - o Creating Alternative Sheet Names
 - o Creating multiplication table across sheets
 - o Create Hourglass like pattern.
 - o Create Chessboard pattern.
- Understanding creation of random numbers & texts
- Short method for doing PasteSpecial values.
- Looping within a collection
- Knowing the presence of one text within another.
- Looping within an Array
- Understanding Hyperlinks, Shapes, Commandbars & Commandbar Control collections.
- Examples:
 - o Creating a Subroutine to add dummy data
 - o Entering Row numbers in ranges
 - o Adding many sheets with known name without creating garbage codes
 - o Deleting default sheets
 - o Inserting sheets based on cell values.
 - o Conditional Formatting
 - o Adding different cell comments
 - o Creating Index by creating Hyperlinks to sheets.
 - o Inserting in text frame of all Shape Objects in sheet.
 - o Knowing all Commandbars name
 - o Knowing all Commandbars and their Subsidiary Control names upto 2 levels.
 - Repeating code on the basis of a condition.
 - Examples:
 - o Appling Cheque amount to various invoices
 - o Adding Subtotal to Data.



CHAPTER 3

- Displaying and using a Folder open Dialog box.
- Getting list of File names in a folder
- Copying, Renaming, Deleting list of files in a go
- Creating various files and entering Dummy Data to it.
- Consolidating the content of those files in one file.
- Creating Folders
- Understanding Date Concept
- Getting present Date and Time
- Entering in a particular format
- Knowing Saved status of a file
- Using Autofilter
- Examples:
 - o Copying relevant columns data only no matter any columns are inserted/deleted
 - o Copy data that satisfies the given criteria
 - o Copying special type of cells

CHAPTER 4

- Things to remember while creating an Array
- Method of storing multiple data in Array
- Defining holding capacity of an Array (Static, Dynamically, Between)
- Returning the values of an Array
- Impact on Speed of program
- Getting Lower/Upper limit of an Array
- Changing the bottom limit of an Array
- Stopping Array from releasing values
- Storing Tabular data in Array

- Example: Storing data based on a criteria and dumping its values elsewhere.
- Understanding Type & purpose of using
- Storing Arrays in Type

CHAPTER 5

- Scope of Variable
- Naming Convention
- Dealing with Error Handlers
- Knowing the type of error generated
- Performing different operations on the basis of errors
- Ignoring Error statement and cancelling Error ignoring statement
- Holding capacity of Datatypes.

CHAPTER 6

- Creating User Defined Functions
- Finding a pattern match
- Examples
- o Getting the name of Workbook
- o Getting Full path of Workbook
- o Getting present time (Static)
- o Getting Random numbers (Static)
- o Getting LastSaved Date & Time of a file
- o Getting Font Color Index of selected Cell
- o Getting Email Address out of hyperlink
- o Getting Random Text out of Array of Data
- o Getting Random Text out of values from Range
- o Getting a Random number between a range
- o Getting Column Name
- o Getting Column Number
- o Simple Add Formula
- o Simple Sum Formula
- o Getting ODD/EVEN row type
- o Getting only Weekdays
- o Creating formula like Sumif
- o Creating formula like Vlookup
- o Sum by Color
- o Getting first non blank cell.
- o Exploding data in a cell to various cells based on a delimiter
- o Showing text separated by enter in a cell to different cells
- o Exploding data in a cell to various cells based on two delimiters
- o Finding One text in Long Text and returning corresponding lookup text
- o Doing concatenate and lookup on multiple fields
- o Converting a list of duplicate data to unique data
- o Retrieving only numbers from Alphanumeric data
- o Returning the address of cells that contains lookup string
- o Reversing the content
- o Returning the Cell addresses separated by comma having maximum values
- o Array Formula to get only non empty cells
- o One Dimensional & two Dimensional Array Formula.
- o Creating Unique Random Function.



Highlights of Course:

- User Defined Functions with Arguments.
- ODBC connectivity to SQL Database.
- Internet explorer, Gmail, Facebook and Banking sites Automation using VBA.
- Share Point connectivity from Excel.
- Establishing a live connectivity from a webpage.
- Outlook Automation like sending bulk emails and saving attachments from Outlook emails.
- Arrays
- Early Binding and Late Binding.

- IBM Pcomm Automation using VBA.
- Expertize in Internet explorer Automation
- Constants and Enums
- Browser in Excel
- Addin development
- Ribbon Tab Addition and Macro addition
- Userforms

