

VBA Automation

- Day 1
 - Basic discussion and understanding of VBA/Macro.
 - Understanding of Excel object Models (Object, property, methods, arguments, etc..)
 - Visual Basic Editor (VBE). Windows in VBE (Project, Property, Code, Immediate, Watch windows). Shortcuts keys.
 - Macro recording, Commenting,
 - Run time, design time and break mode.
 - Creating Range using Static Selection
- Day 2
 - Understanding of variables, data type and its scope, Option explicit
 - Creating ranges using Dynamic Selection
 - i. CurrentRegion
 - ii. SpecialCells
 - iii. Resize
 - iv. Offset
 - v. End(xlDown), End(xlUp), End(xlToLeft) and End(xlToRight)
 - Cut, Copy, Paste, Insert and PasteSpeical
 - Range Formatting
- Day 3
 - IF, Else, Nested If, Select Case
 - MsgBox and Inputbox
 - Data Sorting
 - Data Filter
 - Application object and its properties
- Day 4
 - Do while & do Until Loop
- Day 5
 - For Next Loop
 - For Each Loop
- Day 5
 - VBA Function
 - Using Excel formula in VBA
 - User Defined Functions / Parameters(By Ref, ByVal)

- Day 6
 - Worksheet/Workbook Events
 - a. Error Handling
 - b. File Handling

Advance VBA

- Day 7 (Controls)
 - Form/ Active X Controls
 - User Form
- Day 8 (Arrays)
 - What is an Array?
 - Declaring a fix-sized Array
 - Writing to and reading from Array
 - Looping over an Array
 - Erasing Array
 - Multi-dimensional Array
 - Dynamic Array
- Day 9 (Charts)
 - Creating Charts in Excel VBA
 - Working with Chart Objects and its Properties
 - Live implementation of charts automation in VBA Dashboard
- Day 10 (Pivot Table)
 - Understanding of Pivot Cache and creating pivot table
 - Working with Pivot Tables, Pivot Fields, Pivot items etc
 - Calculated Fields
 - Filtering Data in Pivot
 - Selecting Pivot Tables Ranges
 - Grouping in Pivot
- Day 11
 - Working with IE
 - Automating PowerPoint through Excel VBA
 - Automating Outlook

SQL for MS Access

➤ The Relational Database Structure

- Introduction
- Early Forms of Data Storage
- The Relational Database Structure
- Tables
- Keys
- The Planning Stage
- Data Modeling
- Entities and Relationships
- Normalization
- Client/Server Databases
- Database Management Systems

➤ Structured Query Language and Microsoft Access

- Structured Query Language
- SQL Versions
- SQL Components
- SQL Syntax
- The Power of SQL in Microsoft Access
- Opening Microsoft Access and Switching to SQL View

➤ Creating Tables and Inserting Records

- Introduction
- The Data Definition Language Component
- CREATE TABLE Syntax
- Data Types
- Constraints
- NULL/NOT NULL Constraint
- PRIMARY KEY Constraint
- FOREIGN KEY Constraint
- UNIQUE Constraint
- Adding Constraints to Existing Tables
- Constraint Syntax
- Inserting Records
- Inserting Data without Specifying Column Names
- Inserting NULL Values
- Copying Records from One Table to an Existing Table
- Copying Records from One Table to a New Table Simultaneously
- Updating Records
- Deleting Records

➤ Retrieving Records

- The SELECT Statement
- The ORDER BY Clause
- Sorting in Descending Order
- Sorting in Ascending Order

- Sorting Multiple Columns
- Sorting Using Numbers
- Handling Duplicate Values
- The DISTINCT Keyword
- The DISTINCTROW Keyword
- The TOP Keyword
- The TOP PERCENT Keywords
- Creating an Alias
- Concatenation
- **Filtering Retrieved Records**
 - Introduction
 - The WHERE Clause
 - Comparison Operators
 - Logical Operators
 - Operator Precedence
 - The AND, OR, =, and < Operators
 - The LIKE Operator
 - The BETWEEN Operator
 - The IN and NOT Operators
 - The IS NULL and IS NOT NULL Operators
- **Creating Calculated Fields**
 - Operators and Functions
 - Arithmetic Operators
 - Aggregate Functions
 - Using the AVG (), FIRST (), LAST (), SUM (), MAX (), and MIN () Functions
 - Using the COUNT () Function
 - String Functions and Operations
 - Use of the + and &
 - Using the LEFT (), UCASE (), LEN (), and TRIM () Functions
 - Using the MID () and INSTR () Functions
 - Date and Time Functions
 - Inserting Dates into a Table
 - Using the FORMAT () Function
 - Using the DATE (), TIME (), MONTH (), DAY (), and YEAR () Functions
- **Grouping Data**
 - The GROUP BY Clause
 - Using the GROUP BY Clause with the ORDER BY Clause
 - The HAVING Clause
 - Using the HAVING Clause with the WHERE Clause
- **Creating Table Joins and Unions**
 - Introduction
 - Table Joins—An Overview
 - Qualification

- Inner Join
- Using the DISTINCTROW Keyword
- Self Join
- Nested Join
- Outer Joins
- Right Outer Join
- Left Outer Join
- UNION and UNION ALL Keywords
- **Creating Subqueries**
 - Introduction
 - Subqueries
 - Correlated and Non-Correlated Subqueries
 - The IN Subquery
 - The EXISTS Subquery
 - The ANY and SOME Subqueries
 - The ALL Subquery
 - Nested Subqueries
- **Creating Views**
 - Introduction
 - Creating a View
 - Creating a View Using the CREATE VIEW Keywords in SQL
 - Setting the SQL Version for a Current Database
 - Setting the SQL Version as the Default Setting for New Databases
 - Filtering a Record Through a View
 - Updating a Record Through a View
 - Deleting a View
- **Table Management and Indexes**
 - Introduction
 - Adding a Column to an Existing Table
 - Changing a Column
 - Setting a Default Value for a Column
 - Removing a Column from a Table
 - Removing a Table
 - Improving Data Retrieval Time Using Indexes
 - Index Options
 - Creating an Index
 - Viewing and Editing Indexes
 - Deleting an Index
