**About VBA**

Visual Basic for Applications is an implementation of Microsoft's event-driven programming language Visual Basic 6, which was discontinued in 2008, and its associated integrated development environment. Visual Basic for Applications enables building user-defined functions (UDFs), automating processes and accessing Windows API and other low-level functionality through dynamic-link libraries (DLLs).

**Why VBA**

* Used in Microsoft Excel to create sophisticated tools that can be used in business, engineering and science.
* VBA allows users a level of customization beyond what is typically available in Microsoft Office products, such as Excel, Word and Power Point.
* A user types commands into an editing module to create a macro.
* It allow the user to automatically generate customized reports, charts and perform other data processing functions.
* Within the finance industry, VBA for Excel is commonly used to develop and maintain complex financial spreadsheet models.
* Rapid design and analysis tools for engineering can be easily constructed in office applications using VBA.
* VBA is a great all-in-one kit for customizing your Office experience.

Today, AWS provides a highly reliable, scalable, low-cost infrastructure platform in the cloud that powers hundreds of thousands of businesses in 190 countries around the world.

**Who can do VBA?**

* Absolute Beginners. No prior AWS experience is necessary
* Previous System Administration/ Development knowledge would be added advantage
* System Administrators Interested in learning technical skills

**Prerequisites**

* Some knowledge of any Operating Systems
* Knowledge of Excel
* Some knowledge of Excel formulas
* Programming knowledge is not required

**Program Objectives**

* Practical based learning.
* **Macros** automate tasks and merge program functions that enable developers to build custom solutions using Visual Basic.
* Individual should be able to grab the relevant opportunity.
* Individual will be able to work on the project immediately.

**Program Contents VBA**

1. **Knowing VBA: Time: 2 hours (2 hours’ class + Practice)**

* Recording And Running A Simple Macro
* Editing An Existing Macro In The Visual Basic Editor
* The New Macro Enabled File Type
* Quick Tour Of The Visual Basic Editor
* What Is A Module
* Trigger A Procedure From The Quick Access Toolbar
* Customizing The Ribbons
* Adding Buttons To Sheets
* Adding A Keyboard Shortcut Trigger
* Where to Store Your VBA Code
* Adding Code to The PERSONAL File

1. **Variables and Data Types: Time: 3 hours (2 hours’ class + 1-hour Practice)**

* Using Comments Within Your VBA Code
* Declaring Variables and Data Types
* The Scope of A Variable
* The Static Declaration and Variable Expiry
* Constants Instead of Variables
* An Intrinsic Constant
* String and Date Types Expanded
* VBA Operators
* Arrays
* Multi-Dimensional Arrays

**3. Functions and Procedures : Time: 3 hours (2 hours class + 1 hour Practice)**

* What Is A Function
* Creating A Function Procedure
* How To Call A Function
* Creating A Sub Procedure Manually
* How To Call A Sub Procedure
* Built In VBA Date Functions
* Text Manipulation With VBA Functions
* Determining File Sizes Using FILELEN
* Using Worksheet Excel Functions In VBA Code
* User Defined Functions

**4. Cells and Ranges : Time: 3 hours (2 hours class + 1 hour Practice)**

* Referencing Cells Using The Range Object
* The VALUE Of Ranges
* The TEXT Object Of The RANGE
* Common METHODS Of The RANGE Object
* A Number Of Read Only RANGE Properties
* The CELLS Property
* The OFFSET Property
* The FONT Property And Colors
* Formatting Numeric Values
* Add Formulas To Cells Through VBA Code
* Using MSGBOX To Interact With Users

**5. Conditional Statement and Loops : Time: 3 hours (2 hours class + 1 hour Practice)**

* Using GOTO And Labels
* Controlling The Program Flow With IF THEN ELSE
* Multiple Criteria Plus Nested IFs
* Adding ELSEIF To Speed Up Execution
* SELECT CASE As An Alternative To IF
* The FOR NEXT Loop
* FOR NEXT With A VBA Collection
* DO WHILE Loop

**6. Events and Triggers : Time: 3 hours (2 hours class + 1 hour Practice)**

* How To Create An Event
* WorkBook Events - Open
* Workbook Events - Closing And Saving
* Workbook Triggers - Activate And Deactivate
* Worksheet Triggers - Activate And Deactivate
* Other Useful Worksheet Triggers
* Using Application Events
* Use INPUTBOX for Accepting Values from Users
* Selecting A Range with The INPUT Box

**7. Debugging: Time: 3 hours (2 hours class + 1 hour Practice)**

* Error Trapping the Easy Way
* Make The VBA Ignore Errors
* Interact With The User When An Error Occurs
* Making Use Of The ERR Object
* Debugging Techniques
* Using Breakpoints To Help Debug
* Setup And Use A Watch
* Speeding Up The VBA Tips