**Excel Assignment - 17**

1. What are modules in VBA and describe in detail the importance of creating a module?

Ans: Module is the place where VBA code is stored that is written in Visual Basic Editor. It is the fundamental syntactic unit of VBA source code.

Modules consists of two parts: A module header and a module body. Also, modules have three types:

* Standard modules: Most of the code go onto standard modules like macro and general procedure.
* Object modules: Object modules hold the code which is unique to the that worksheet. Codes in these modules are known as events.
* Class modules: This module is used to create objects at run time.

It is crucial to create modules as it allows to store macros and functions. This is the typical place where we start writing and storing the macros. The macro recorder also creates code in the code module.

1. What is Class Module and what is the diﬀerence between a Class Module and a Module?

Answer: Class module is used to create the objects at run time. It works in a different way to the ordinary modules as class modules facilitate creating the component object model which can then be used with in your normal VBA code. When we create a new object in class module, we create a building block which can be used anywhere with VBA. The object has a number of properties and methods that can be accessed by VBA code from anywhere within the workbook without having re-writing the code over again. It can be used in any number of different excel applications. If updates are made to the code elsewhere in the application, the new object will still continue to work in the same way. Objects also can be reused in other applications and helps in debugging.

1. What are Procedures? What is a Function Procedure and a Property Procedure?

Answer: It is a section of the code created to perform specific tasks. It tells the application how to perform them. Procedures are used to divide complex code takes into more manageable units.

Function Procedure: It is a series of VB statements enclosed by the function and End function statements. It is similar to sub procedure, but a function can also return a value. It takes arguments such as constant, variable or expression that is passed to it by calling procedure, If function procedure has no arguments, its statements must include an empty set of parentheses. A function returns a value by assigning a value to its name in one or more statements of the procedure.

Property procedure: Property procedure is a series of VB statements that allow a programmer to create and manipulate custom properties. This procedure can be used to create ready only properties for forms, standard modules, and class modules.

1. What is a sub procedure and what are all the parts of a sub procedure and when are they used?

Answer: A sub procedure is a series of VB statements enclosed by SUB and END sub statements. This procedure performs a task and then return control to the calling the code but it does not return a value to the calling the code.

Syntax: [Private|Public|Friend] [Static]sub name [(arglist)]

[statements]

[Exit sub]

[Statements]

End Sub

Sub statements has following parts:

* Public: It is optional. It indicates that sub procedure is accessible to all other procedures in all modules.
* Private: its is optional. It indicates that sub procedure is accessible only to other procedures in module where its is declared.
* Friend: its optional. It is used in class module only. Its indicates that sub procedure is visible throughout the project by not visible to controller of an instance of an object.
* Static: It is also optional. It indicates that sub procedure’s local variable are preserved between calls. Static attribute doesw not affect variables that are declared outside the sub, even if they are used in procedure.
* Name: its is required. Name of the sub follows standard variable naming conventions.
* Arglist: It is optional. List of variables representing arguments that are passed to the sub procedure when it is called. Multiple variables are separated by commas.
* Statements: these are optional. Any group of statements to be executed with the sub procedure.

5.How do you add comments in a VBA code? How do you add multiple lines of comments in a VBA code?

Answer: VBA comment is a green line of the text that helps you to describe the written code. In simple words, A comment is a line of text which is not a code and VBA ignores it while executing the code.

There are following steps to add comments in VBA code.

* Click on the line where you want to insert the comment.
* After that, type an apostrophe using keyboard key.
* Type the comment you want to add in the code.
* After that, hot enter to move to new line and the comment will turn green.

To add multiple lines of comments in code, we follow the steps below:

* Select all the lines and then use the comment button from the toolbar or you can also add an apostrophe at the starting of each line. The moment you click the comment button it will convert all the lines into multiline comment block.

Another way of adding comment is with comment bloc button in Edit toolbar. By clicking this button, any code you have selected will automatically be commented by inserting an apostrophe in front of each line of the text.

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