

ASSIGNMENT-19 SOLUTIONS

1. The most commonly used data types used in VBA are:
 - Integer: Used to store number values that won't take on decimal form.
 - Single: Used to store number values that may take on decimal form. Can also contain integers.
 - Double: A longer form of the single variable. Takes up more space, but needed for larger numbers.
 - Date: Stores date values.
 - String: Stores text. Can contain numbers, but will store them as a text (calculations cannot be performed on numbers stored as a string)
 - Boolean: Used to store binary results (True/False, 1/0)
2. Variables are names for different pieces of the data that the macro will be working with. Variable declaration in VBA is done by using the "Dim" statement. The "Dim" statement is followed by the name of the variable, and sometimes the statement "as [datatype]". For example, if we wanted to create a variable for a Stock Price, we could write "Dim stockPrice as double". This creates a variable called the stockPrice, which takes on the data type double.
If we don't declare a variable then runtime errors may occur.
3. Range Object Represents a cell, a row, a column, a selection of cells containing one or more contiguous blocks of cells or a 3D range.
Worksheet Object: Represents a worksheet.
4. Sheets and Worksheets from a VBA perspective are not the same. when we refer to Sheets in VBA, we are talking about Charts and Worksheets. And when we refer to Worksheets, we are excluding Charts. For example, on a Worksheet you can select cells, but you can't on a Chart sheet, because there are no cells. So, if we want to perform certain actions on the active sheet, we need to know which type of sheet we are on.
5. The main difference between the A1 and R1C1 notations is the way in which columns are identified. Using the A1-style notation, columns are identified by letters, while working with R1C1-style references, columns are identified by numbers. In recent Excel versions, this number can be from 1 to 16,384.
When working with Visual Basic for Applications, R1C1-style references allow to (for most purposes) create more efficient and powerful VBA applications. Additionally, if you want to be able to use certain features like array formulas or loops, we must use the R1C1-style notation. Working with A1 notation is quiet easy to understand compared to R1C1.
6. OFFSET is a reference function in Excel. The OFFSET function returns a reference to a range that is a specific number of rows and columns from another range or cell. It is one of the most important notions in Excel.

The required VBA code is:

```
Private Sub CommandButton1_Click()  
Range("B1").Offset(2, 2).Select  
End Sub
```