**Assignment - 19**

**1. What are the data types used in VBA?**

Variable Data Types

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. ...

Double: A longer form of the single variable. ...

Date: Stores date values.

String: Stores text. ...

Boolean: Used to store binary results (True/False, 1/0)

**2. What are variables and how do you declare them in VBA? What happens if you don’t declare a variable?**

Variables are like placeholders for the values in computer storage. Variables can hold different varieties of values and those values can change during the execution of the code. Every variable should have a name, using the variable name, the computer will fetch the value assigned for that variable

**3. What is a range object in VBA? What is a worksheet object?**

Range is a property in VBA that helps specify a particular cell, a range of cells, a row, a column, or a three-dimensional range. In the context of the Excel worksheet, the VBA range object includes a single cell or multiple cells spread across various rows and columns. the worksheet object represents a single worksheet that is a part of the workbook's worksheets (or sheets) collection.

**4. What is the difference between worksheet and sheet in excel?**

Worksheet – the sheet with the gridlines and cells

Chart – the sheet which contains a single chart

Dialog Sheet – an Excel 5 dialog sheet.  These are effectively defunct as they have been replaced by VBA User Forms

Macro sheets – A sheet containing [Excel 4 macros](https://exceloffthegrid.com/using-excel-4-macro-functions/). These were replaced by VBA in 1995.

International Macro sheet – A sheet containing an internationally compatible Excel 4 macro (also replaced in 1995).

**5. What is the difference between A1 reference style and R1C1 Reference style? What are the advantages and disadvantages of using R1C1 reference style?**

Most of the time, columns are identified by letters (A, B, C), and rows are identified by numbers (1, 2, 3). In Excel, this is known as the A1 reference style. However, some prefer to use a different method where columns are also identified by numbers. This is known as the R1C1 reference style.

The R1C1 reference style is useful if you want to compute row and column positions in macros. In the R1C1 style, Excel indicates the location of a cell with an "R" followed by a row number and a "C" followed by a column number

**6. When is offset statement used for in VBA? Let’s suppose your current highlight cell is A1 in the below table. Using OFFSET statement, write a VBA code to highlight the cell with “Hello” written in it.**

A B C

1 25 354 362

2 36 6897 962

3 85 85 Hello

4 96 365 56

5 75 62 2662

The OFFSET function in Excel returns a cell or range of cells that is a given number of rows and columns from a given cell or range.

The syntax of the OFFSET function is as follows:

OFFSET (reference, rows, cols, [height], [width])

=OFFSET(C1,3,4)

OFFSET can be used with any function expecting a reference argument. For example, the formula SUM(OFFSET(C2,1,2,3,1)) calculates the total value of a 3-row by 1-column range that is 1 row below and 2 columns to the right of cell C2.