Excel Assignment - 20

1. Write a VBA code to select the cells from A5 to C10. Give it a name "Data Analytics" and fill the cells with the following cells "This is Excel VBA"

Number Odd or even

56

89

26

36

75

48

92

58

13

25

2. Use the above data and write a VBA code using the following statements to display in the next column if the number is odd or even

a. IF ELSE statement

b. Select Case statement

c. For Next Statement

Number	Odd or even
56	Even
89	Odd
26	Even
36	Even
75	Odd
48	Even
92	Even
58	Even
13	Odd
25	Odd

Excel Assignment - 20

```
Sub Oddeven()
'
' Oddeven Macro
'
' Keyboard Shortcut: Ctrl+n
'
Dim a As Long
Dim Number As Long
For a = 2 To 11
Number = Sheet12.Range("A" & a)
Sheet12.Range("B" & a).Value = IIf(Number Mod 2 = 0, "Even", "Odd")
Next

End Sub
```

3. What are the types of errors that you usually see in VBA?

- Syntax Errors:
  - These errors occur when your code violates the syntax rules of VBA. This might include missing or mismatched parentheses, quotes, or operators.
- Runtime Errors:
  - Runtime errors occur when your code is executed and encounters a problem during runtime, such as division by zero, referencing an uninitialized variable, or invalid object references.
- Logic Errors:
  - Logic errors occur when your code runs without causing syntax or runtime errors, but it produces incorrect results due to flawed logic.

4. How do you handle Runtime errors in VBA?

- On Error GoTo:
  - The On Error GoTo statement allows you to direct the program's flow to a specific label when an error occurs. You define a label using a line label (e.g., ErrorHandler:) followed by the code you want to execute to handle the error.
- On Error Resume Next:
  - The On Error Resume Next statement tells VBA to continue executing the code even if an error occurs. This is useful when you want to skip over a specific line that might raise an error but continue with the rest of the code.

5. Write some good practices to be followed by VBA users for handling errors

By using Explicit Error Handling explicit error handling techniques such as On Error GoTo or On Error Resume Next. Avoid allowing errors to go unnoticed, as they can lead to unexpected behavior or crashes. Instead of using a single error handler for all errors, create specific error handlers for different types of errors. We can use custom error messages that can provide the guidance on what to do next.

Excel Assignment - 20

6. What is UDF? Why are UDF's used? Create a UDF to multiply 2 numbers in VBA

UDF stands for "User-Defined Function." It is a custom function that can be created in VBA to perform specific calculations or operations that are not available as built-in Excel functions. UDFs allow you to extend the functionality of Excel by adding your own custom formulas. User-Defined Functions are used for

- Custom Calculations: UDFs can perform calculations such as complex mathematical operations, custom text processing, or specific business calculations.

- Data Manipulation: UDFs can manipulate data in specific ways that standard functions do not offer, making data processing more efficient and tailored to your needs.

- Automation: UDFs can automate repetitive tasks or calculations, reducing the need for manual input and improving efficiency.

Example:

```
Function Multiply2Number(num1 As Double, num2 As Double) As Double
  Multiply2Number = num1 * num2
End Function
```