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”

Ans:

Sub DataAnalytics()

Range("A5:C10").Select

ActiveWorkbook.Names.AddName:="Data\_Analytics",RefersTo:=Selection

Selection.Value = "This is Excel VBA"

End Sub

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   Description automatically generatedUse 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
   1. IF ELSE statement
   2. Select Case statement
   3. For Next Statement

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

Ans:

1. IF ELSE statement

CheckOddEven\_IfElse()

Dim ws As Worksheet

Dim targetRange As Range

Dim cell As Range

Set ws = ThisWorkbook.Sheets("Sheet1")

Set targetRange = ws.Range("I2:I11")

For Each cell In targetRange

If cell.Value Mod 2 = 0 Then

cell.Offset(0, 1).Value = "Even"

Else

cell.Offset(0, 1).Value = "Odd"

End If

Next cell

End Sub

1. Select Case statement

Sub CheckOddEven\_SelectCase()

Dim ws As Worksheet

Dim targetRange As Range

Dim cell As Range

Set ws = ThisWorkbook.Sheets("Sheet1")

Set targetRange = ws.Range("I2:I11")

For Each cell In targetRange

Select Case cell.Value Mod 2

Case 0

cell.Offset(0, 1).Value = "Even"

Case 1

cell.Offset(0, 1).Value = "Odd"

End Select

Next cell

End Sub

1. For Next Statement

Sub CheckOddEven\_ForNext()

Dim ws As Worksheet

Dim targetRange As Range

Dim cell As Range

Dim i As Long

Set ws = ThisWorkbook.Sheets("Sheet1")

Set targetRange = ws.Range("I2:I11")

For i = 1 To targetRange.Rows.Count

If targetRange.Cells(i, 1).Value Mod 2 = 0 Then

targetRange.Cells(i, 1).Offset(0, 1).Value = "Even"

Else

targetRange.Cells(i, 1).Offset(0, 1).Value = "Odd"

End If

Next i

End Sub

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

Ans:

**1. Syntax errors**– It occurs when a specific line of code is not written correctly.

2. **Compile errors**– It happens when issues happen when putting together lines of code, though the individual lines of code seem to make sense.

3. **Runtime errors**– Runtime Error occurs when the code is usually correct in principle, but an action taken by the user, or the data being used leads to unexpected errors.

1. How do you handle Runtime errors in VBA?

Ans:

The primary tools for error handling in VBA are ‘On Error’ statement and ‘Err’ object.

1. The On Error statement allows you to specify how VBA should handle errors. There are 3 options –
2. On Error Resume Next
3. On Error GoTo 0
4. On Error GoTo Label
5. The Err object provides information about the most recent runtime error that occurred.
6. Write some good practices to be followed by VBA users for handling errors.

Ans:

* 1. Use ‘explicit’ option at top of your models.
  2. Include appropriate error handling statements.
  3. Reset error handlings to its default state.
  4. Log errors to file or a log sheet.

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   Description automatically generatedWhat is UDF? Why are UDF’s used? Create a UDF to multiply 2 numbers in VBA

Ans:

UDF stands for User Defined Function. In VBA, it is used for performing a specific task.

* 1. UDF’s can be used repeatedly in different parts of workbooks promoting code reusability.
  2. UDF’s cab enhance readability of your formulas by encapsulating complex calculations.
  3. UDF’s can automate specialized tasks making your worksheets more efficient.

Code:

Function MultiplyNumbers(ByVal num1 As Double, ByVal num2 As Double) As Double

MultiplyNumbers = num1 \* num2

End Function