

**Excel Assignment - 21**

1. Write a VBA code to enter your name in A1 Cell using Input Box and once you enter the name display a message box that says the name has been entered.

2. What are Userforms? Why are they used? How to fill a list box using for loop.

3. What is an array? Write a VBA code to enter students and their marks from the below table.

4. Use the following data to create a pie chart using VBA code. Use Font - ‘Times new Roman’, Size -14, Bold, Title - Piechart’ and you are per to use colours as per your taste.

5. Check the dataset in the link given below and create a pivot table using VBA showing the sales for the year from stationary category.

https://docs.google.com/spreadsheets/d/1IRSEnmgz8Ro276- GslknRNk0zlrB5CZH1YrnT71kqFM/edit?usp=sharing

6. Write step by step procedure to protect your workbook using a password.  
ANS:

1. VBA code to enter name in A1 cell using Input Box and display a message box:

```vba

Sub EnterName()

Dim userName As String

'Prompt user to enter name

userName = InputBox("Enter your name:")

'Enter name in cell A1

Range("A1").Value = userName

'Display message box

MsgBox "Name has been entered."

End Sub

```

2. Userforms are custom dialog boxes in Excel that allow users to interact with worksheets or workbooks. They are used to create more interactive and user-friendly interfaces for performing various tasks. To fill a list box using a for loop in VBA, you would typically loop through your data and add items to the list box. Here's an example:

```vba

Sub FillListBox()

Dim i As Integer

'Clear existing items in the list box

ListBox1.Clear

'Fill list box using for loop

For i = 1 To 10

ListBox1.AddItem "Item " & i

Next i

End Sub

3. An array is a collection of variables of the same data type. In VBA, arrays allow you to store multiple values of the same type under a single variable name. Here's an example code to enter students and their marks from a table:

```vba

Sub EnterMarks()

Dim students(1 To 3, 1 To 2) As Variant

Dim i As Integer

'Enter student names and marks into array

students(1, 1) = "Student A"

students(1, 2) = 90

students(2, 1) = "Student B"

students(2, 2) = 85

students(3, 1) = "Student C"

students(3, 2) = 95

'Output array to worksheet

For i = 1 To 3

Cells(i, 1).Value = students(i, 1)

Cells(i, 2).Value = students(i, 2)

Next i

End Sub

```

4. VBA code to create a pie chart with specified formatting:

```vba

Sub CreatePieChart()

Dim chartObj As ChartObject

Dim rngData As Range

'Set data range

Set rngData = Range("A1:B4")

'Create chart

Set chartObj = ActiveSheet.ChartObjects.Add(Left:=100, Width:=375, Top:=75, Height:=225)

'Set chart data

With chartObj.Chart

.SetSourceData Source:=rngData

.ChartType = xlPie

.HasTitle = True

.ChartTitle.Text = "Pie Chart"

.ChartTitle.Font.Name = "Times New Roman"

.ChartTitle.Font.Size = 14

.ChartTitle.Font.Bold = True

End With

End Sub

5. To create a pivot table using VBA from the provided dataset, you would first need to import the data from the Google Sheets link into Excel. Then you can use VBA to create the pivot table with the desired fields.

6. Steps to protect your workbook using a password:

- Open your Excel workbook.

- Press Alt + F11 to open the VBA editor.

- In the Project Explorer window, find your workbook and double-click "ThisWorkbook" to open its code window.

- In the code window, paste the following code:

```vba

Sub ProtectWorkbook()

ThisWorkbook.Protect Password:="YourPassword", Structure:=True, Windows:=False

End Sub

```

Replace "YourPassword" with your desired password.

- Close the VBA editor.

- Press Alt + F8 to open the "Run Macro" dialog, select "ProtectWorkbook", and click "Run".

- Save your workbook. Now it's protected with the specified password.