VBA Programming Project Phase

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14 Dec. 2021

Totonto

1. Introduction

- Company sales data analysis help to define the future company focus to be profitable through designing sales strategy across sales regions
- Sales strategy of products, new customer targeting and retaining royal customers determine the future sales increase.
- Sales trend analysis across regional sales and product supply based on competitors' sales will bring the company to stay the leader of the market by sales and customer retaining.
- Seasonal products supply to customers based on their test preference increase sales
- Acknowledging salespersons based on their performance increase employee's performance

2. Project Problems

1. Create a bar chart from data of sales in excel file. 2013 and 2015
2. Create a pivot table and group data based on salesperson.
3. Create a shape object and assign a macro to it that displays in message the current date.
4. Create a procedure that declares variables of type string and integer.
5. Create a VBA procedure that changes the font color of table to bold.
6. Create a VBA procedure that adds a yellow explanation column to right of table.(the header of that column is explanation and fill that column by yellow)

Project Problems Cont’d

7. Create a VBA procedure that uses loop.

8. Create a message box that displays number of executions of one procedure

9. Create a user Form that has two text boxes and a button to calculate sum and show it in a message box.

10 create a User Form in Excel VBA to get name , date of birth , gender, telephone number, email , and postal code from the user and store the value provided by the user in the worksheet

3. Problem Solving Procedures

- Use real project sales data
- Analyze the problem by demonstrating each step
- Generate a report (conclusions and recommendations)

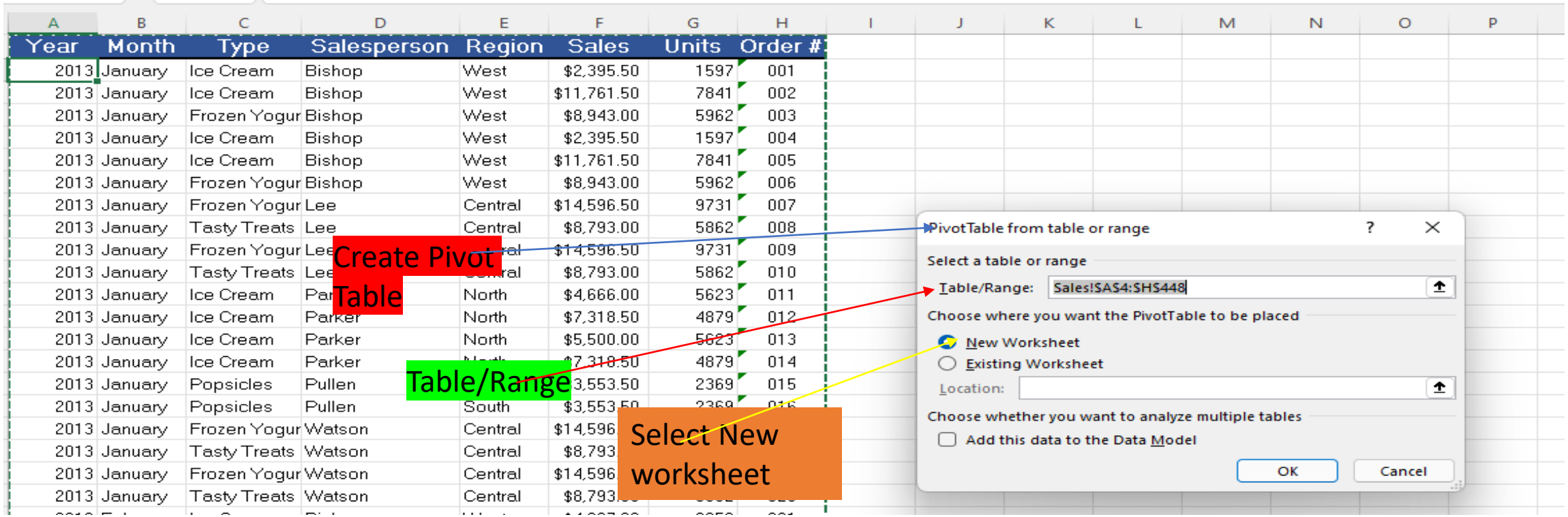
1. **Create a bar chart from data of sales in excel file 2013 and 2015**

Inserting pivot table steps to be followed

- Open sales data spreadsheet and check any blank rows or columns.
- Make sure each column has a heading, as it will be carried over to the Field List.
- Make sure your cells are properly formatted for their data type.
- Select one cell
- Click the Insert tab.
- Select the PivotTable button from the Tables group.
- Select PivotTable from the list

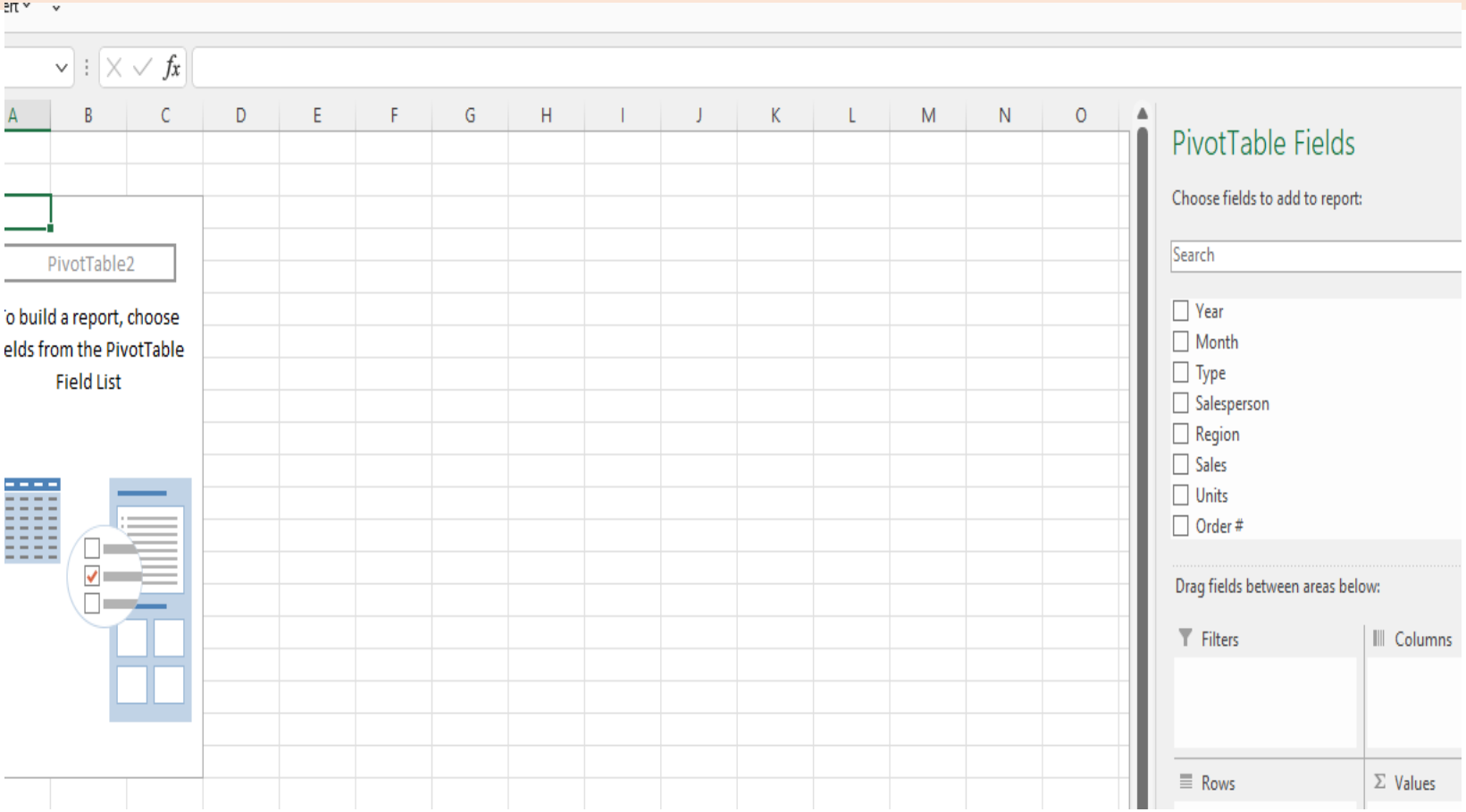
Sales Bar chart from the data 2013 and 2015

Open Sales Data → Click on Insert tab → Visual Basic

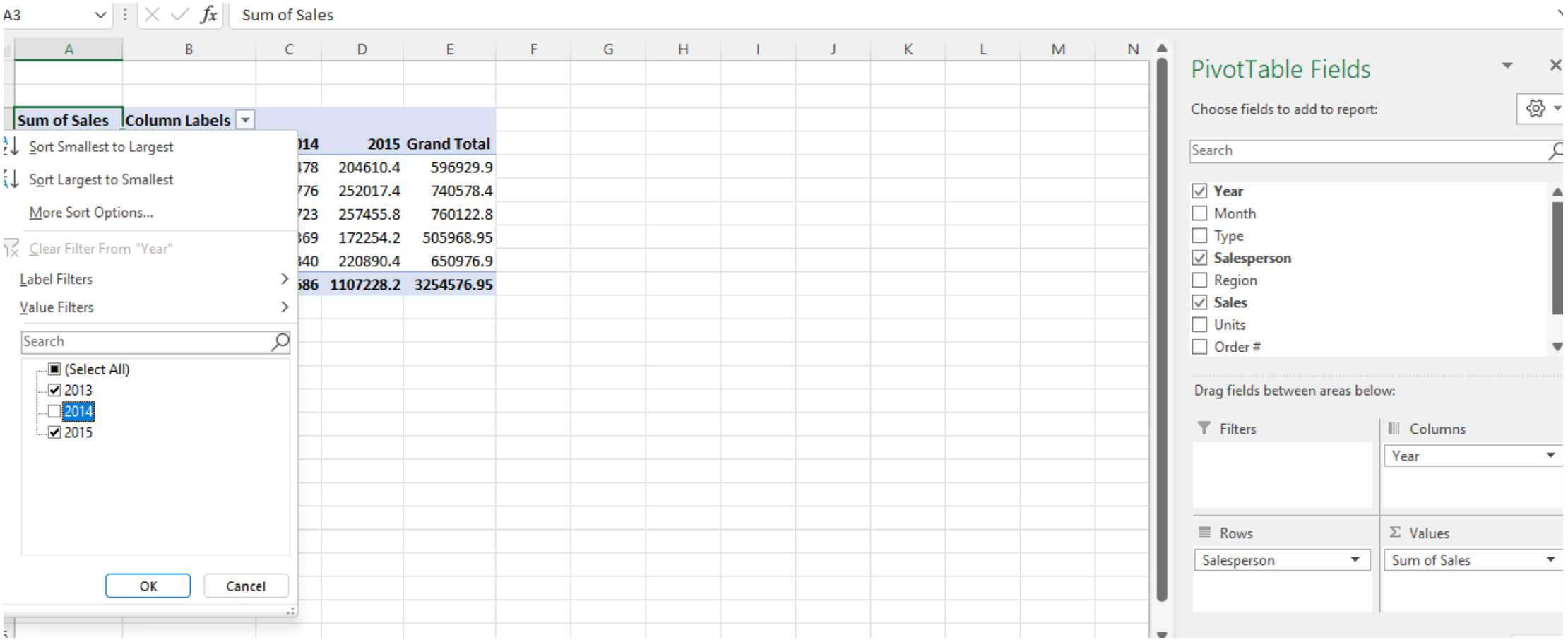


Year	Month	Type	Salesperson	Region	Sales	Units	Order #
2013	January	Ice Cream	Bishop	West	$2,395.50	1597	001
2013	January	Ice Cream	Bishop	West	$11,761.50	7841	002
2013	January	Frozen Yogur	Bishop	West	$8,943.00	5962	003
2013	January	Ice Cream	Bishop	West	$2,395.50	1597	004
2013	January	Ice Cream	Bishop	West	$11,761.50	7841	005
2013	January	Frozen Yogur	Bishop	West	$8,943.00	5962	006
2013	January	Frozen Yogur	Lee	Central	$14,596.50	9731	007
2013	January	Tasty Treats	Lee	Central	$8,793.00	5862	008
2013	January	Frozen Yogur	Lee	[illegible]	$14,596.50	9731	009
2013	January	Tasty Treats	Lee	[illegible]	$8,793.00	5862	010
2013	January	Ice Cream	Par	North	$4,666.00	5623	011
2013	January	Ice Cream	Parker	North	$7,318.50	4879	012
2013	January	Ice Cream	Parker	North	$5,500.00	5623	013
2013	January	Ice Cream	Parker	[illegible]	$7,318.50	4879	014
2013	January	Popsicles	Pullen	[illegible]	3,553.50	2369	015
2013	January	Popsicles	Pullen	South	$3,553.50	2369	016
2013	January	Frozen Yogur	Watson	Central	$14,596		
2013	January	Tasty Treats	Watson	Central	$8,793		
2013	January	Frozen Yogur	Watson	Central	$14,596		
2013	January	Tasty Treats	Watson	Central	$8,793		

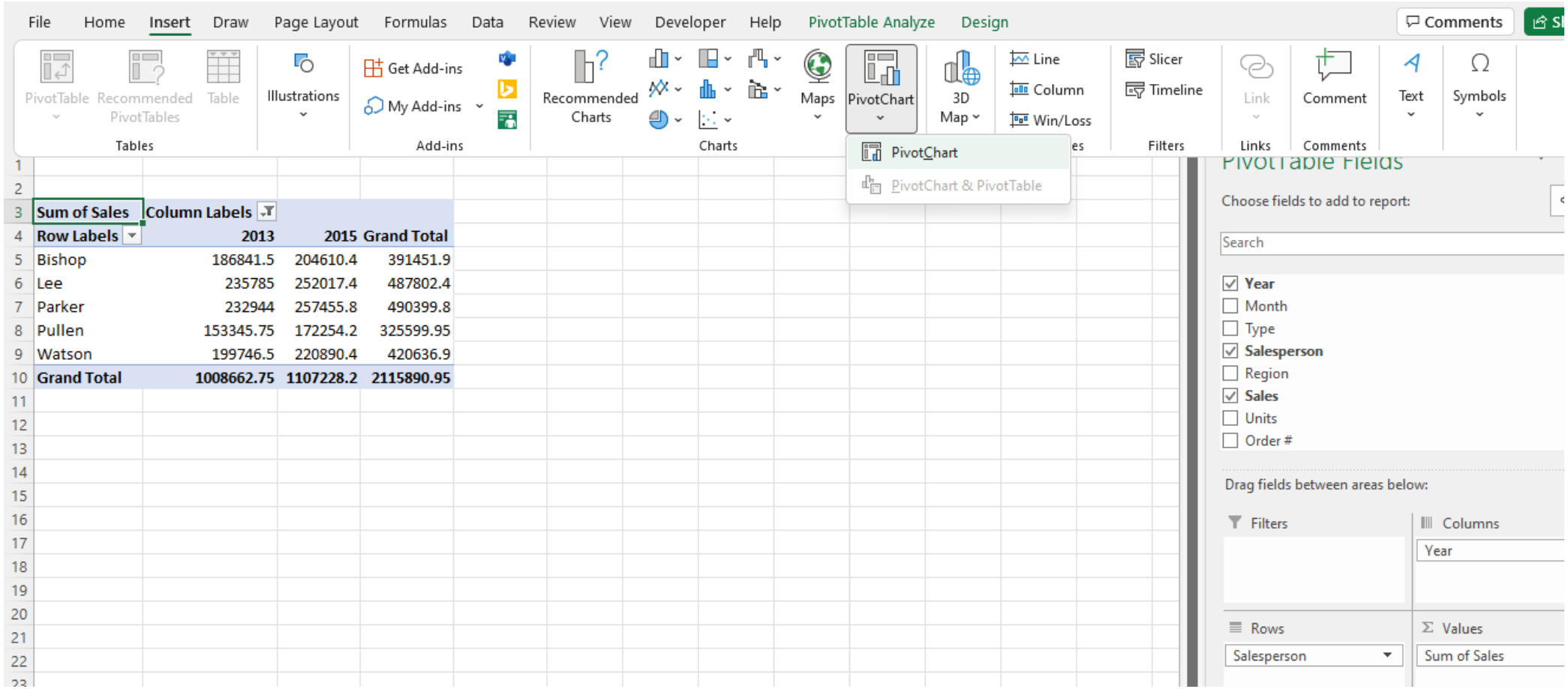
The Pivot Table Field



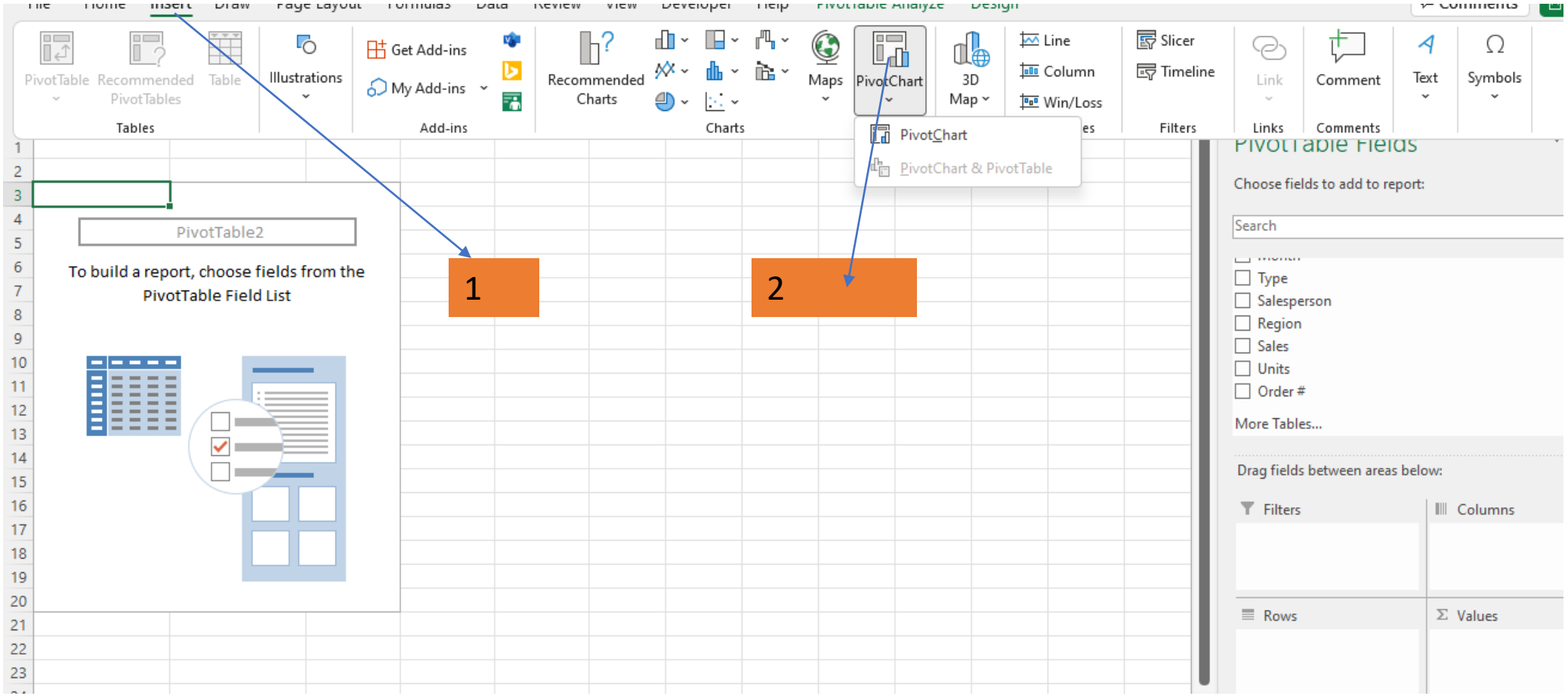
Filter 2014 sales from the data



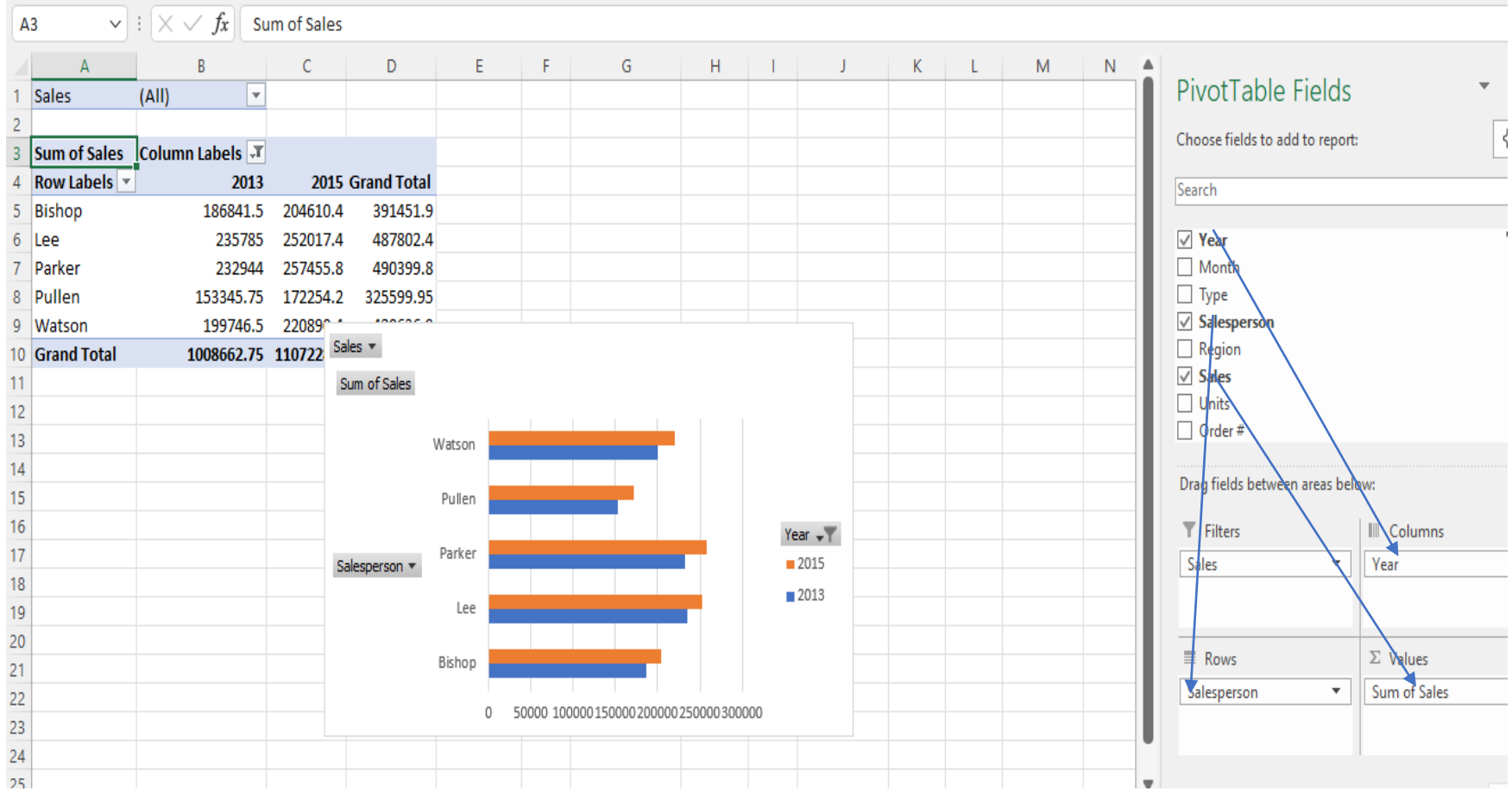
Pivot Table: Sales by salesperson



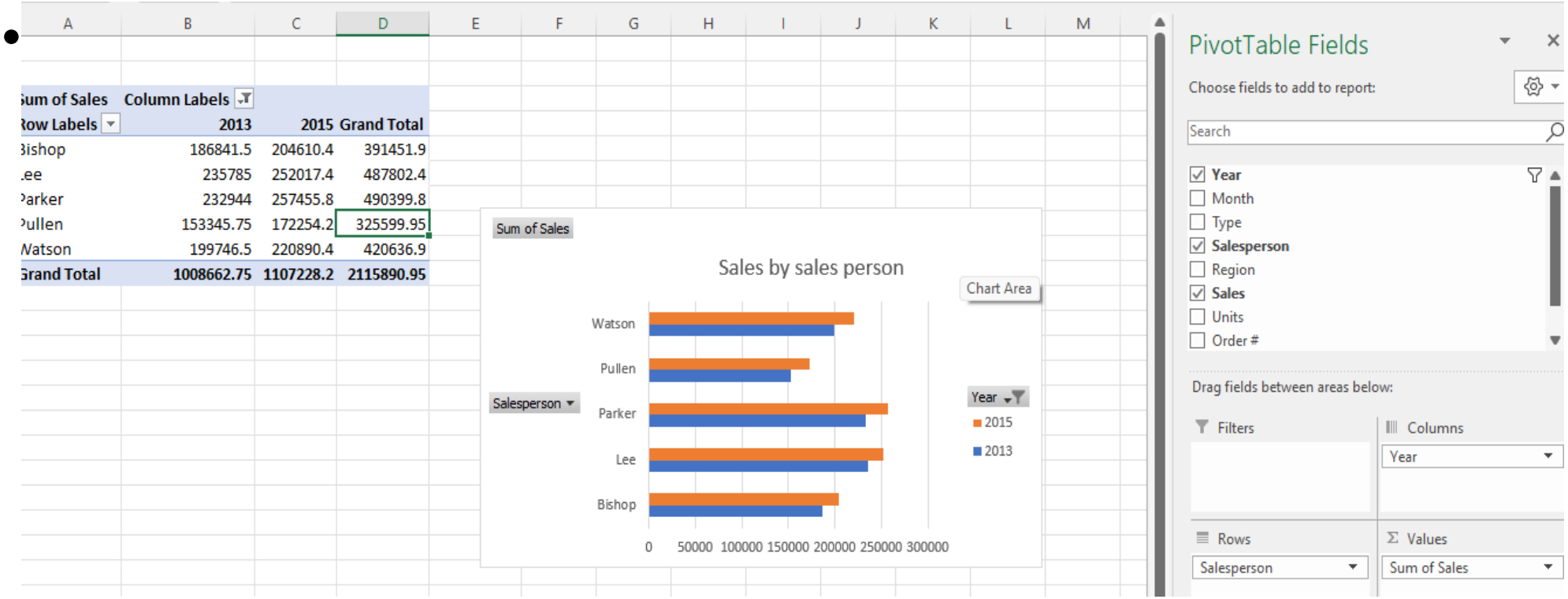
Insert Pivot Chart



Bar Chart: Sales by salesperson Cont'd

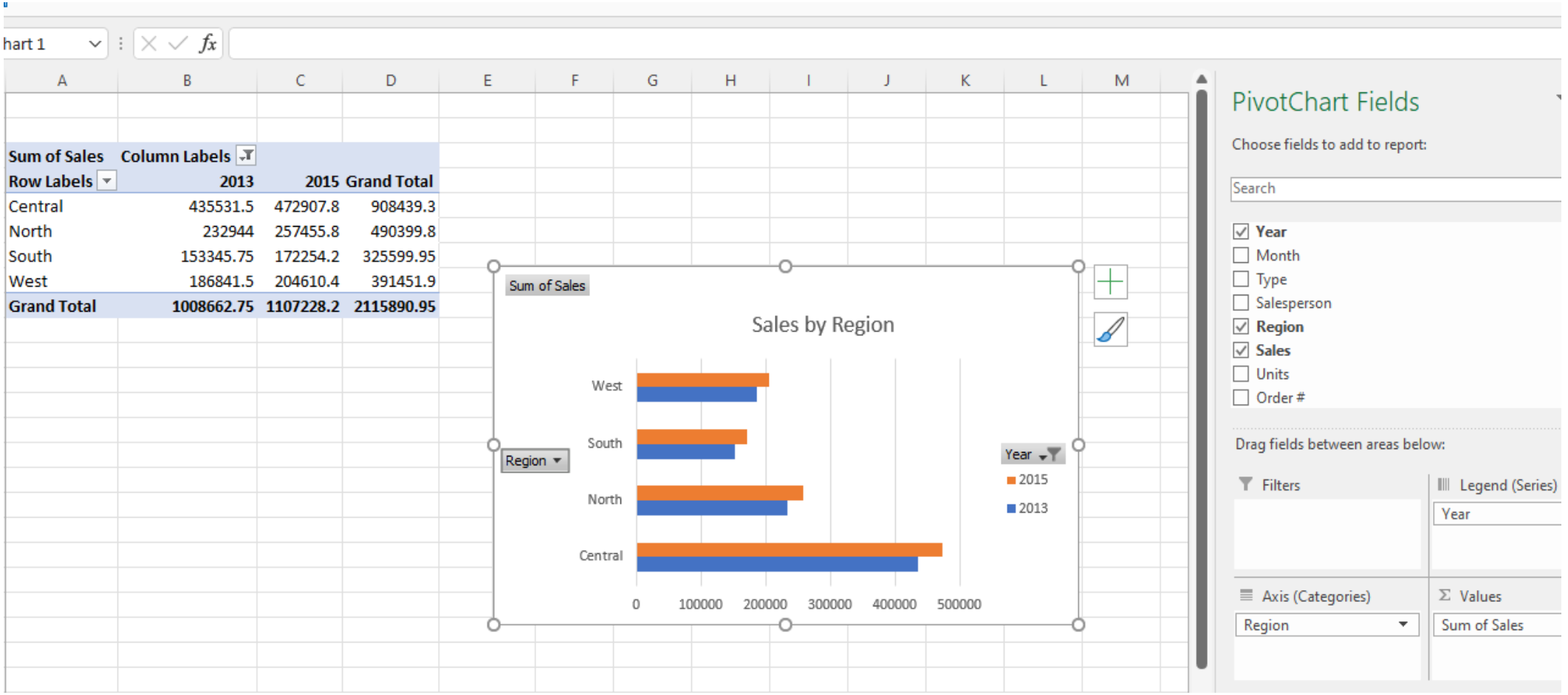


Bar Chart: Sales By salesperson and year

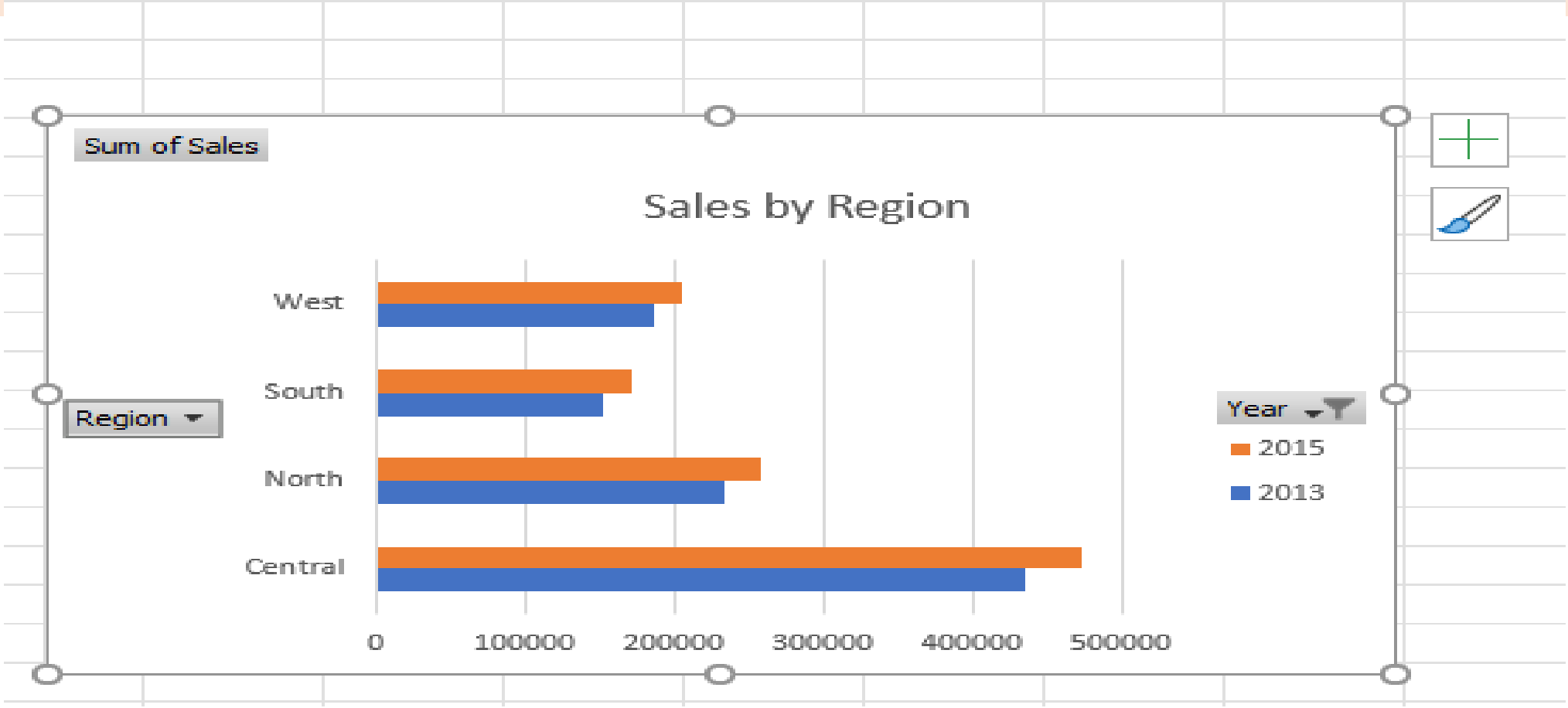
- 

Bar Cart. Sales by Salesperson

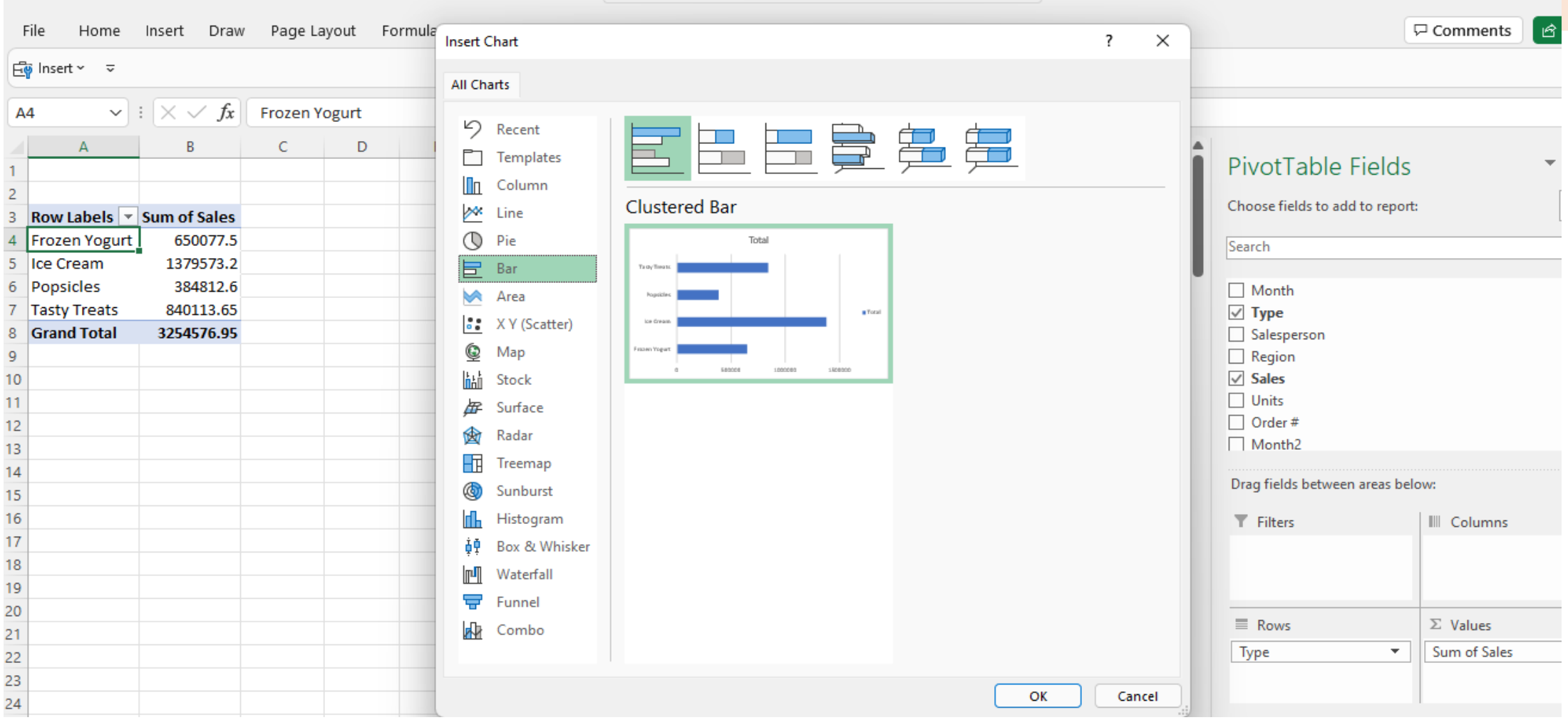
Bar Cart: Sales by Region



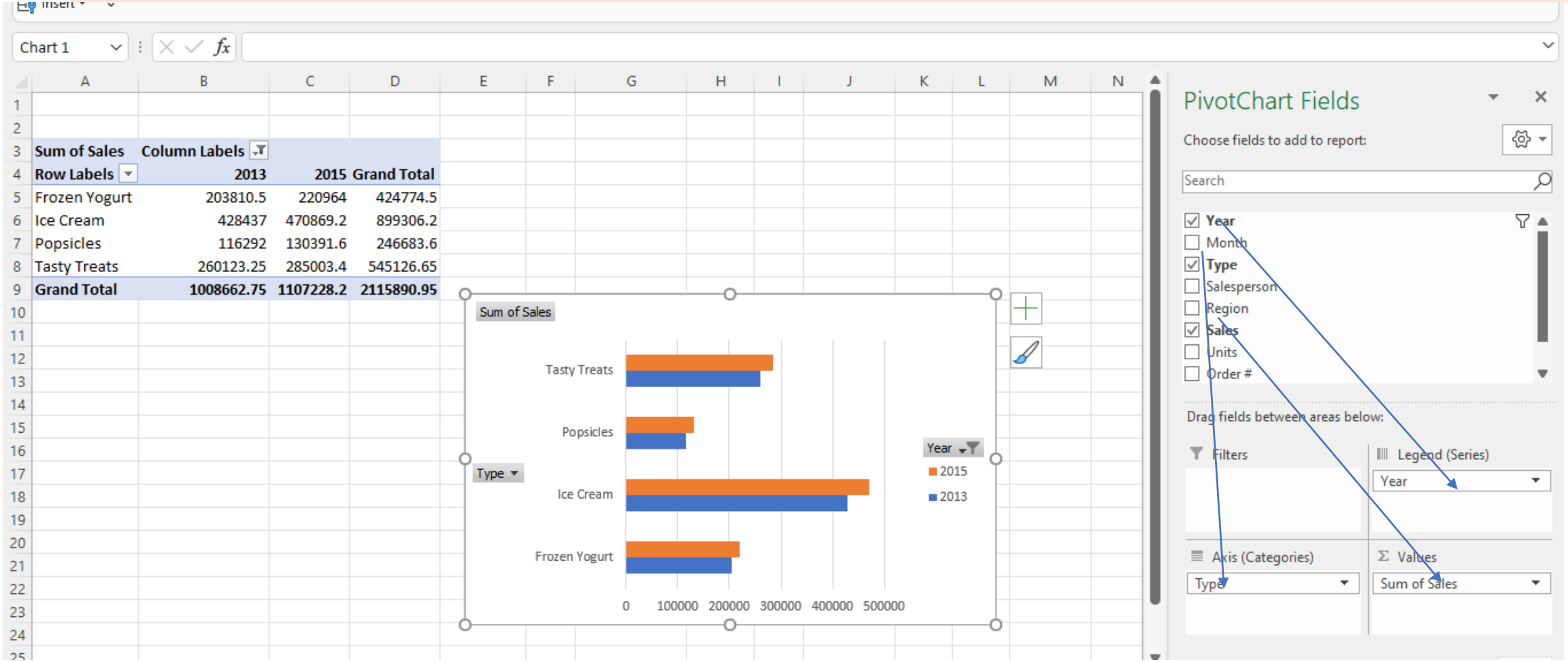
Bar Cart: Sales by Region

- 

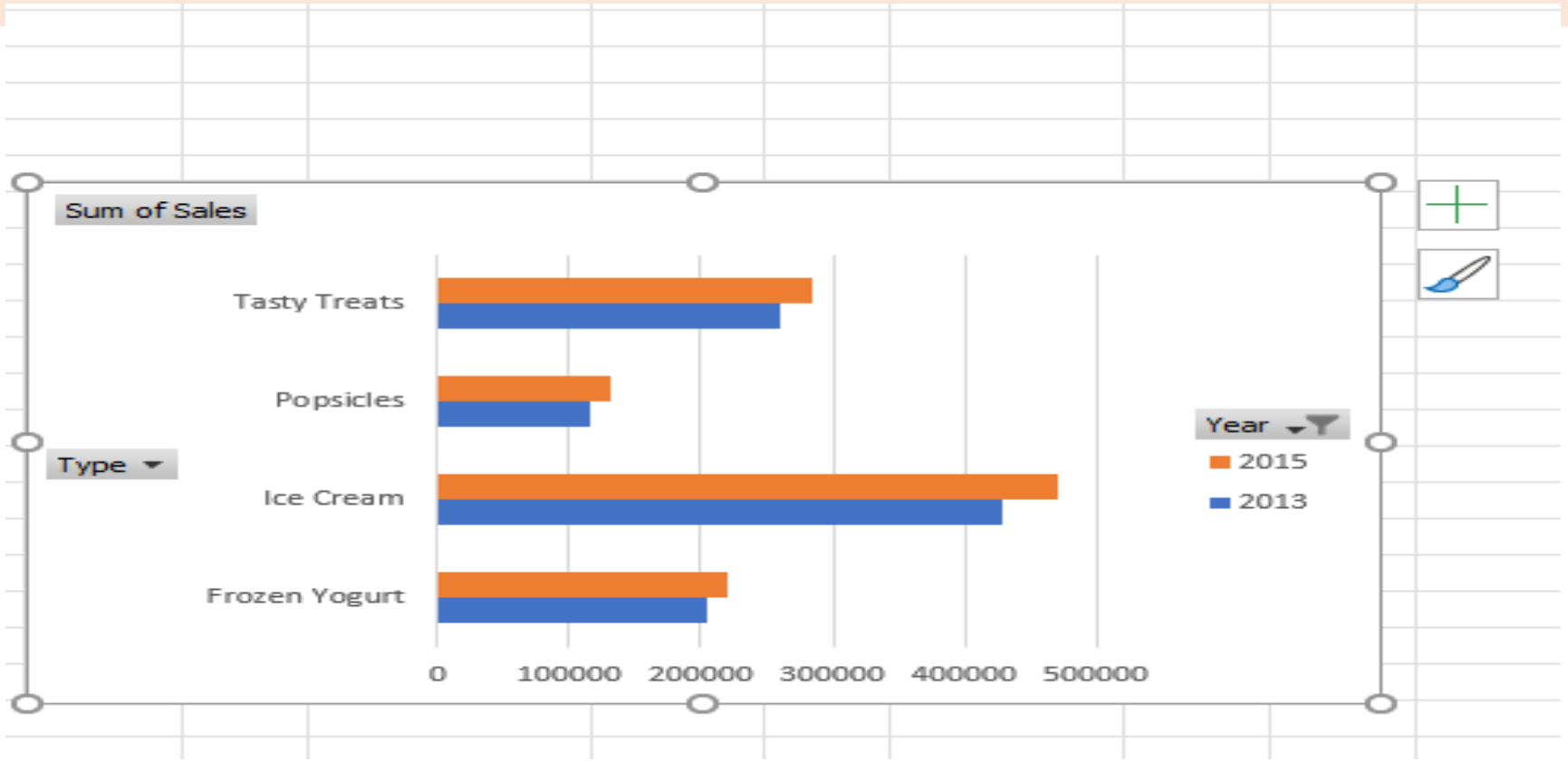
Bar Chart: Sales by product line



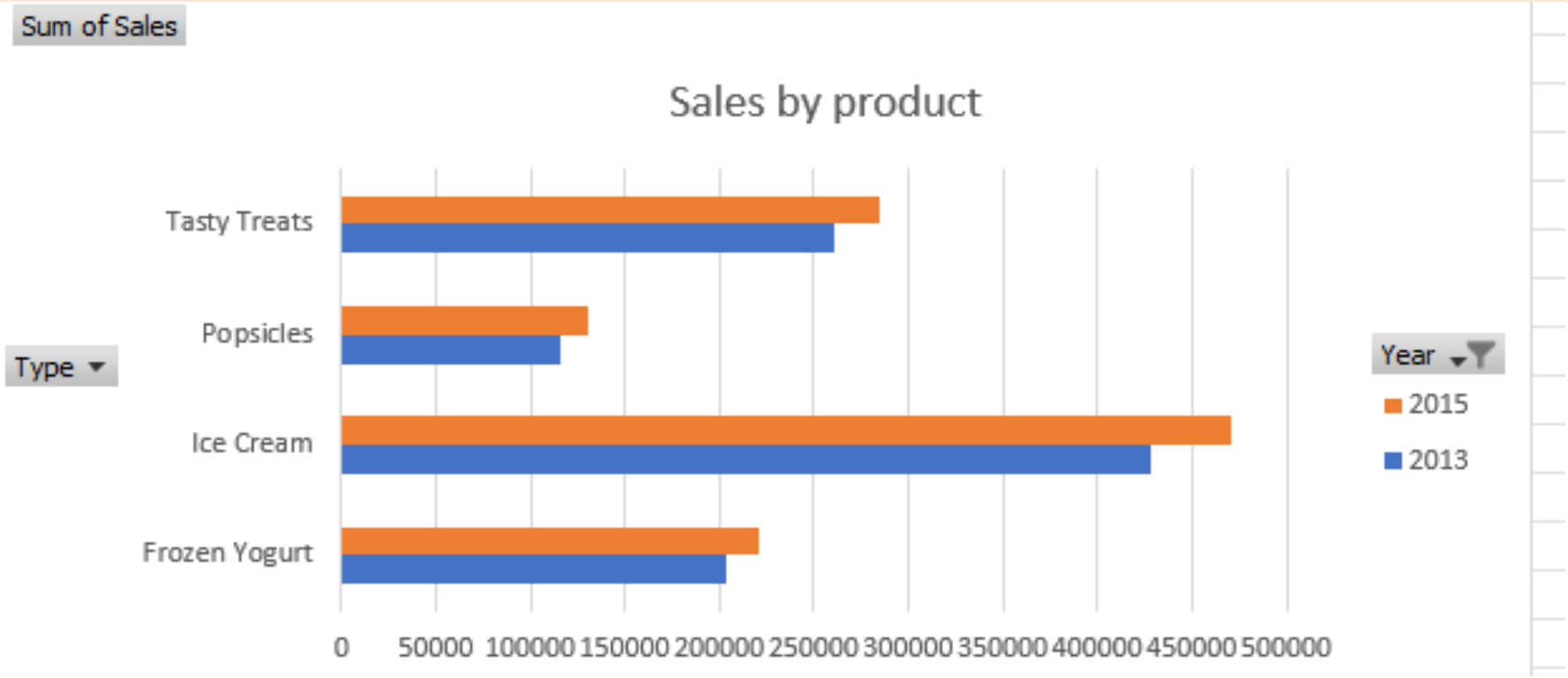
Bar Chart: Sales by product type



Bar Chart: Sales by product type Cont’d



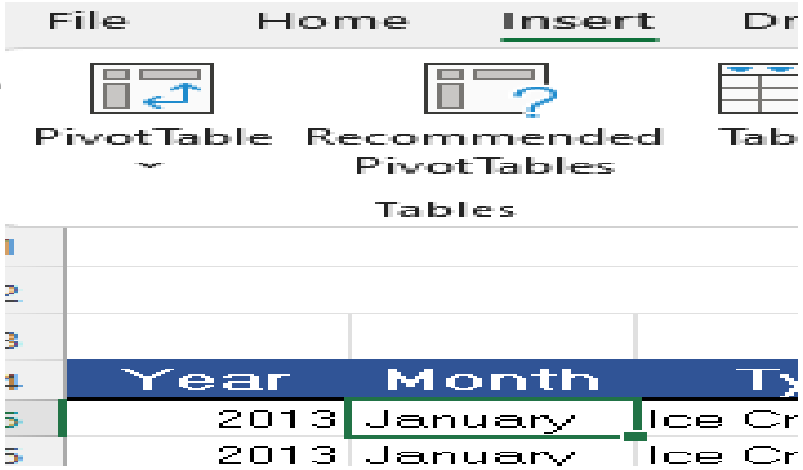
Bar Chart: Sales by product type Cont'd



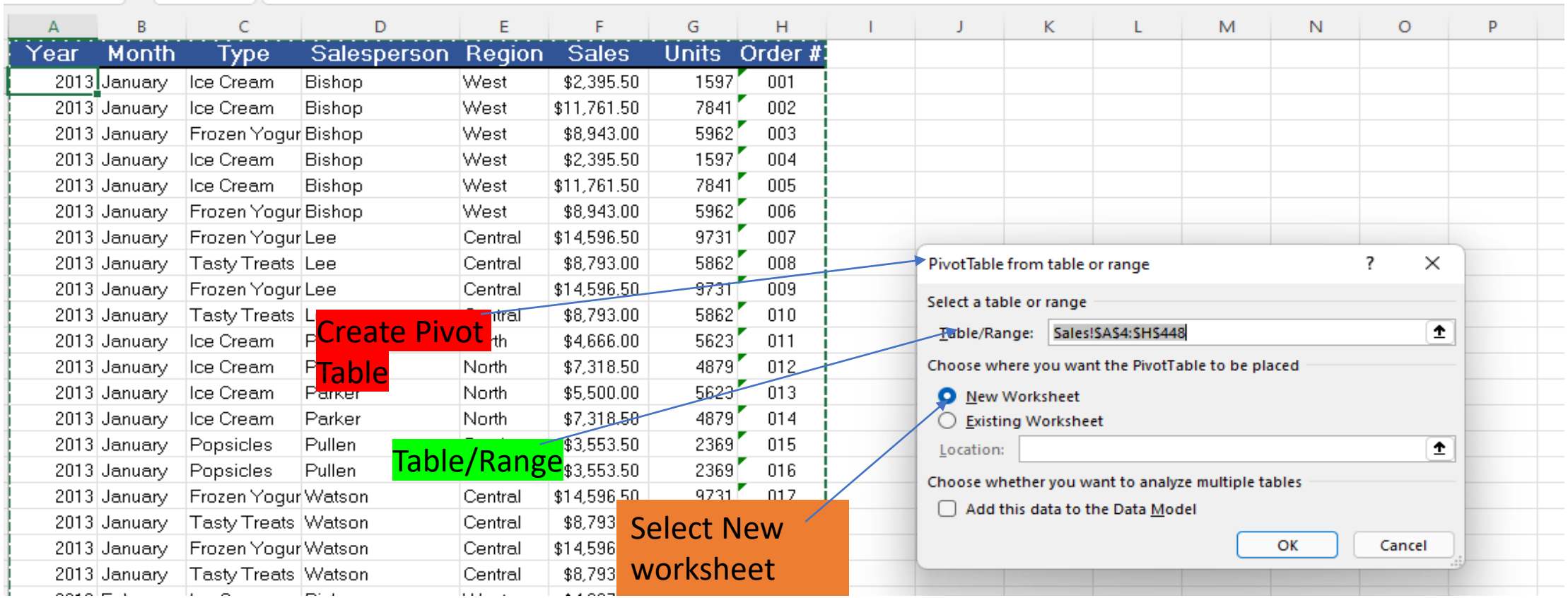
2. Create a pivot table and group data based on salesperson

Inserting pivot table procedure

- Open your original spreadsheet and remove any blank rows or columns.
- Make sure each column has a heading, as it will be carried over to the Field List.
- Make sure your cells are properly formatted for their data type.
- Select one cell
- Click the Insert tab.
- Select the PivotTable button from the
- Select PivotTable from the list



Pivot Table



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2013	January	Frozen Yogur	Lee	Central	$14,596.50	9731	009
2013	January	Tasty Treats	L	ntral	$8,793.00	5862	010
2013	January	Ice Cream	P	rth	$4,666.00	5623	011
2013	January	Ice Cream	P	North	$7,318.50	4879	012
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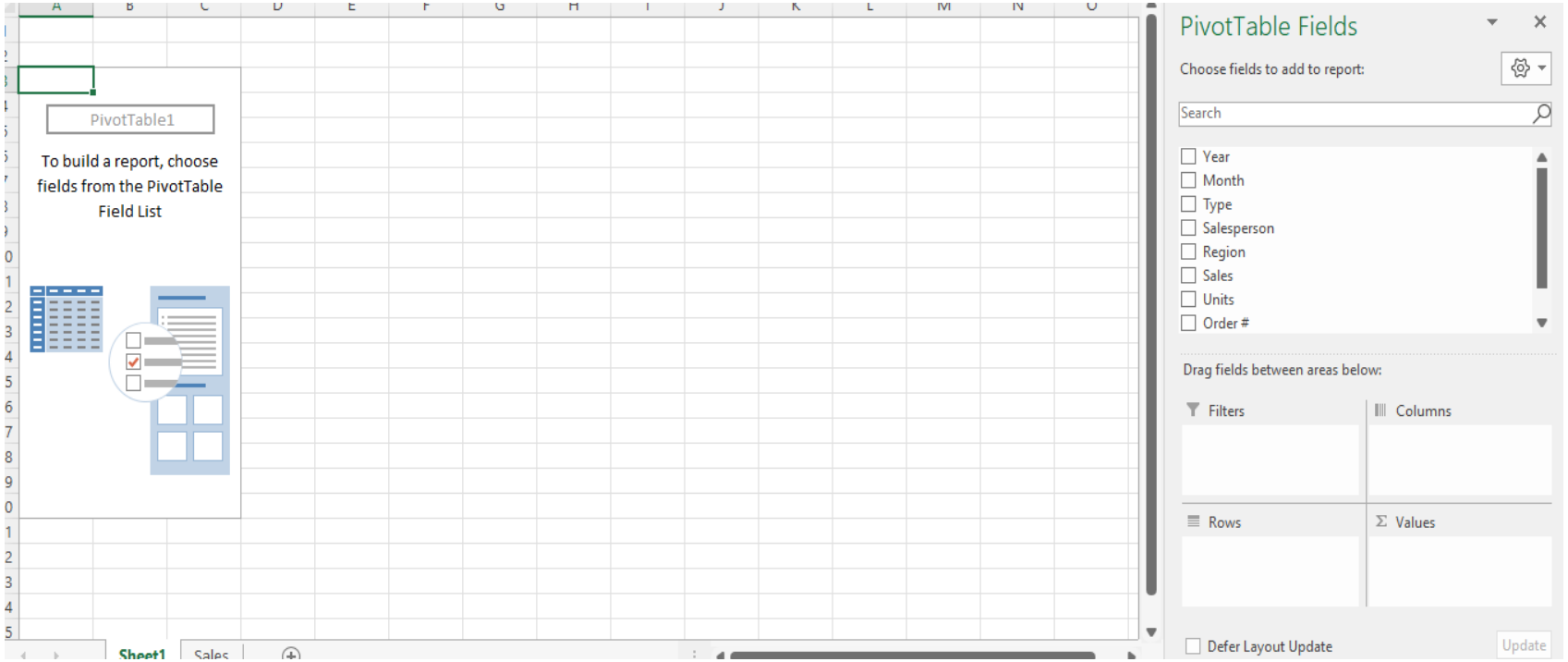
2013	January	Frozen Yogur	Watson	Central	$14,596.50	9731	017
2013	January	Tasty Treats	Watson	Central	$8,793		
2013	January	Frozen Yogur	Watson	Central	$14,596		
2013	January	Tasty Treats	Watson	Central	$8,793		

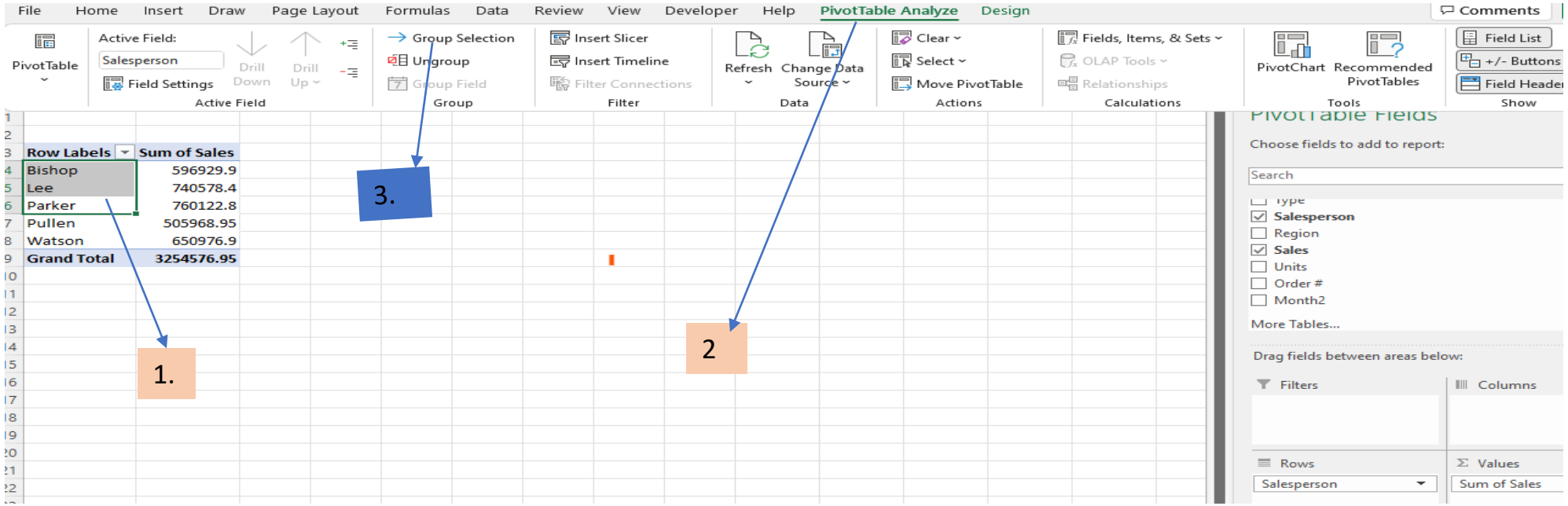
Pivot cont’d

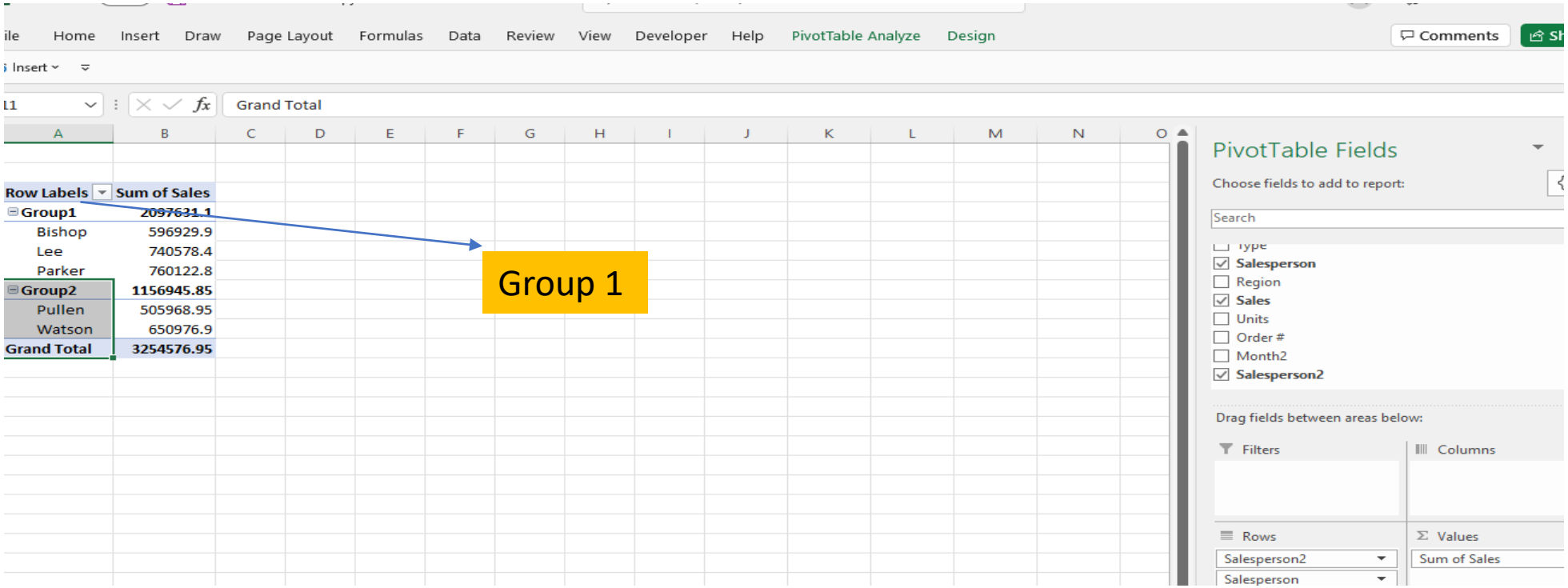
- My selection is new work sheet, and it appears as below:



Pivot Cont'd

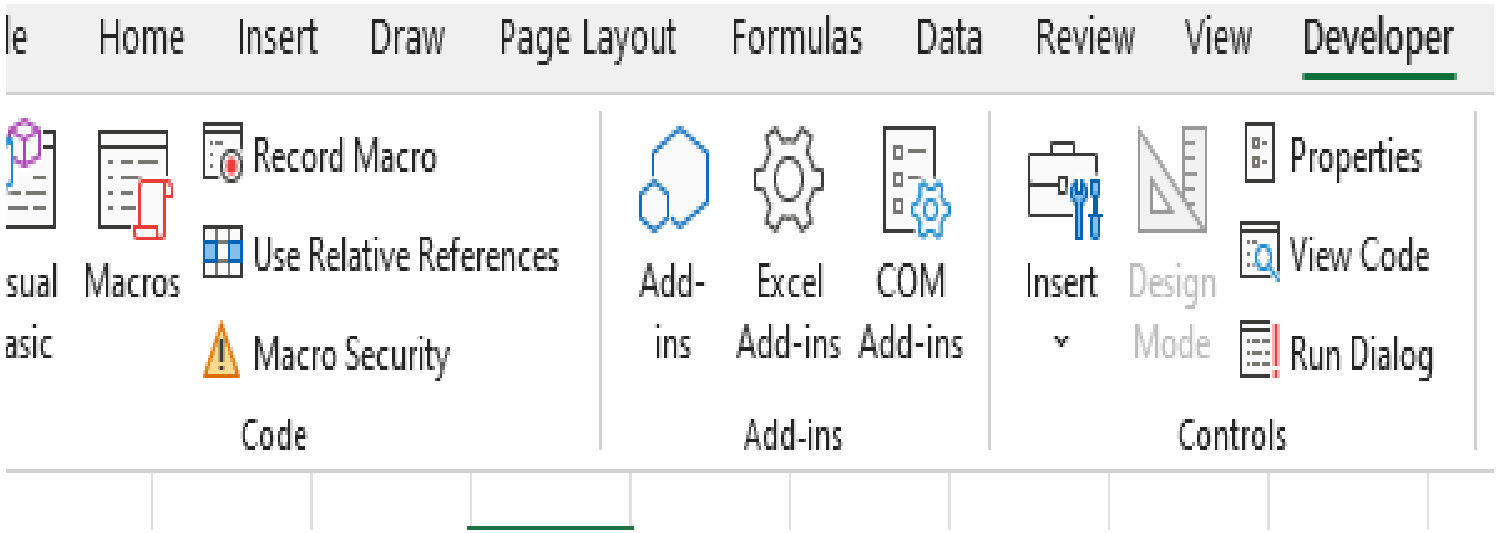
- Group data based on salesperson




Home
Insert
Draw
Page Layout
Formulas
Data
Review
View
Developer
Help
PivotTable Analyze
Design
Comments
Grand Total
Row Labels
Sum of Sales
Group1
2097631.1
Bishop
596929.9
Lee
740578.4
Parker
760122.8
Group2
1156945.85
Pullen
505968.95
Watson
650976.9
Grand Total
3254576.95
Group 1
PivotTable Fields
Choose fields to add to report:
Search
Salesperson
Region
Sales
Units
Order #
Month2
Salesperson2
Drag fields between areas below:
Filters
Columns
Rows
Values
Salesperson2
Sum of Sales
Salesperson

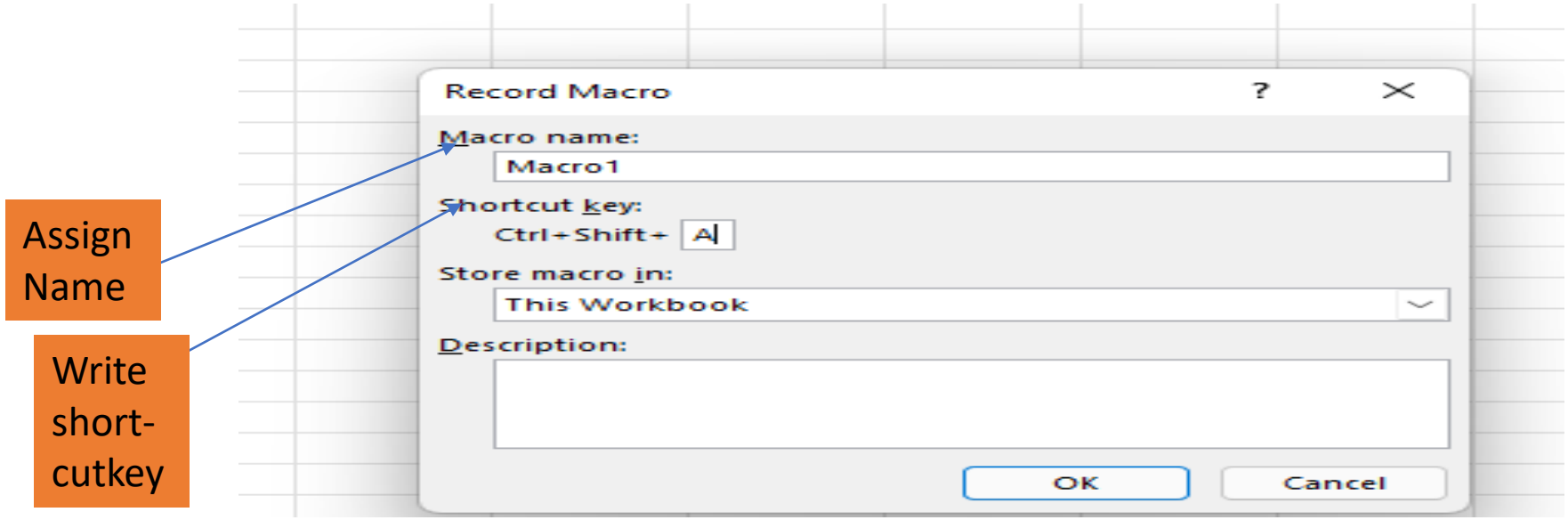
3. Create a shape object and assign a macro to it that displays in message the current date

- Open Excel → Developer → Record Macro



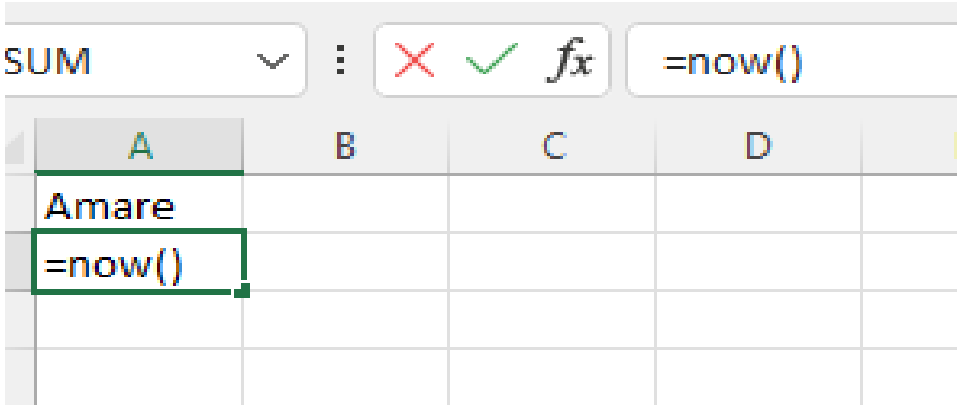
Shape object and assign a macro cont'd

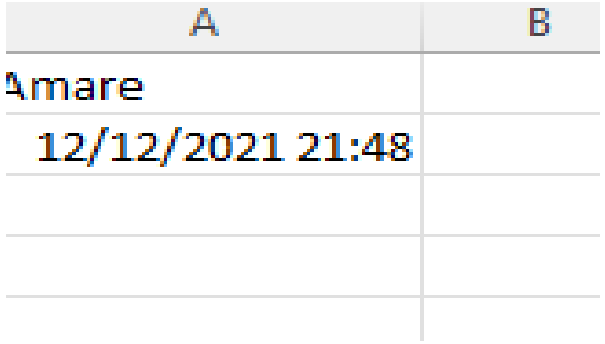
- Open Excel → Developer → Record Macro



Macro Record- Insert formula in the first active worksheet

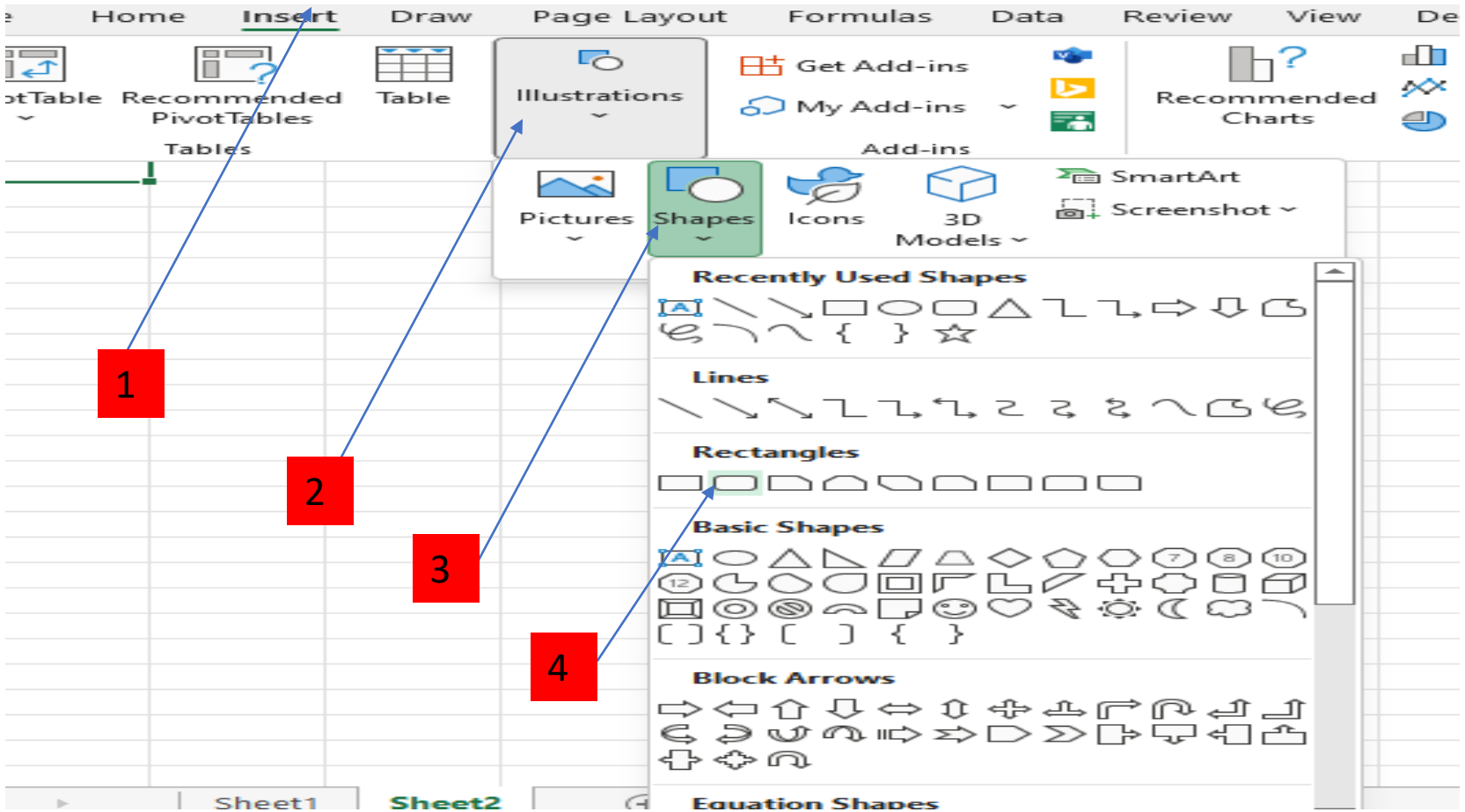
- Name and time(now()) macro recording → Then inter → Add New sheet



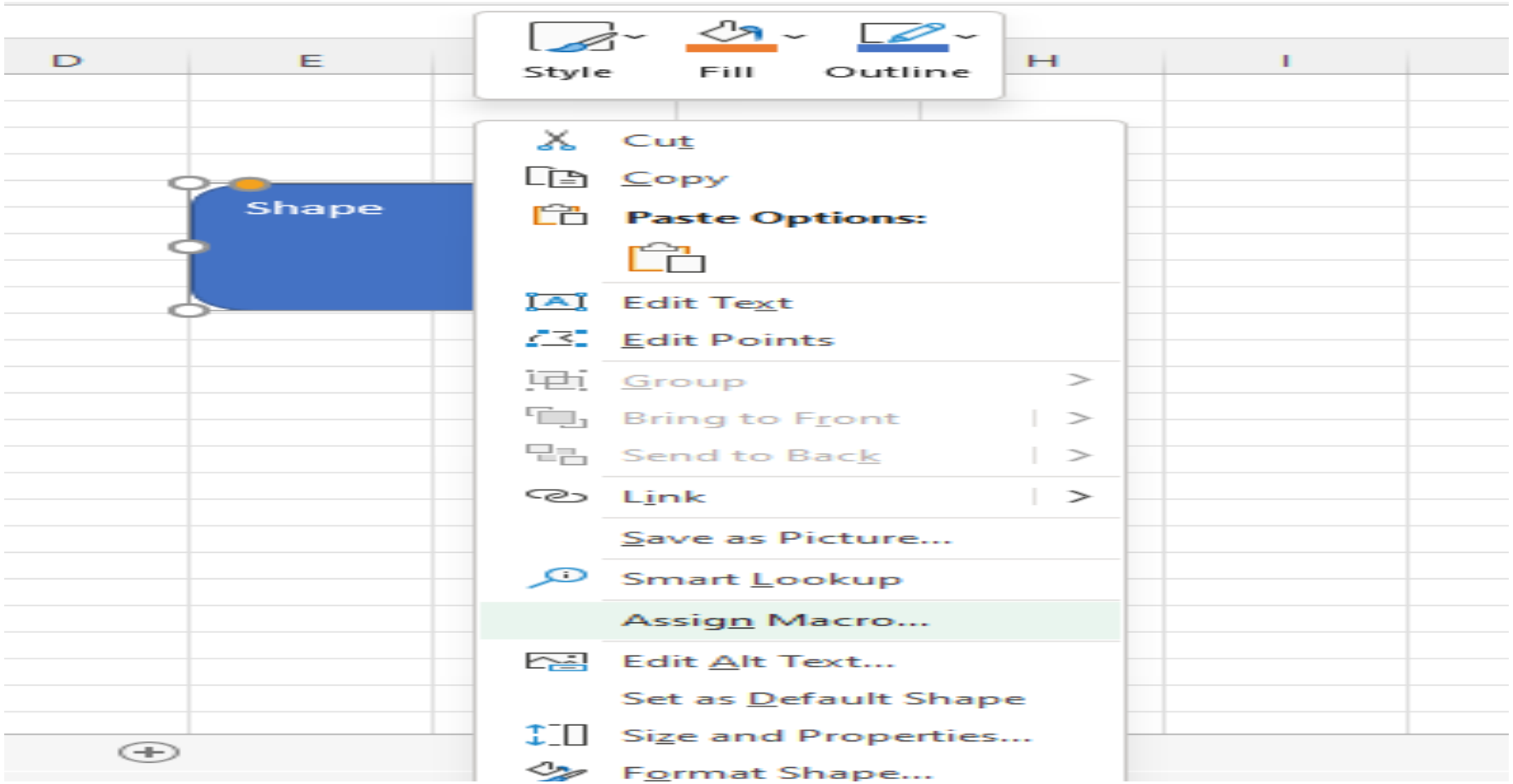


Assigning Shape

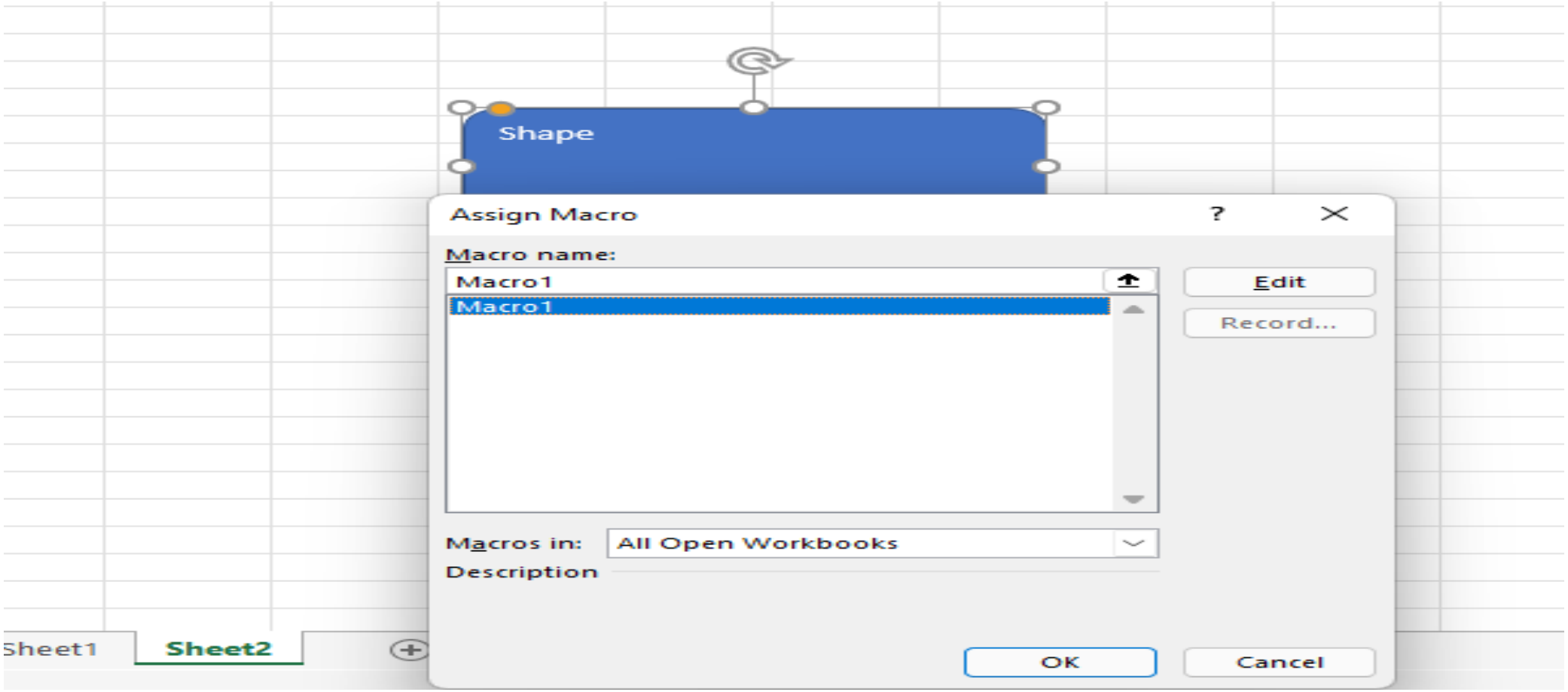
From new sheet Insert Illustrations Shape Rectangular shape



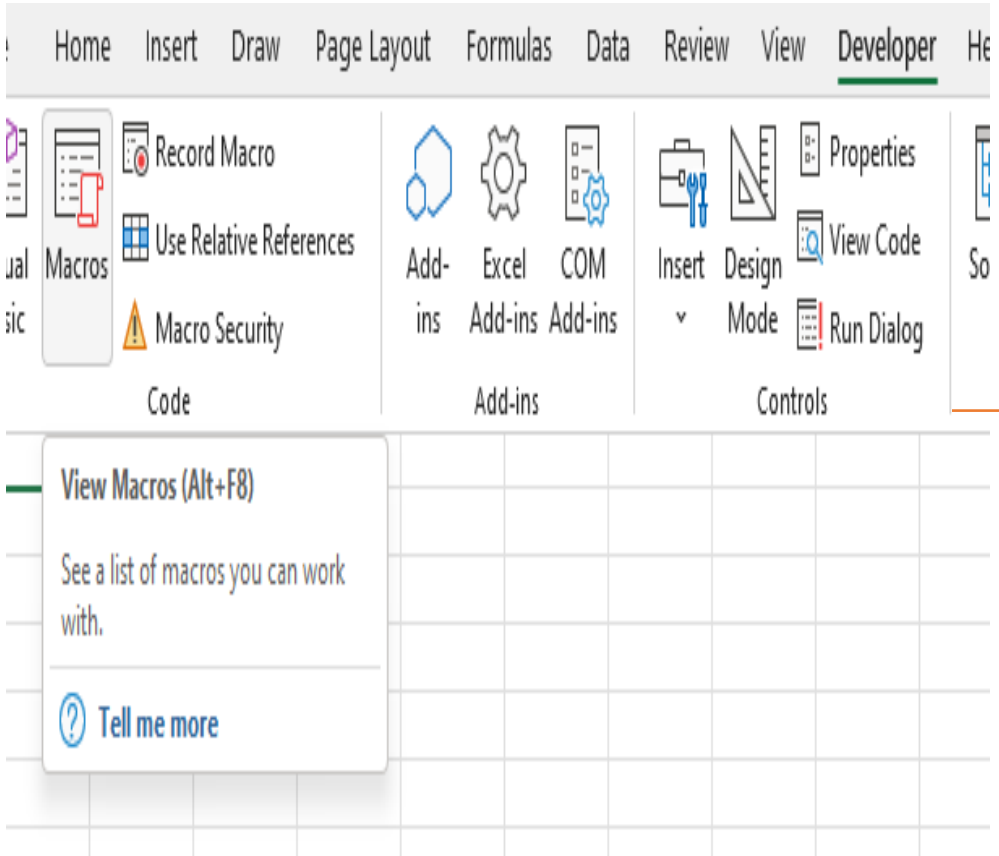
Edit the shape and assign Macro. Double click on the shape to run the Macro

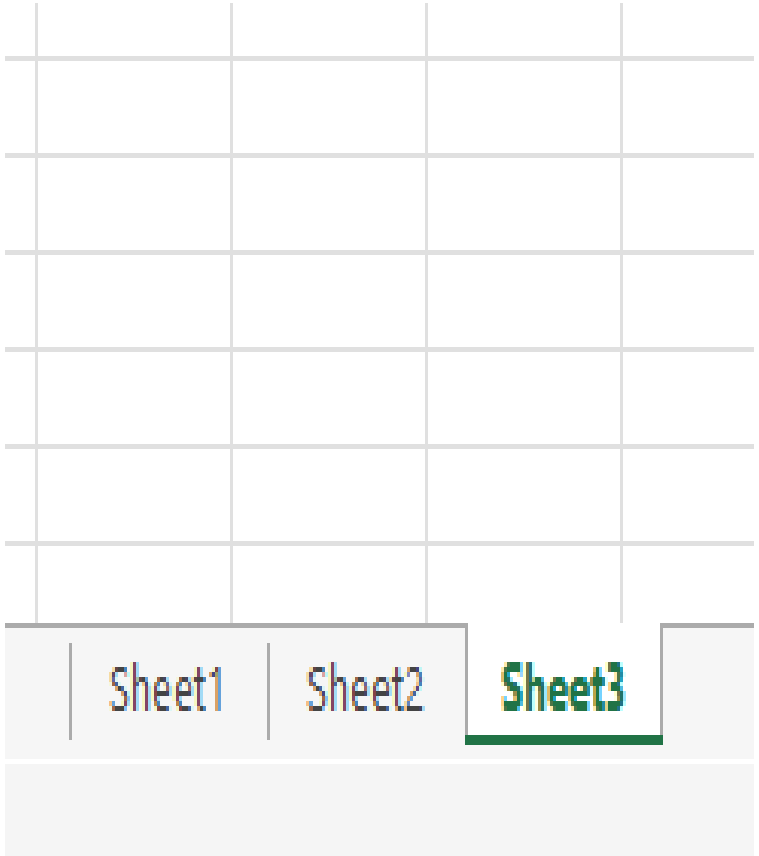


Assign Macro



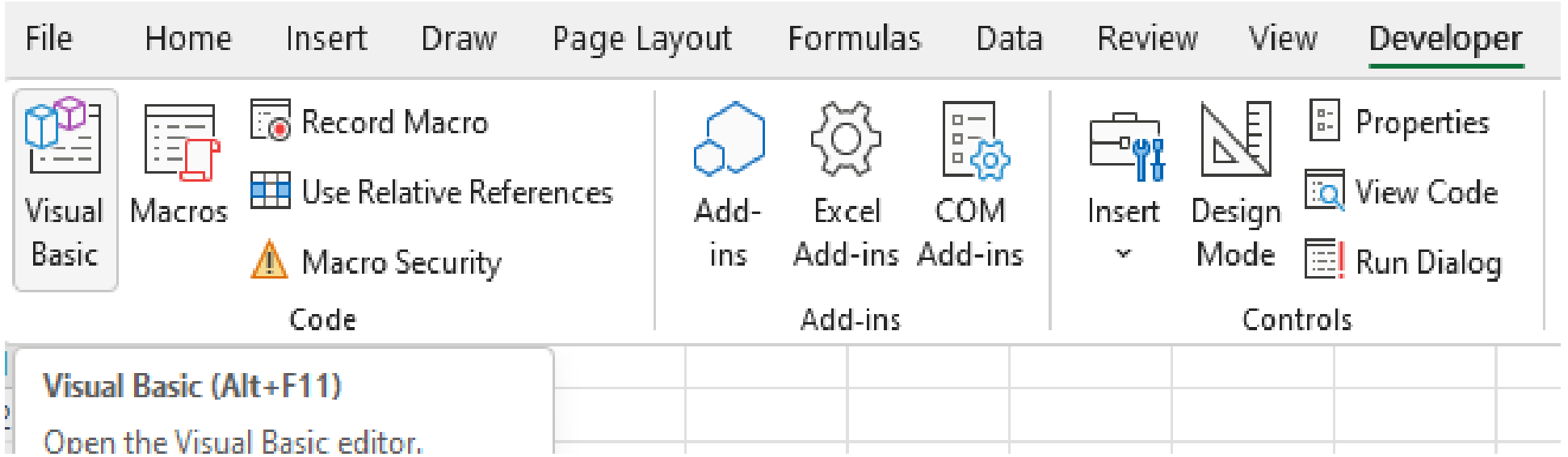
Run Macro: Developer Click on → Macros





Visual Basic to insert module

- After macros run, Developer → visual basic to record on VBA Project



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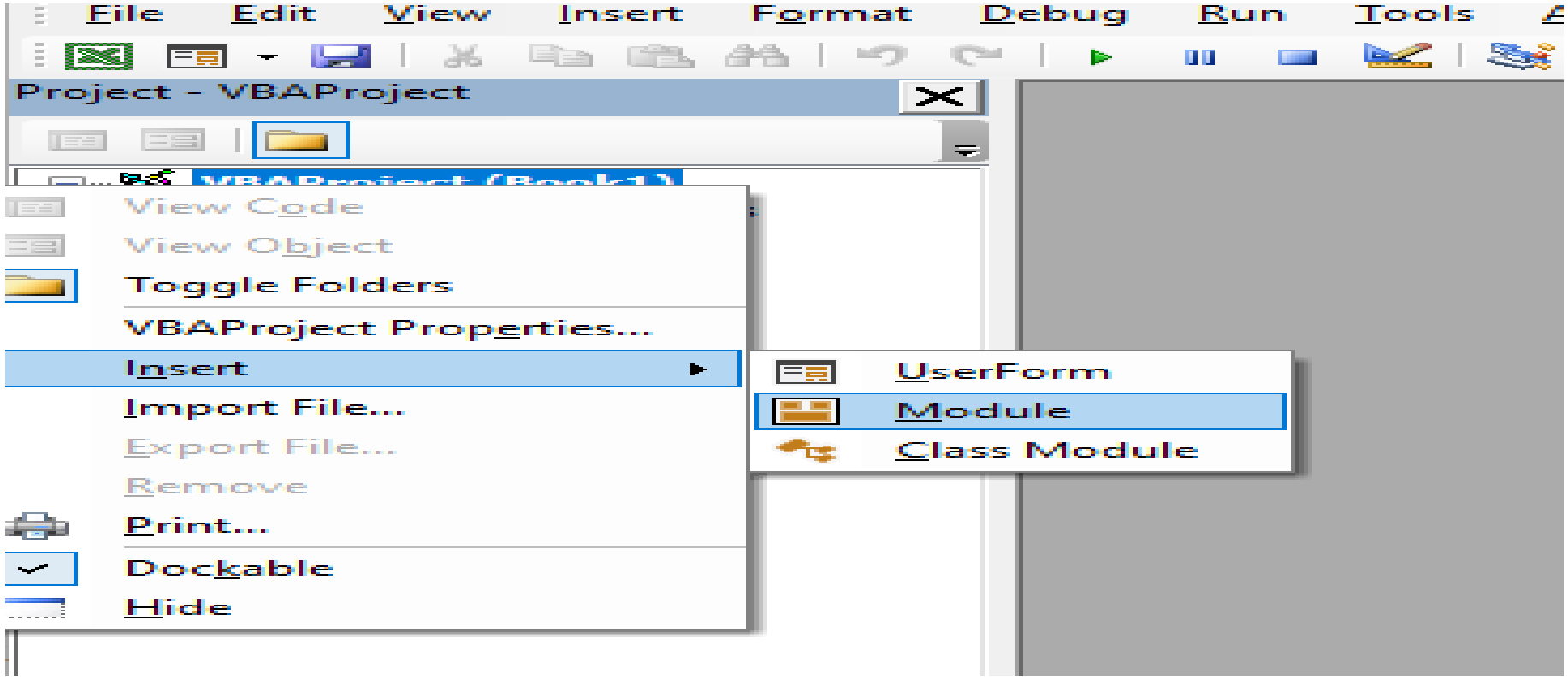
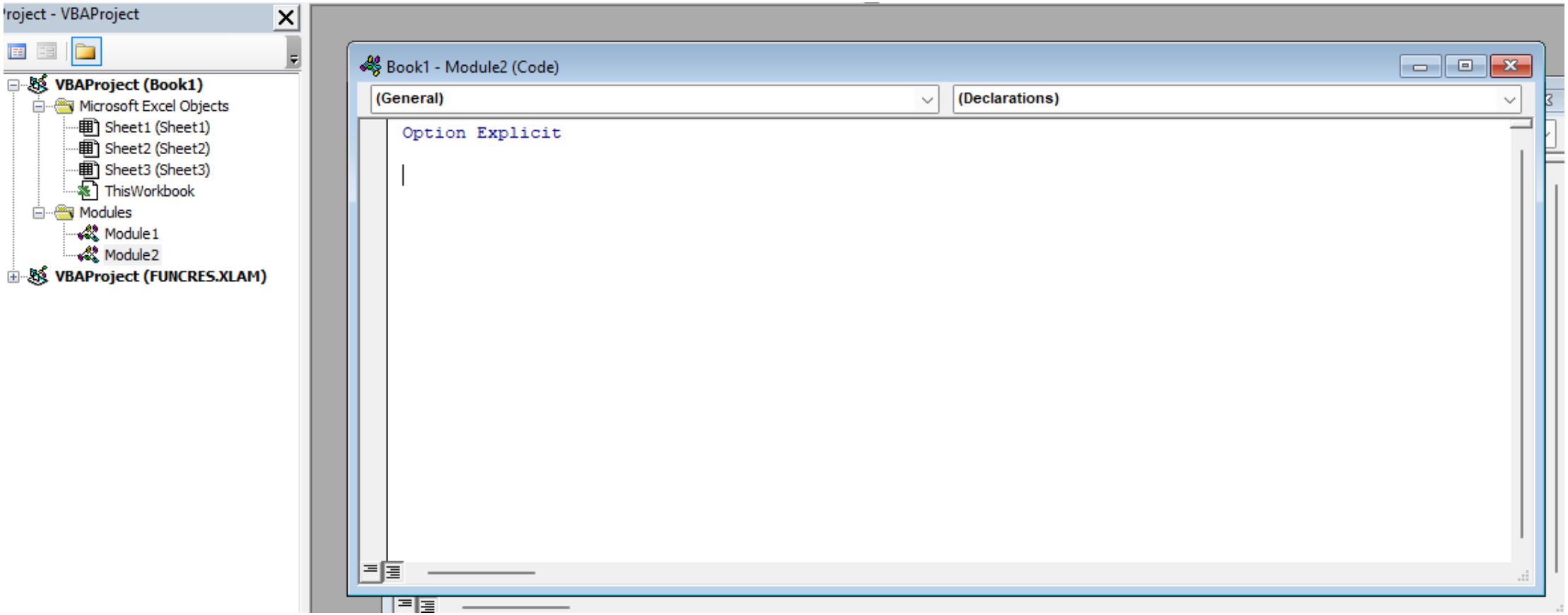
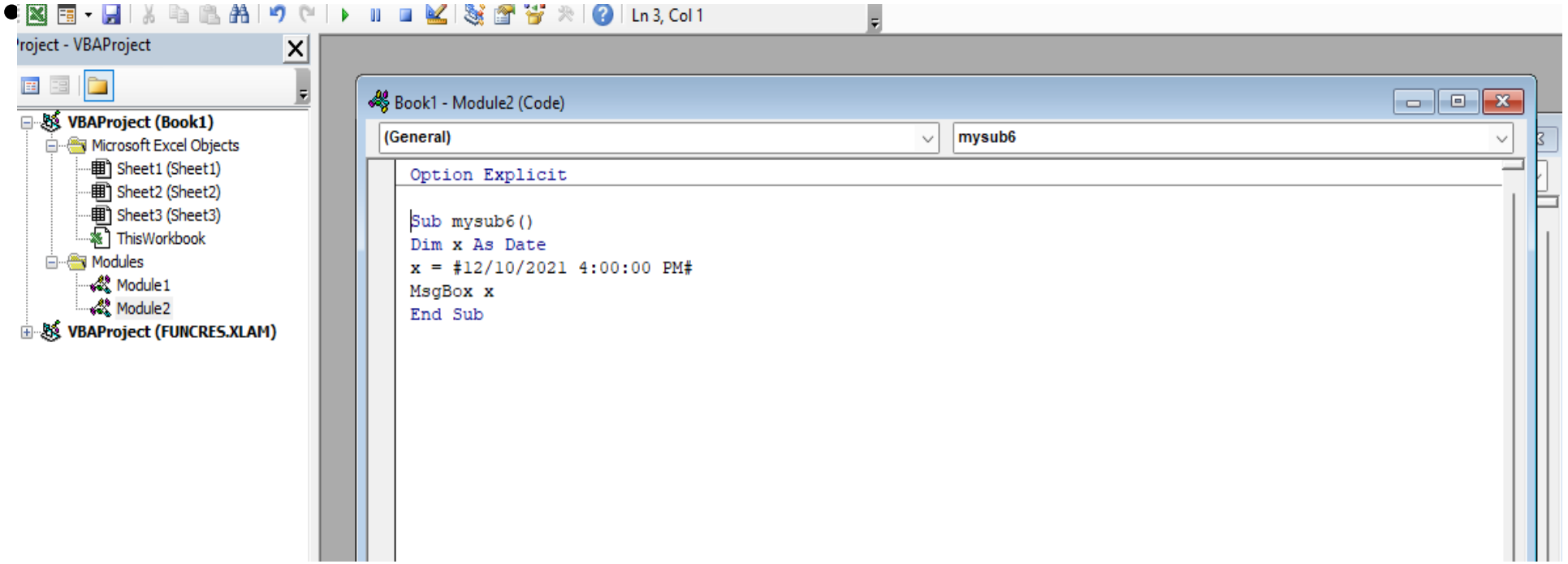

File Edit View Insert Format Debug Run Tools
Project - VBAProject
View Code
View Object
Toggle Folders
VBAProject Properties...
Insert
Import File...
Export File...
Remove
Print...
Dockable
Hide
UserForm
Module
Class Module

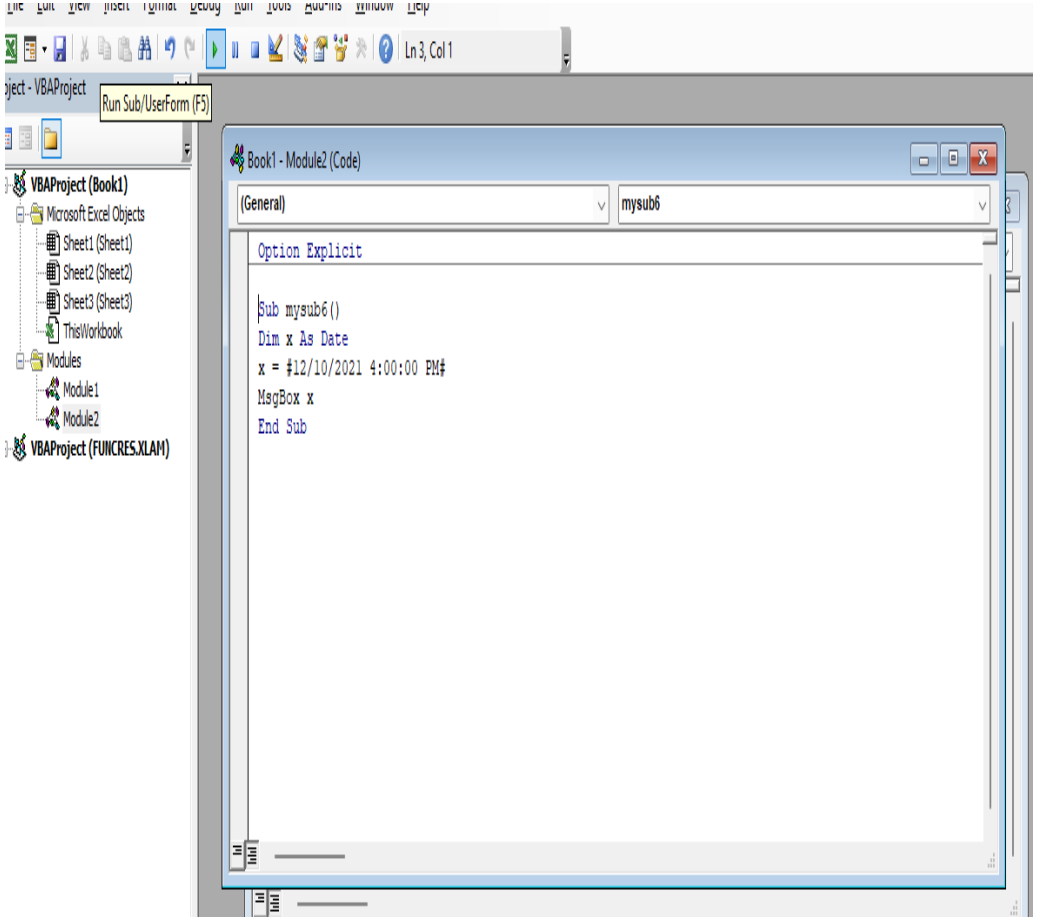
VBA Project Module procedure

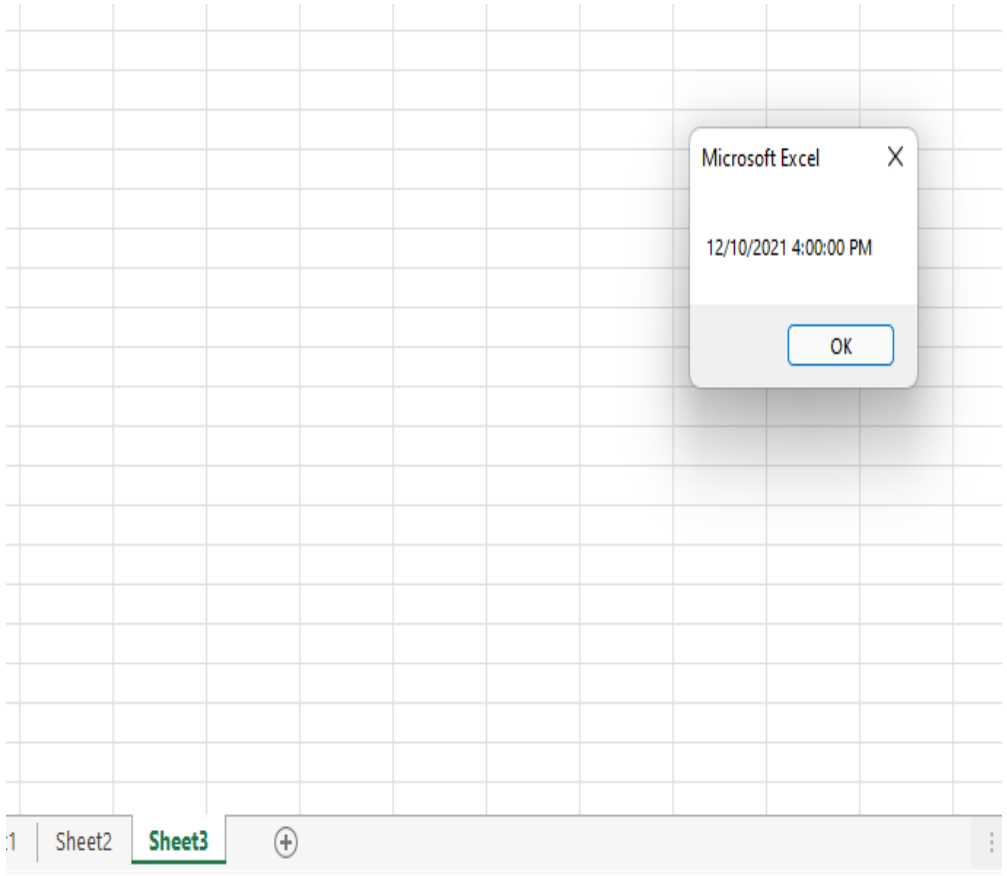


Coding on visual basic module



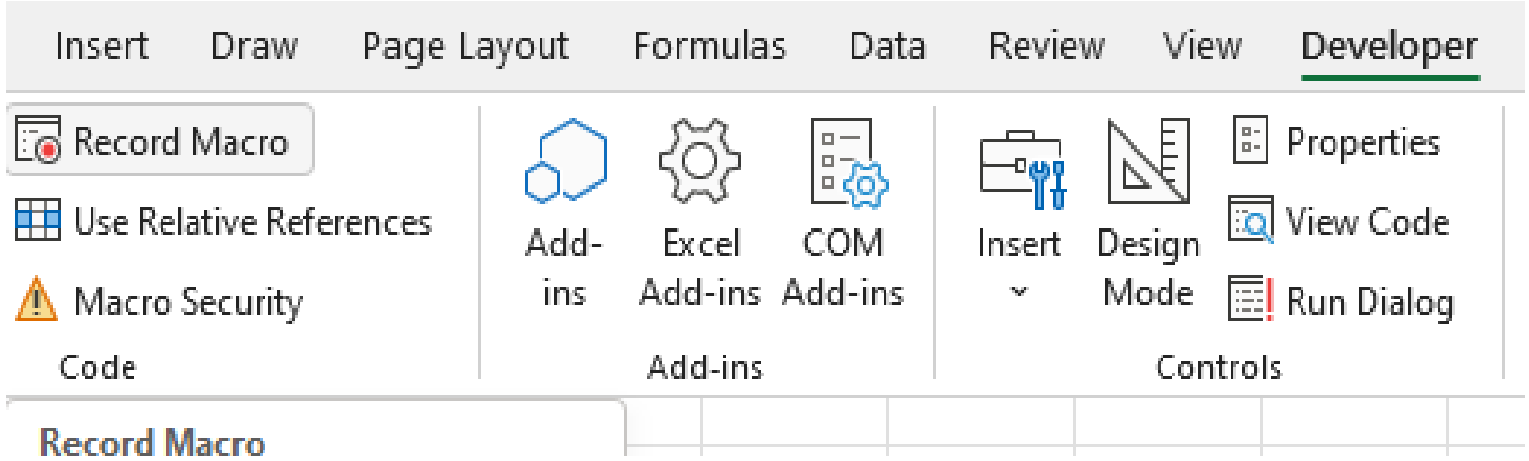
After coding on the module and macro run, the date displayed



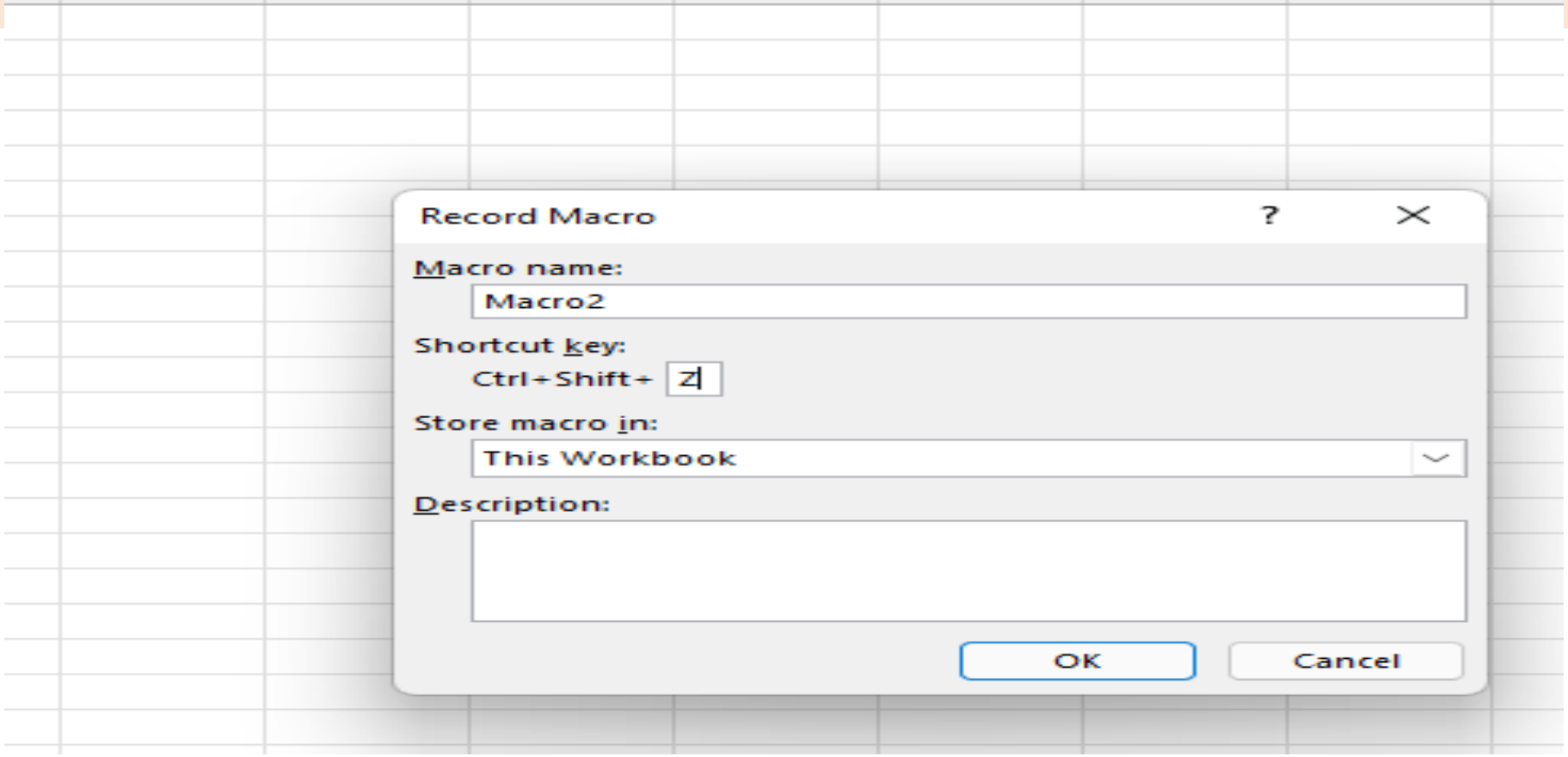


4. Create a procedure that declares variables of type string and integer.

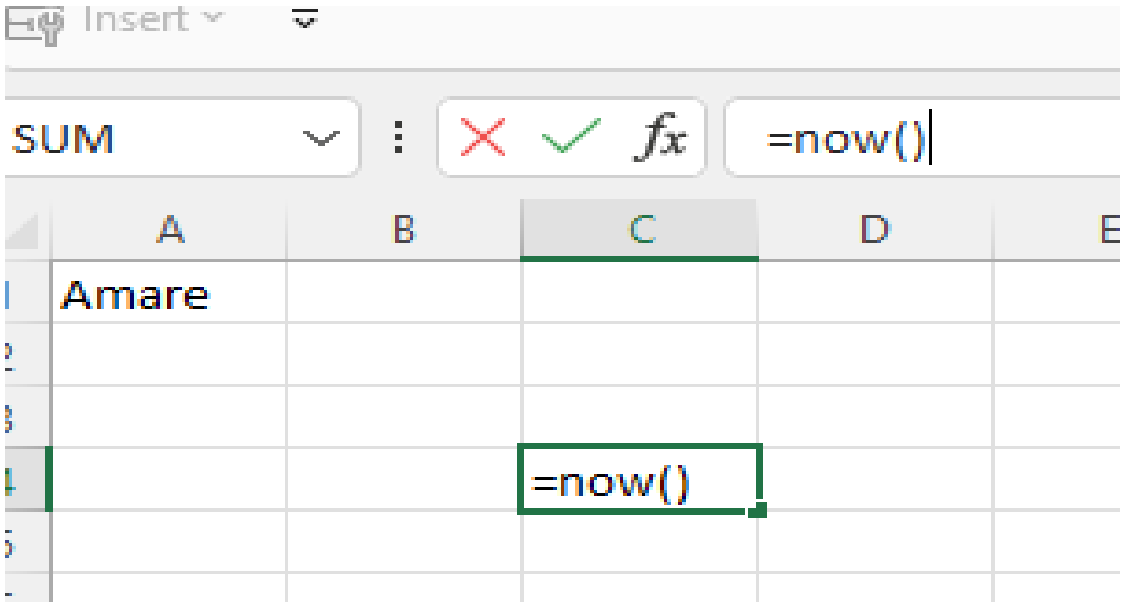
open **Active Worksheet Developer Record Macro**



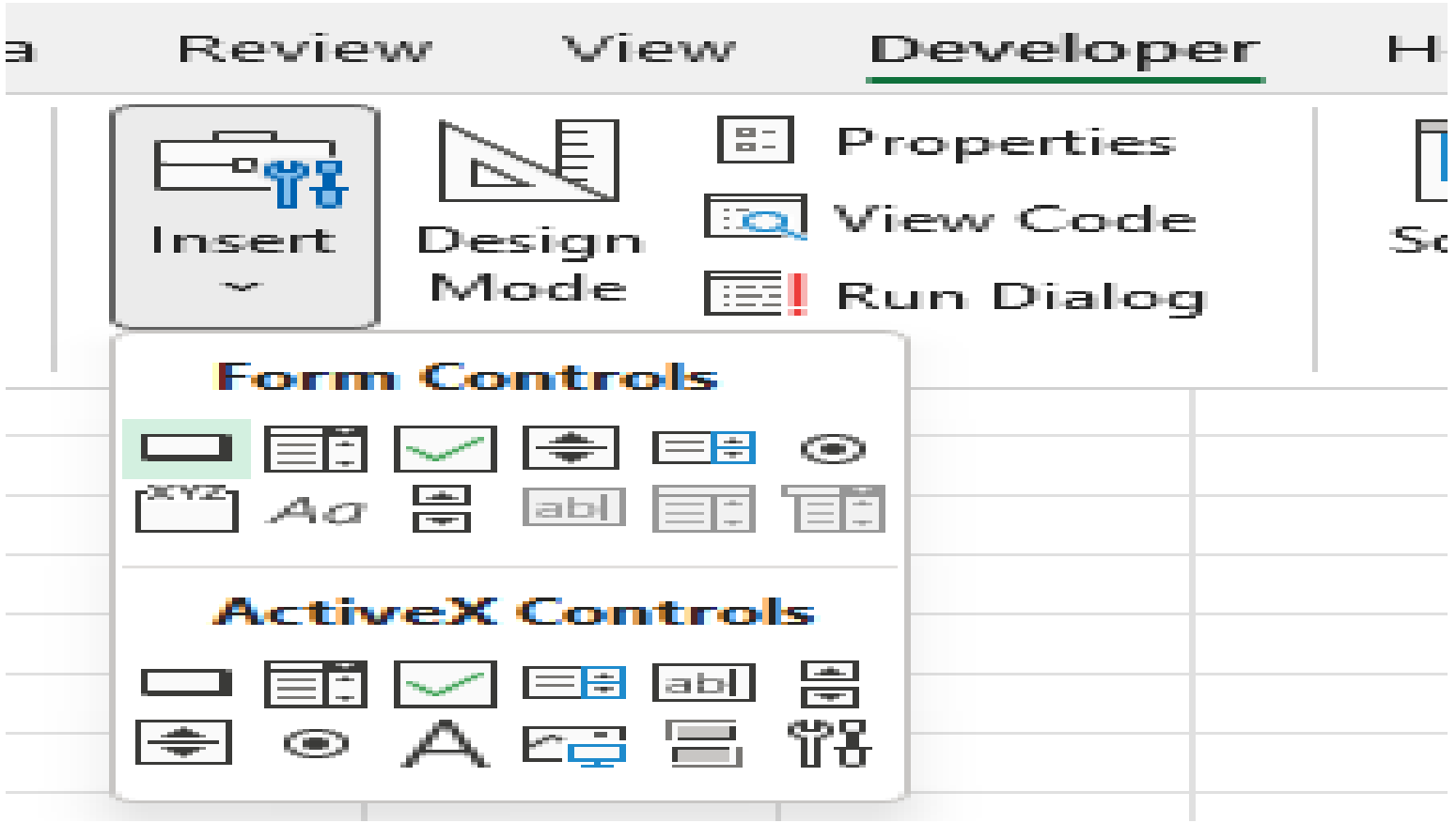
Macro Name and Shortcut key



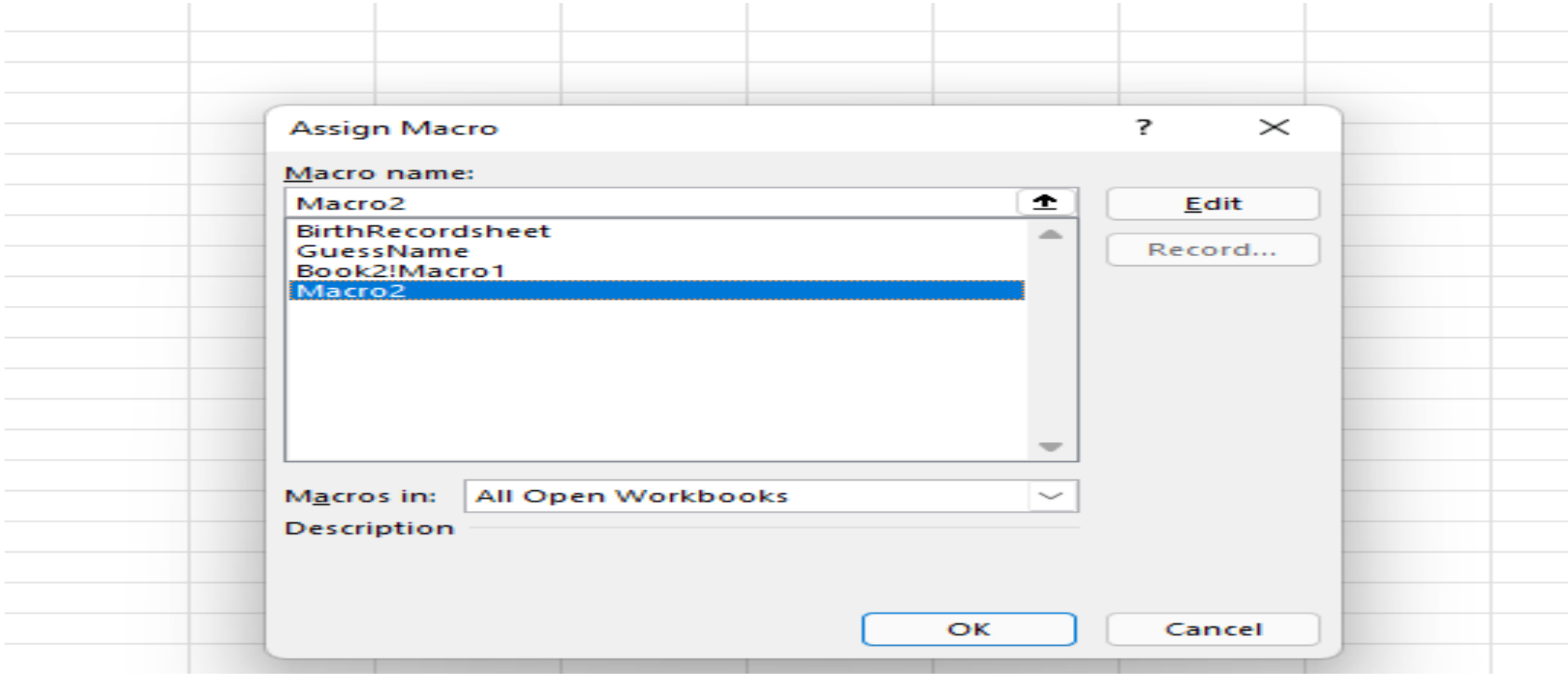
After Recording Macros, stop macro recording and write a formula in new sheet as shown



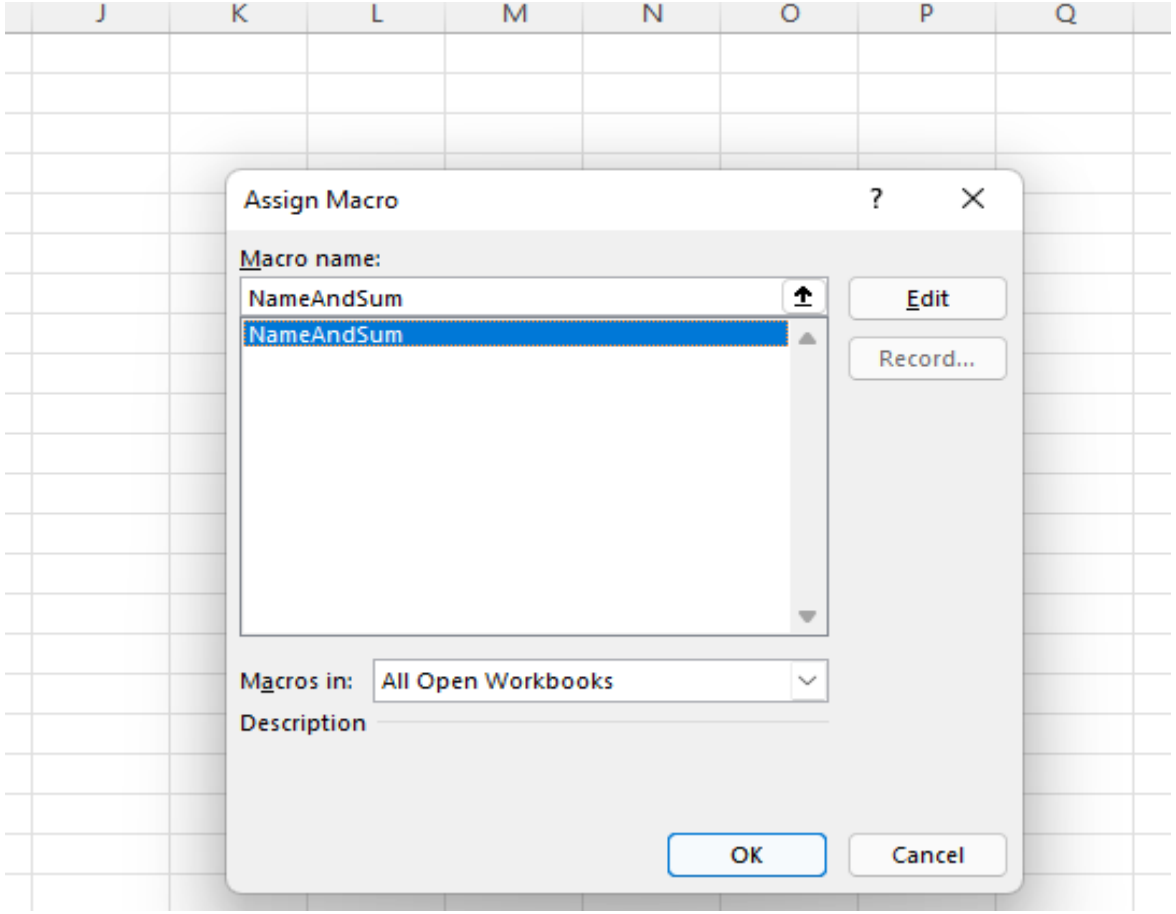
Insert rectangular shape in new worksheet opened to Assign macro

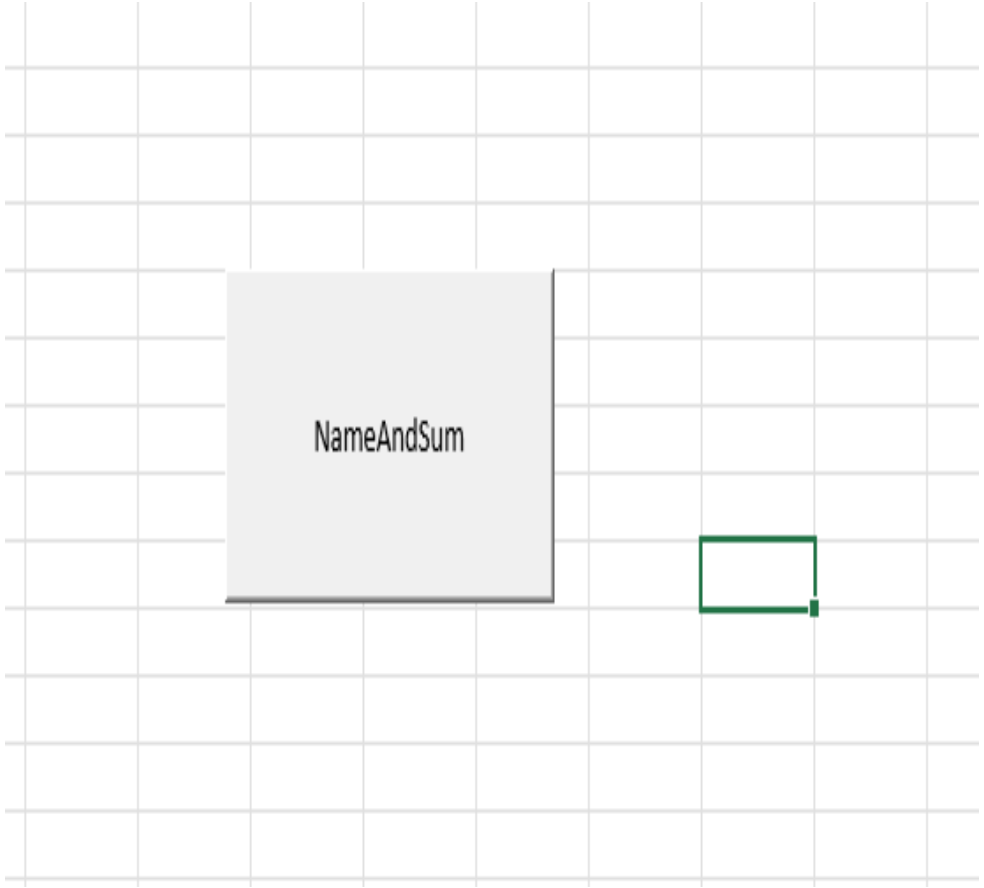


Assign Macro Name

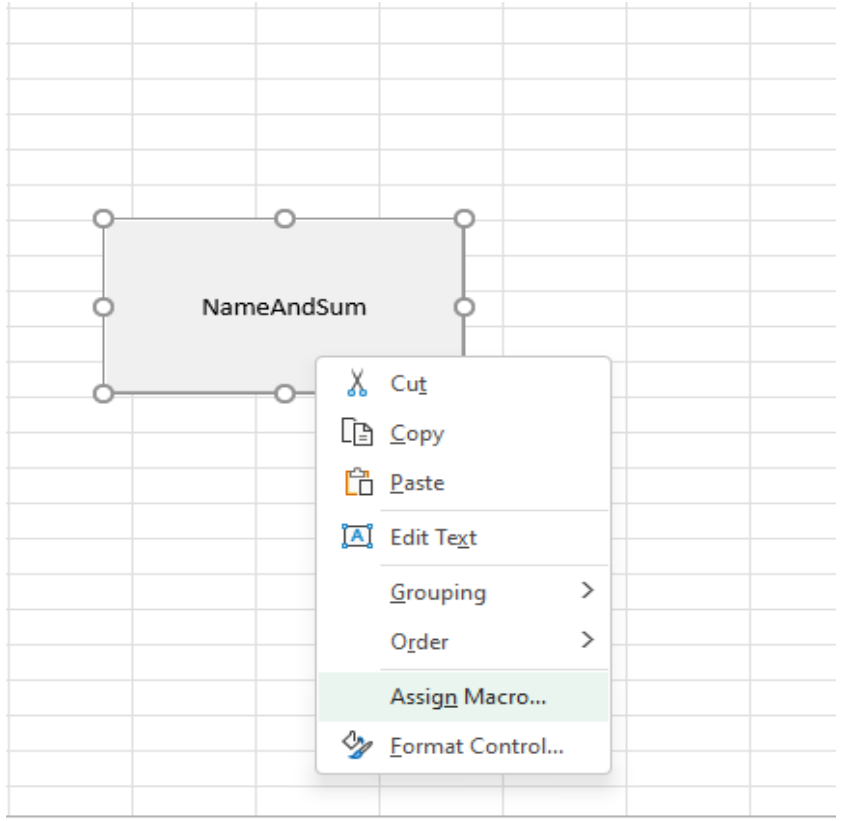


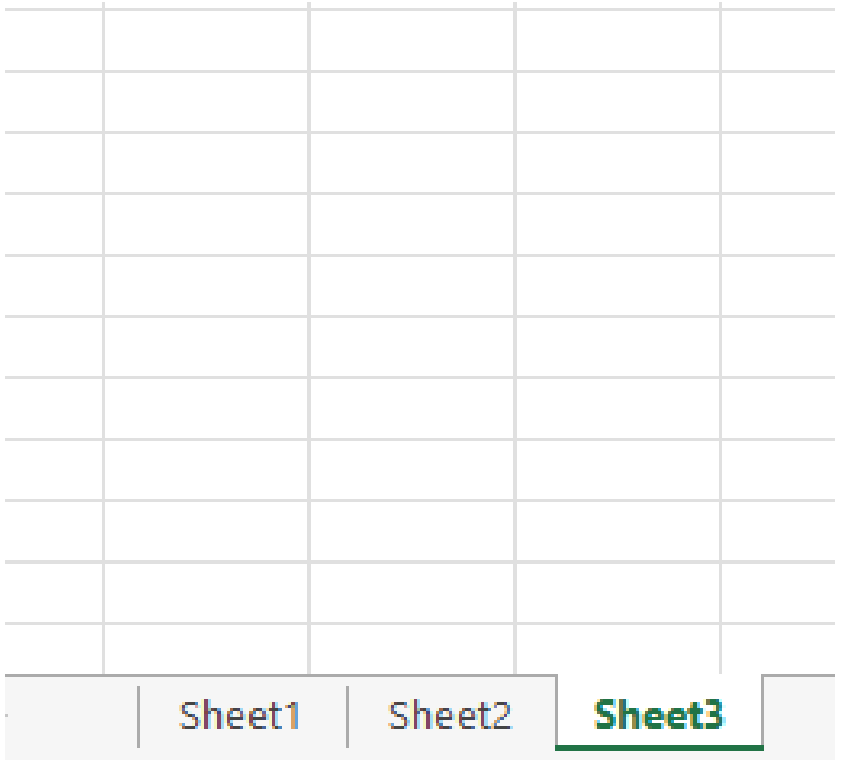
Shape dragging to rename and assign macro



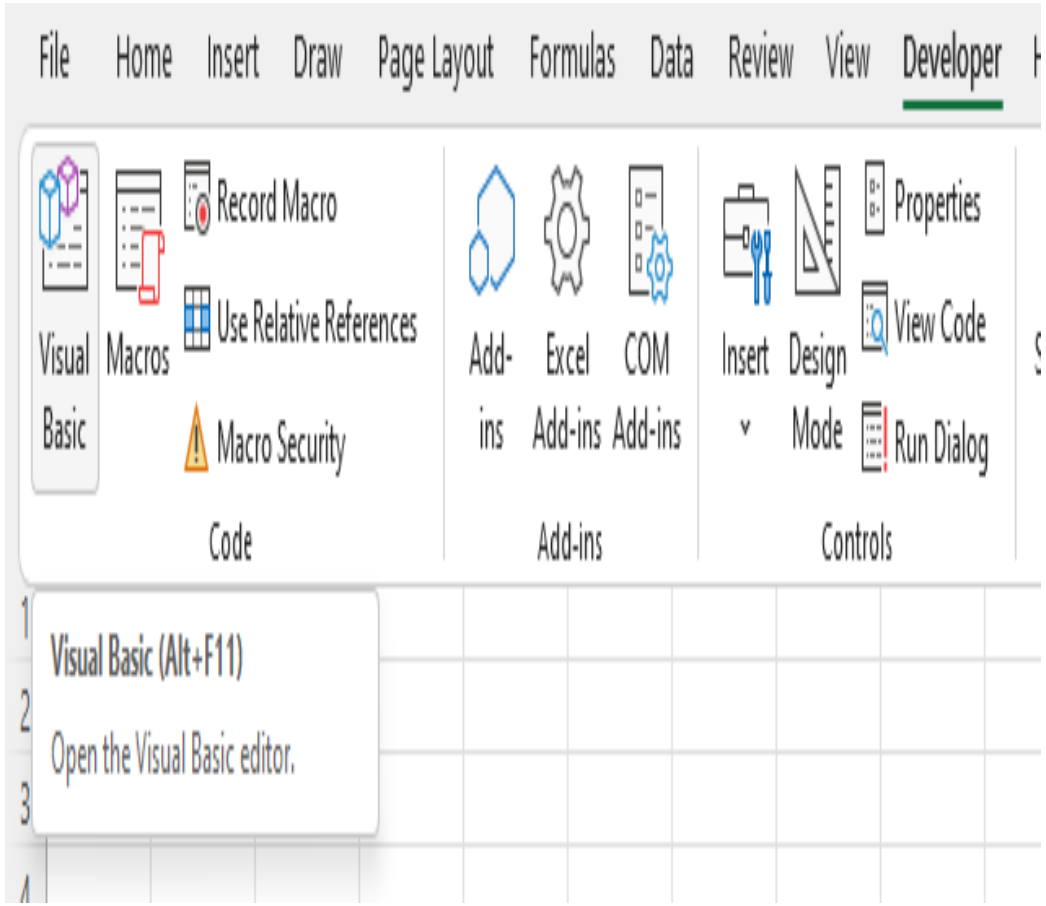


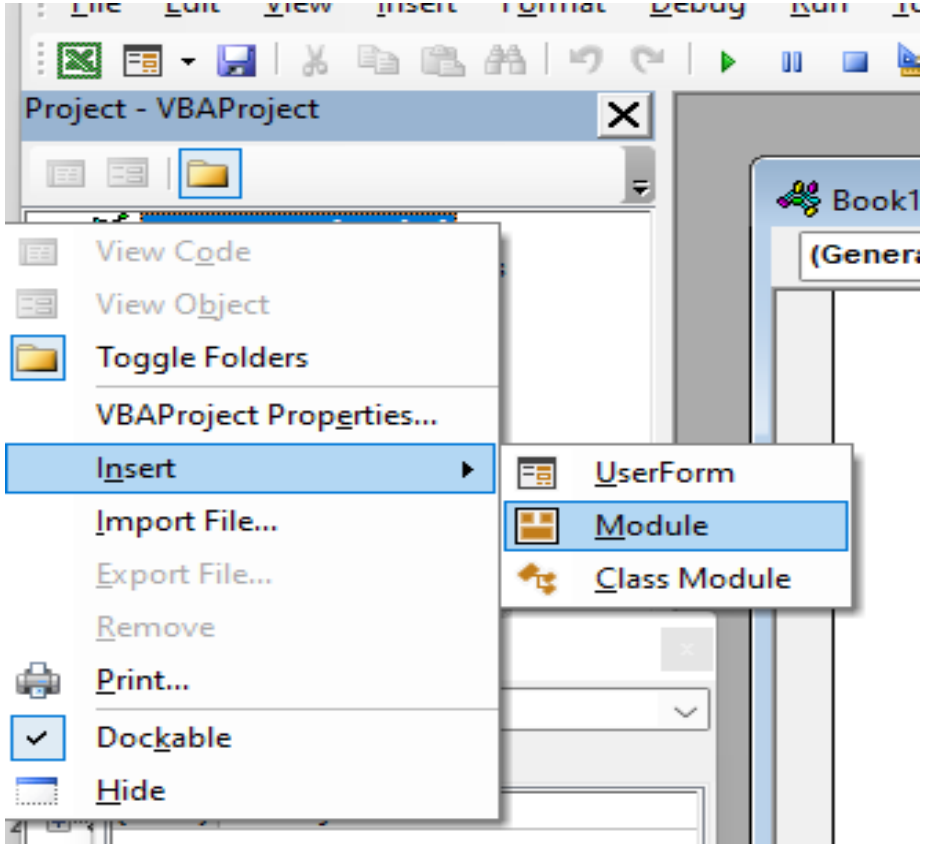
Assign Macro and Double click on rename shape and bring new active worksheet



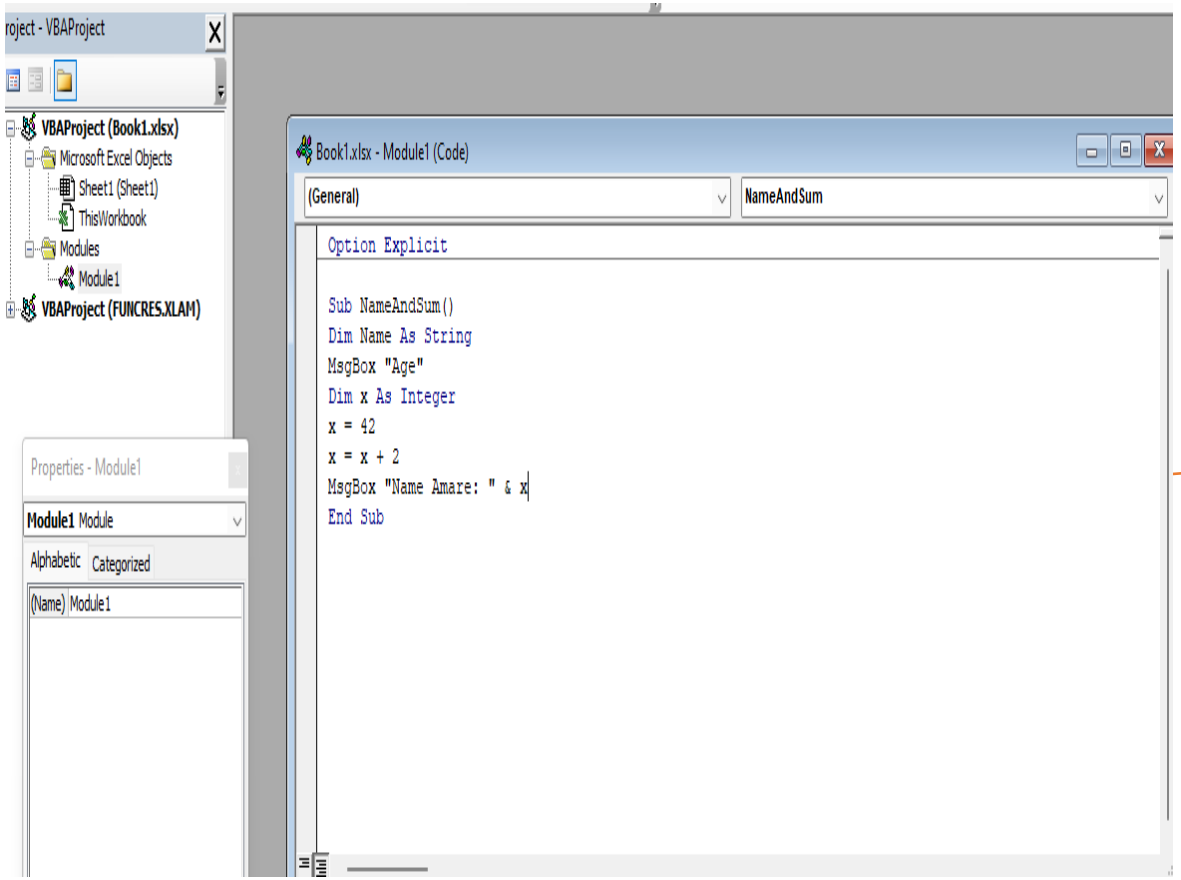


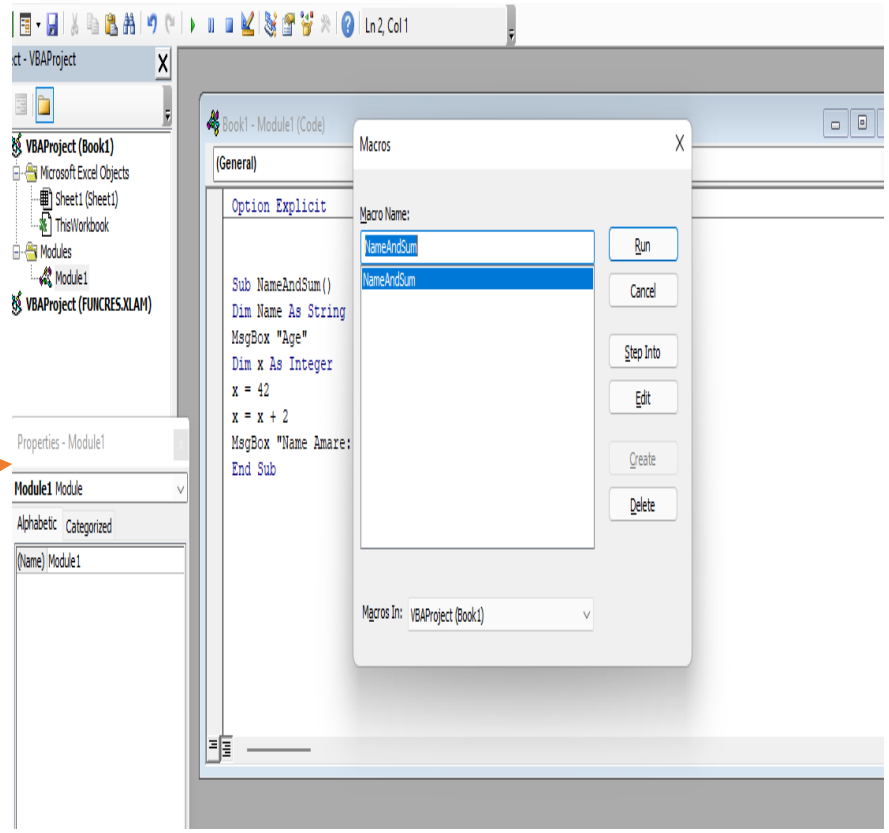
After Macro Run-- Go to Developer --Visual Basic – VBA Project to insert module



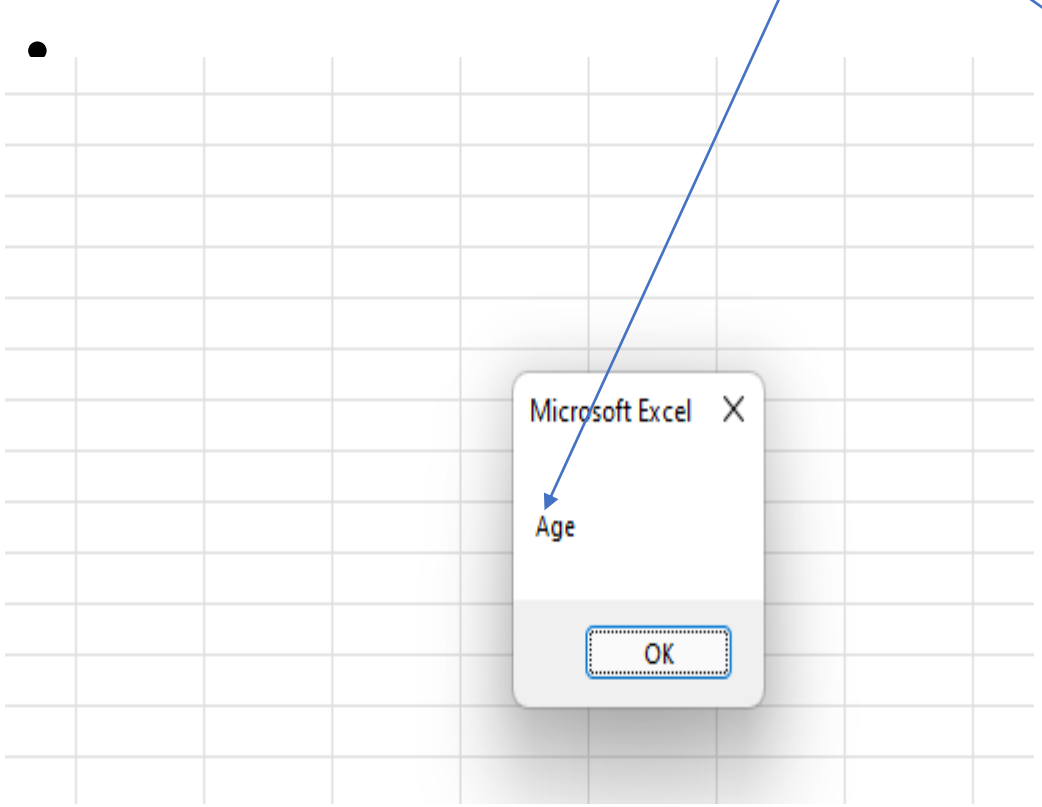


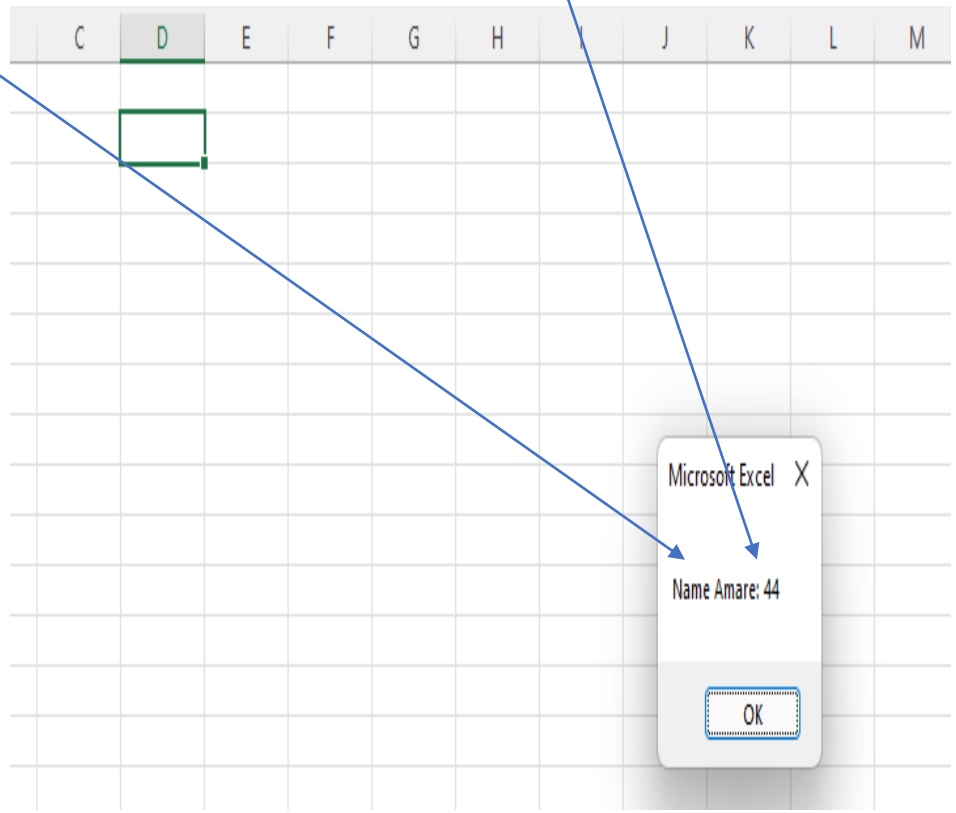
Press the Macro Run Button for the to work on string coding procedure window



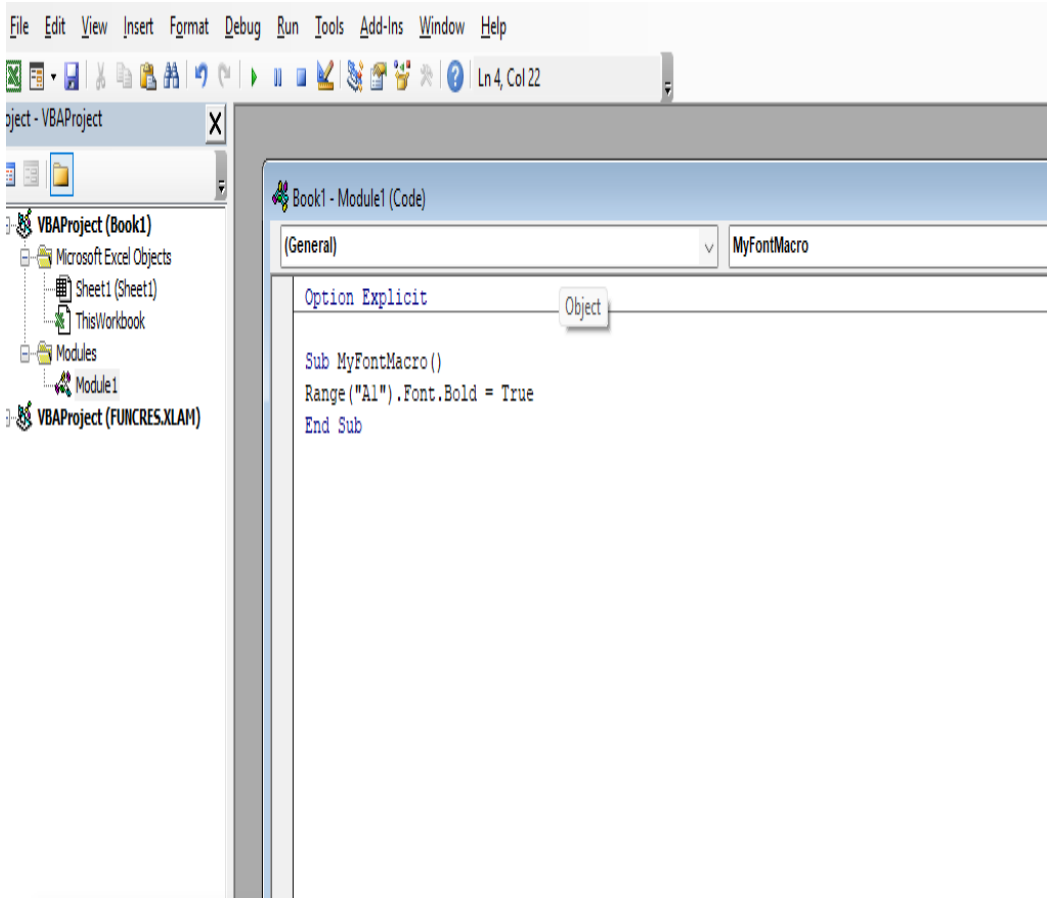


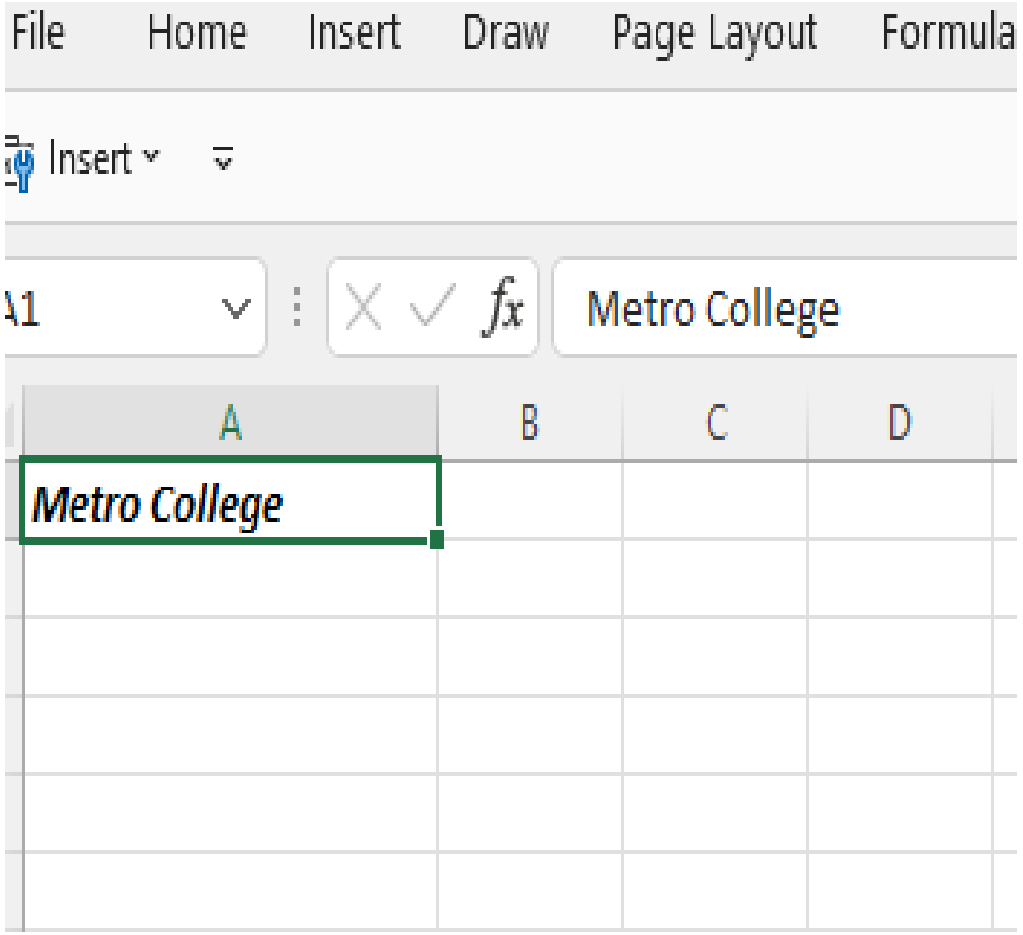
After Run the macro, string and Integer variable appear

- 

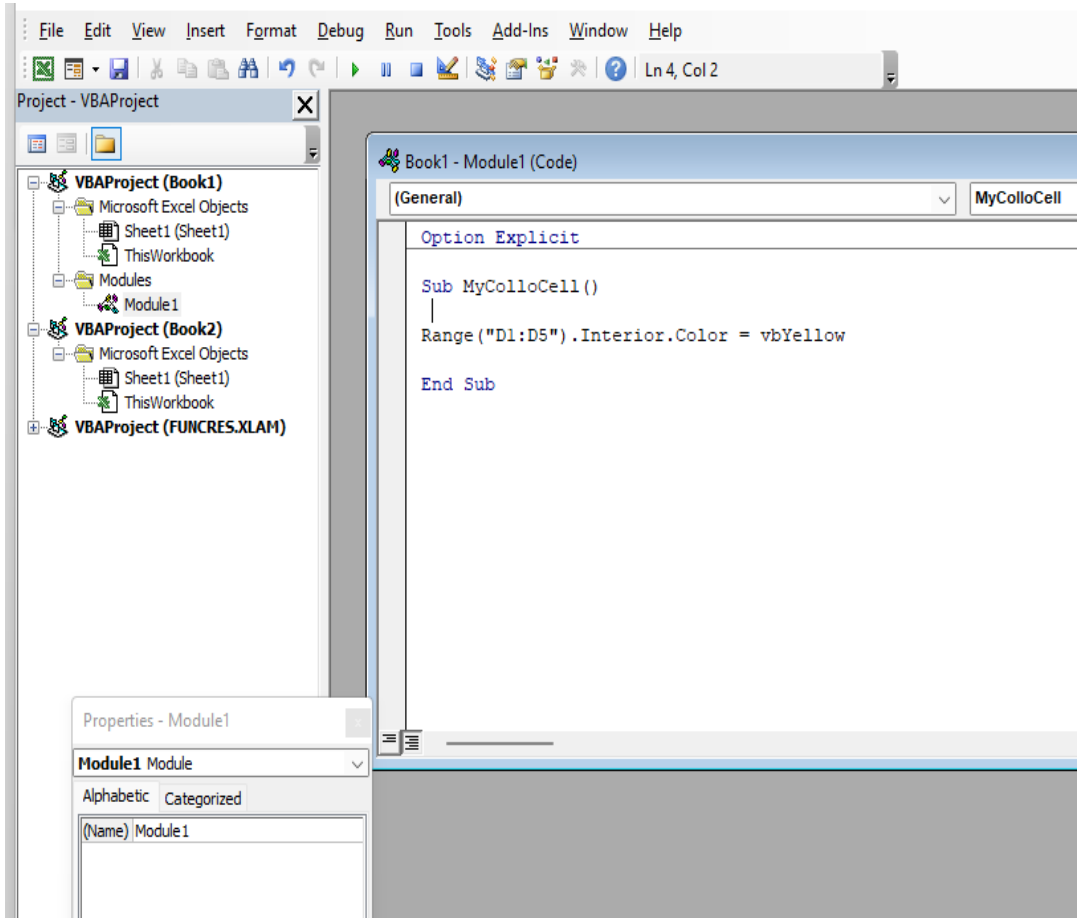


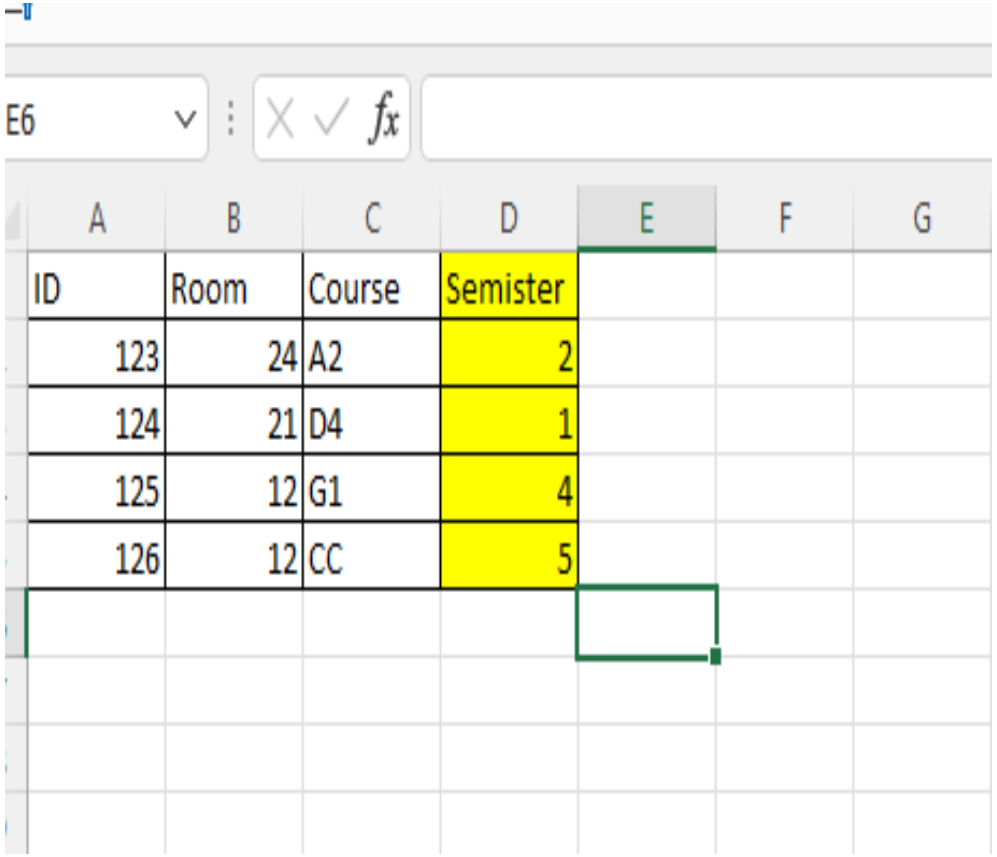
5. Create a VBA procedure that changes the font color of table to bold.





6. Create a VBA procedure that adds a yellow explanation column to right of table.(the header of that column is explanation and fill that column by yellow)

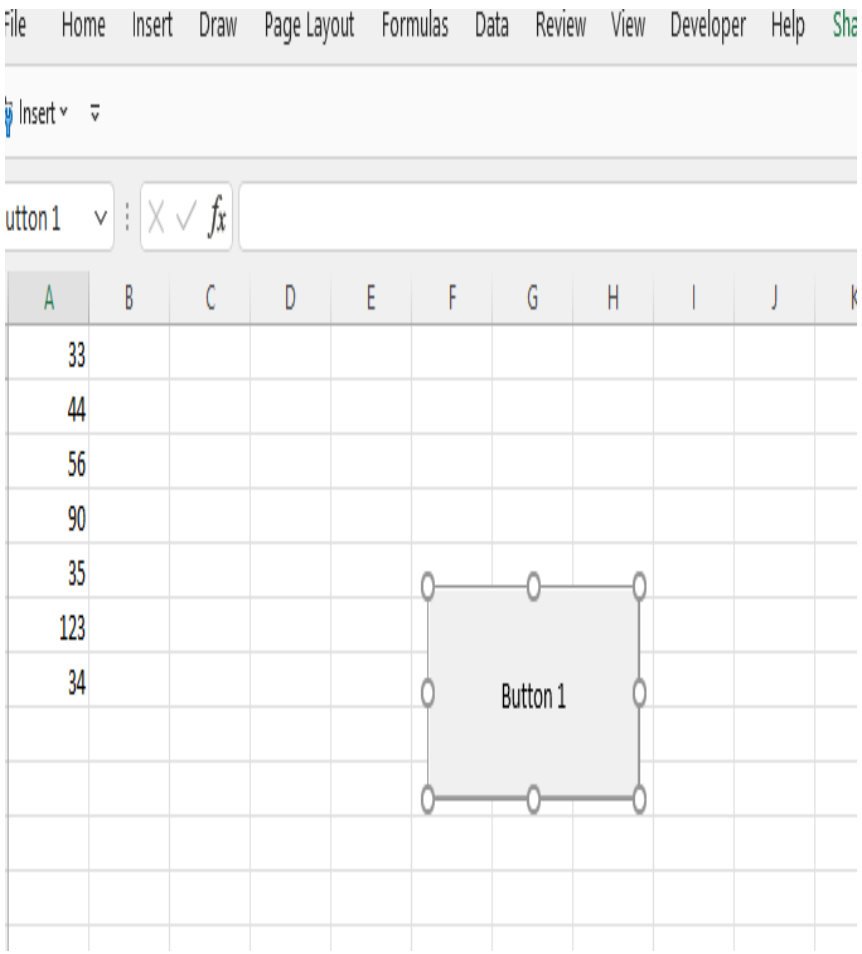


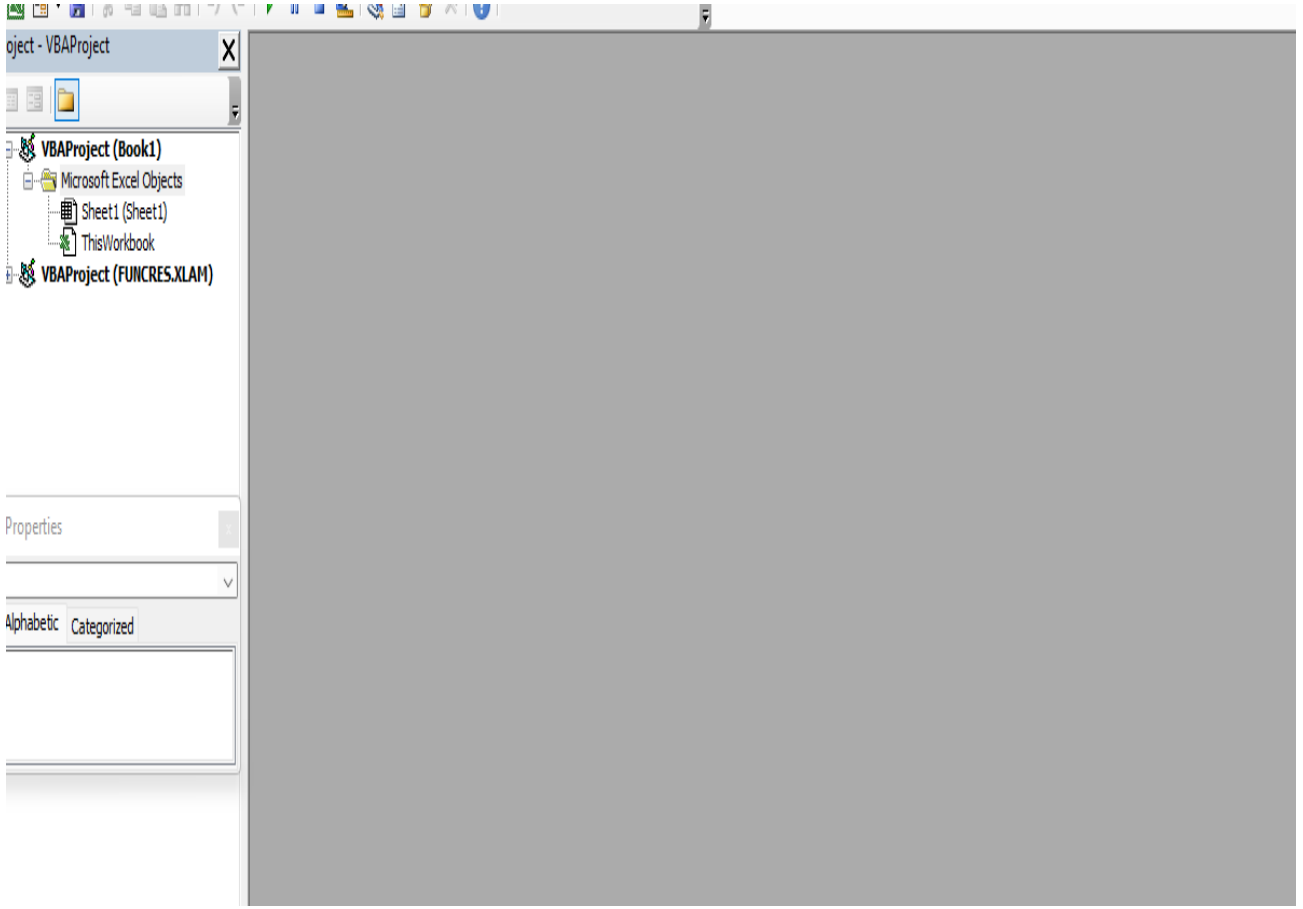


7. Create a VBA procedure that uses loop

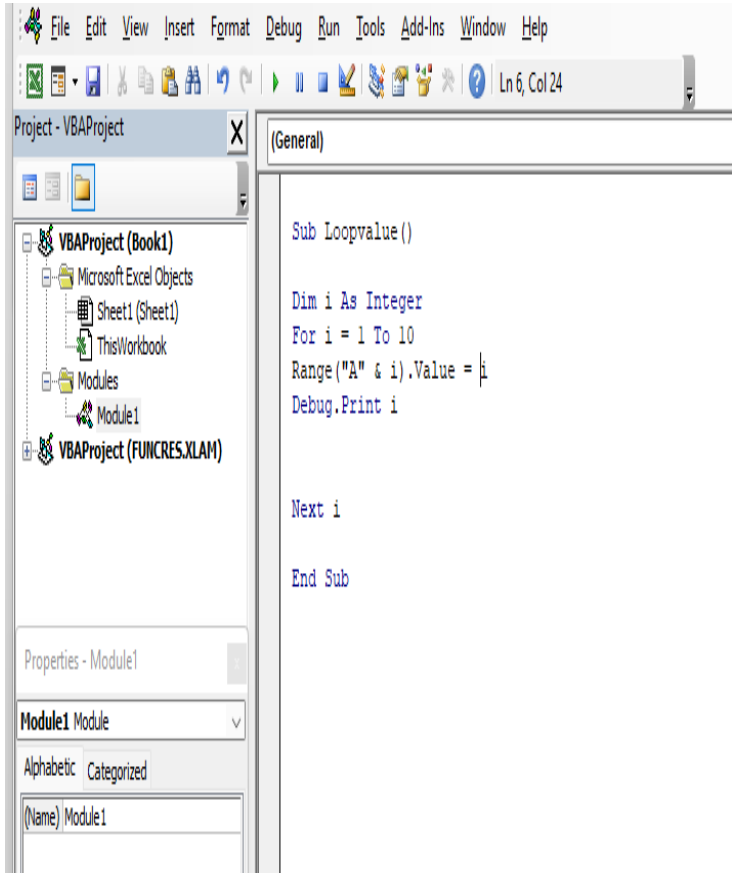
- loops are a programming concept that allows a program to repeat itself. They help to refract your code, reducing the number of specifically-coded actions that are written to help improve the speed and efficiency of your applications.
- Loops are flexible tools, giving you the option to repeat a certain action (such as changing cell values) a set number of times. A loop could also be combined with other statements, such as For and If, that help to determine how often, and for how long, a script should run.

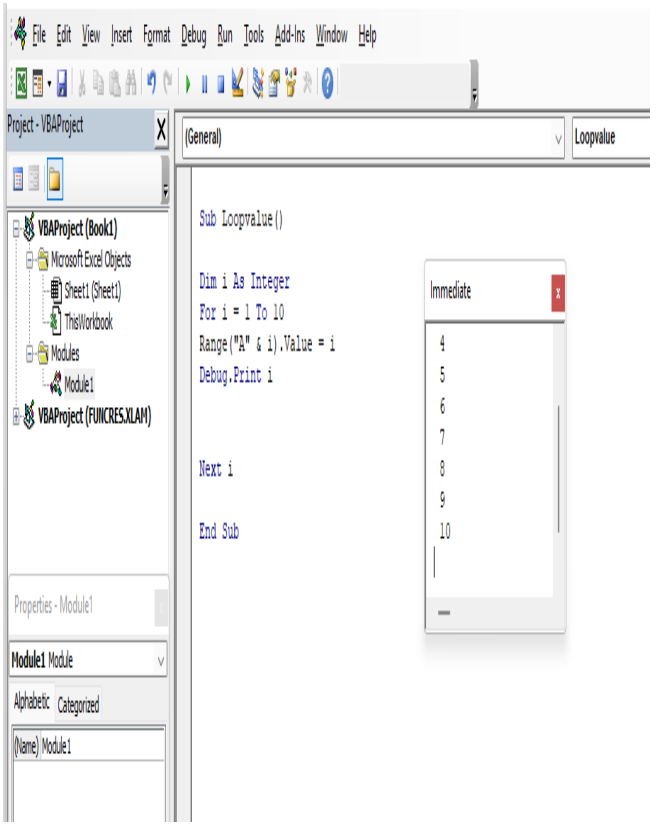
assigning macro loop and opening VBE to Insert module for procedure

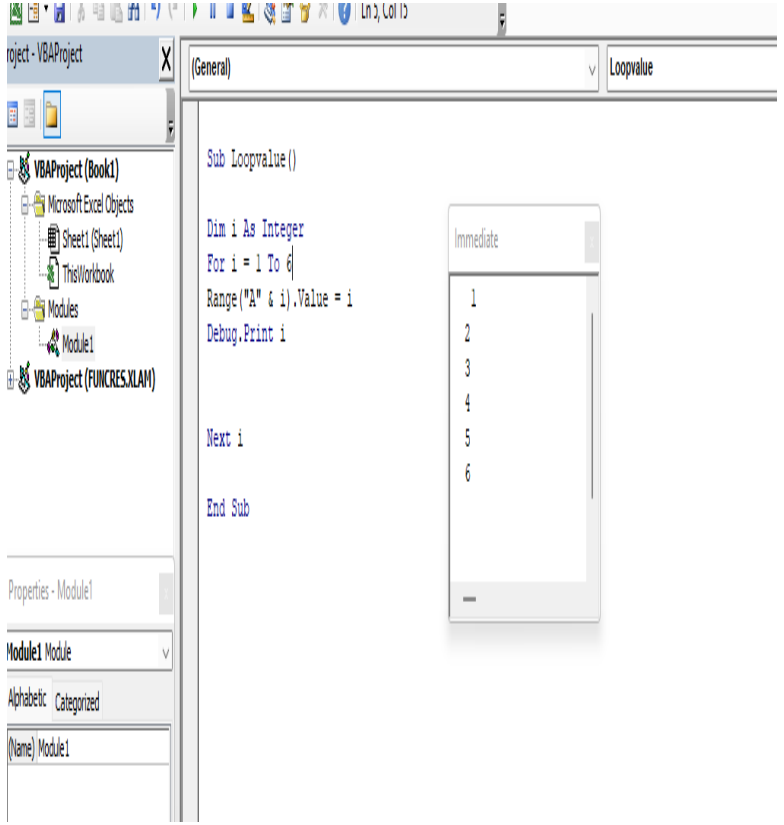




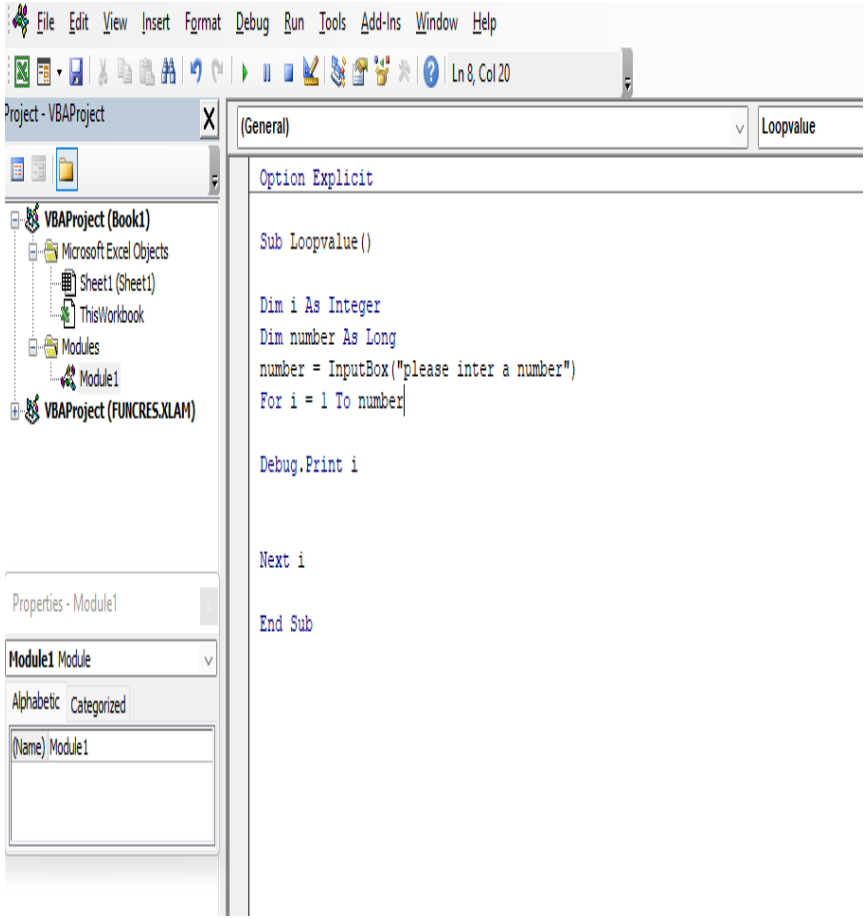
Loop procedure Coding for 1 to 10 small and long ranges loop

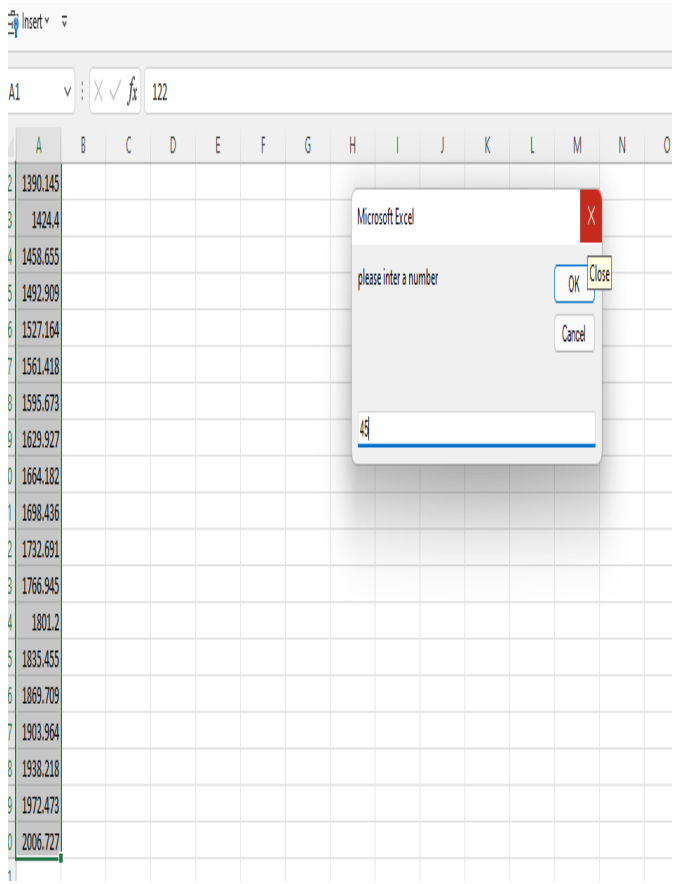


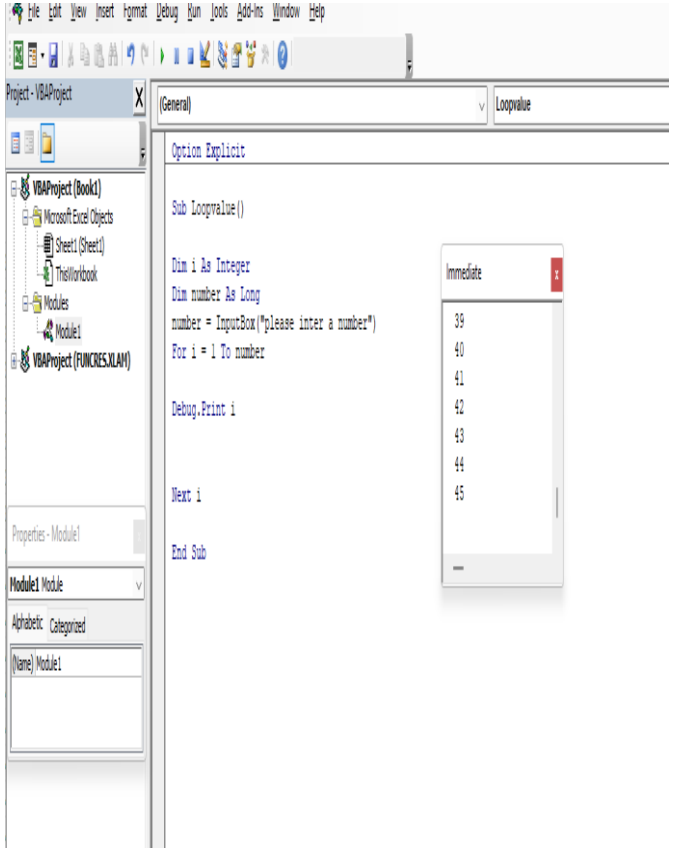




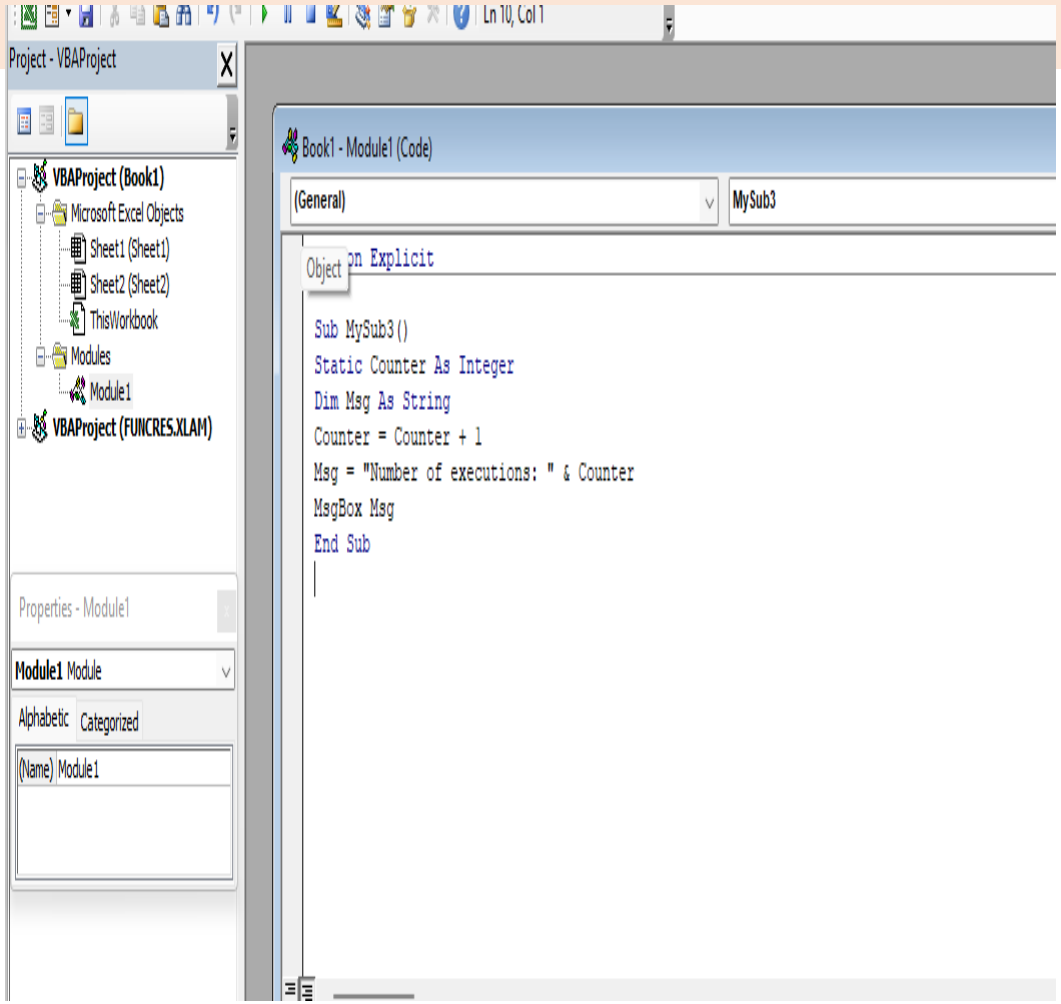
Lookup coding module for long integers

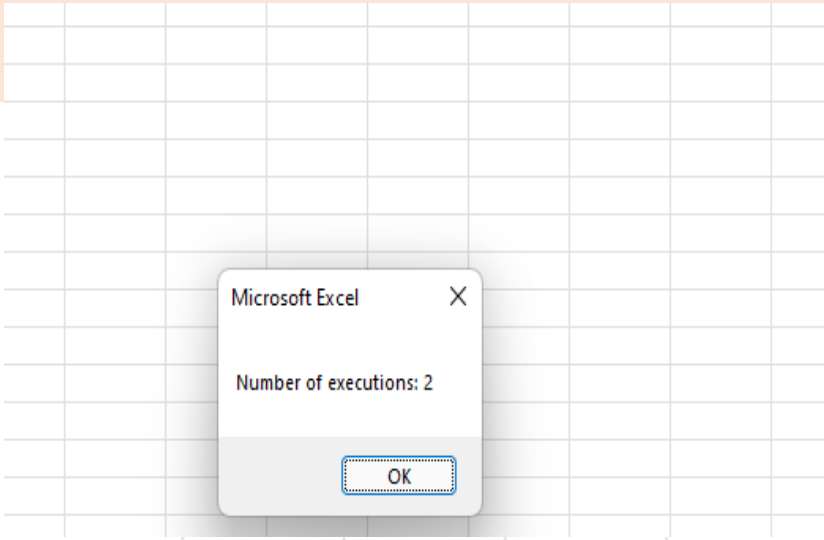


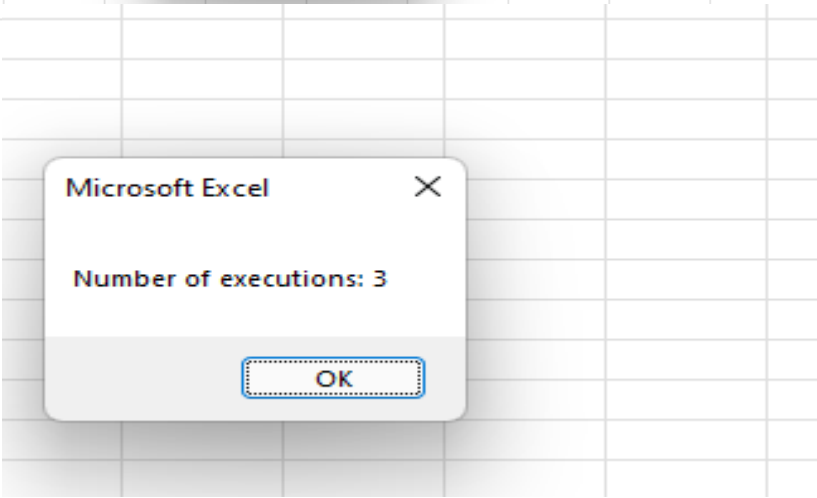




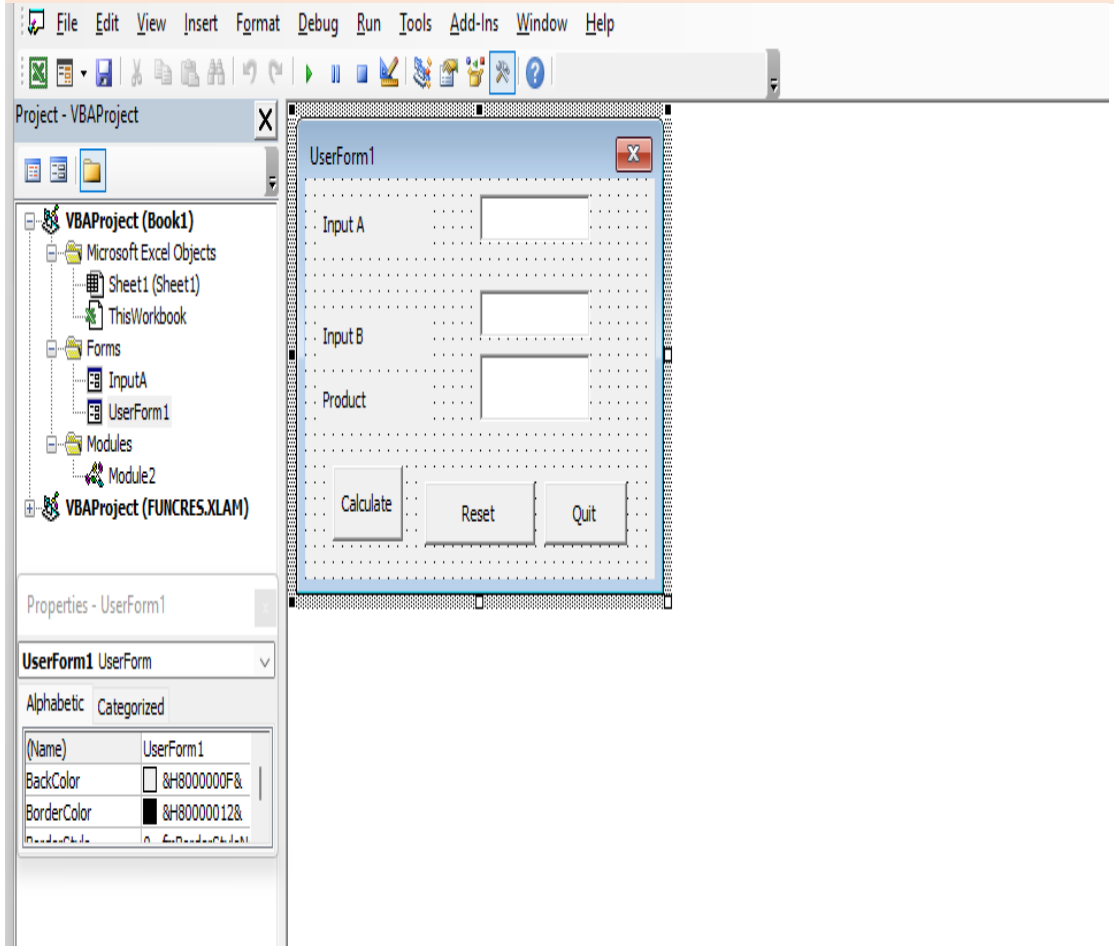
8. Create a message box that displays number of executions of one procedure

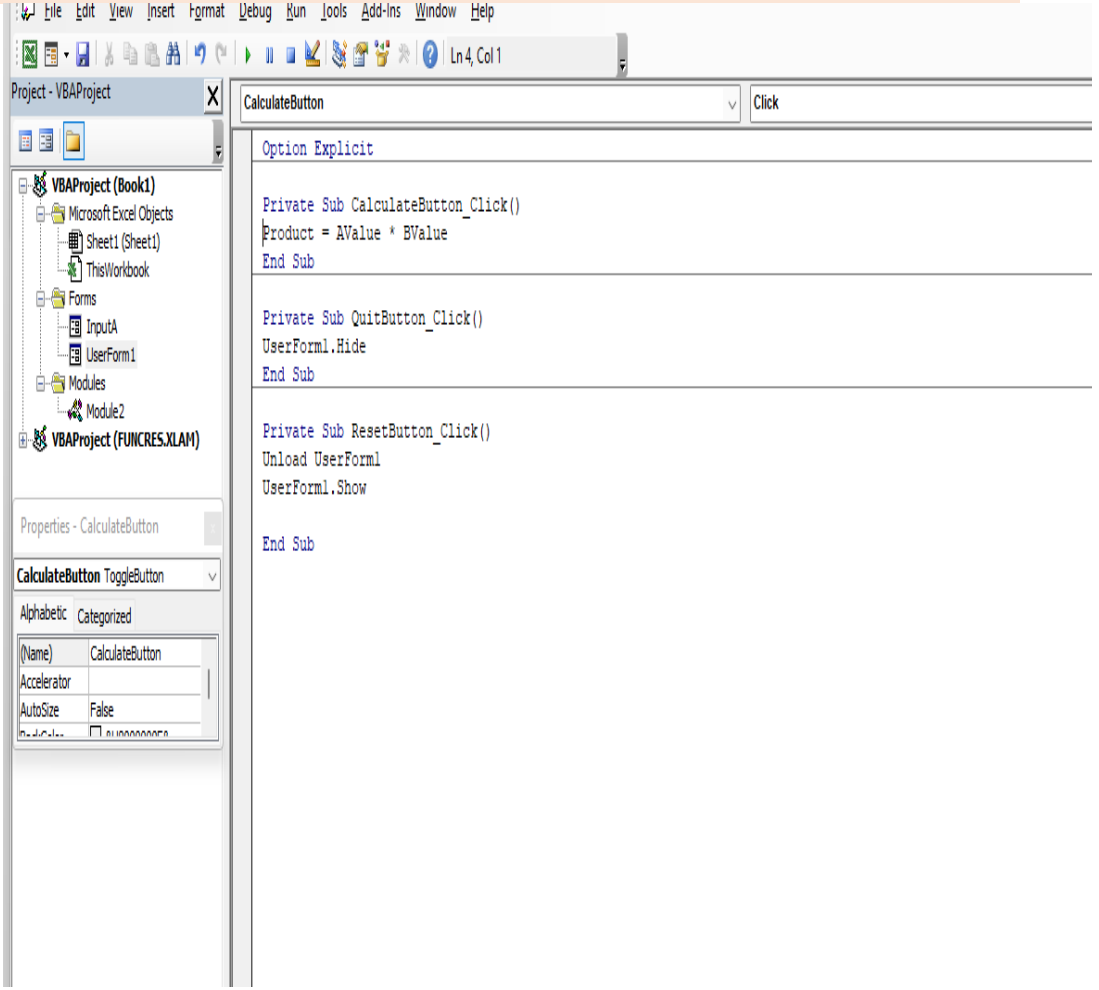




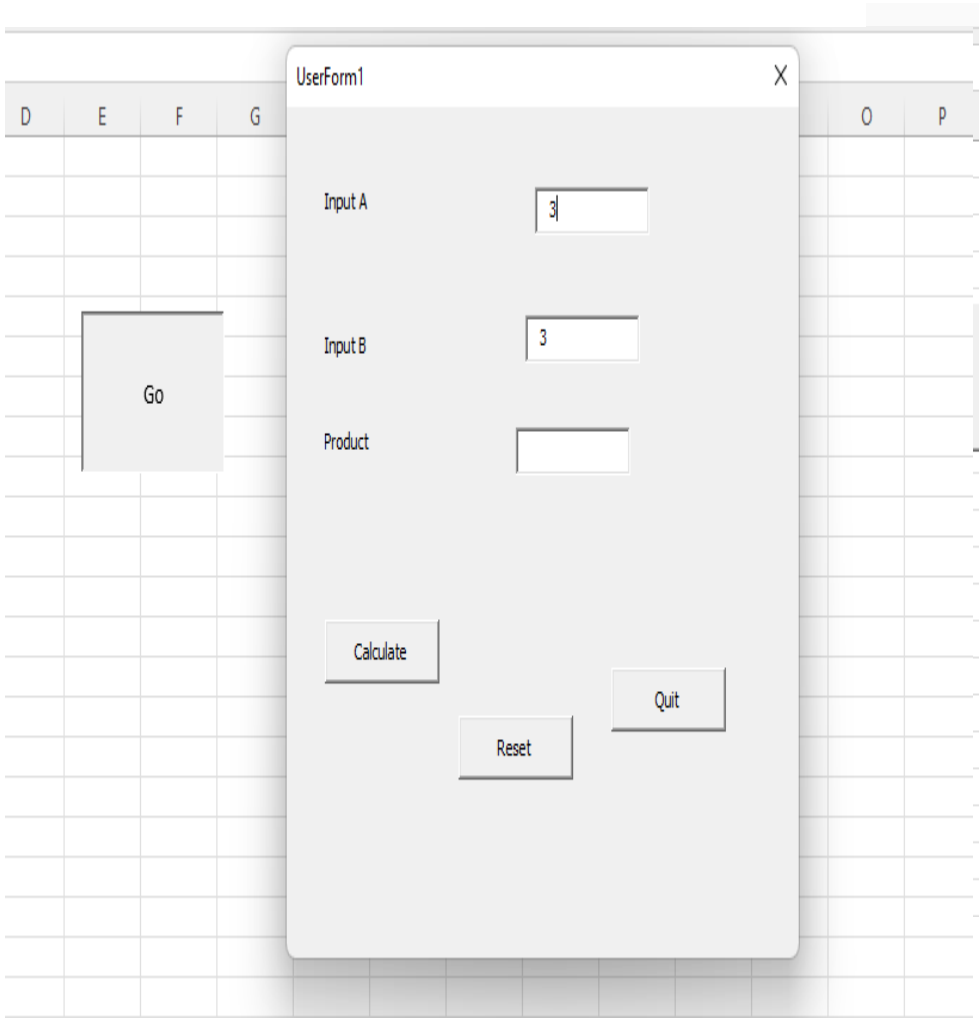


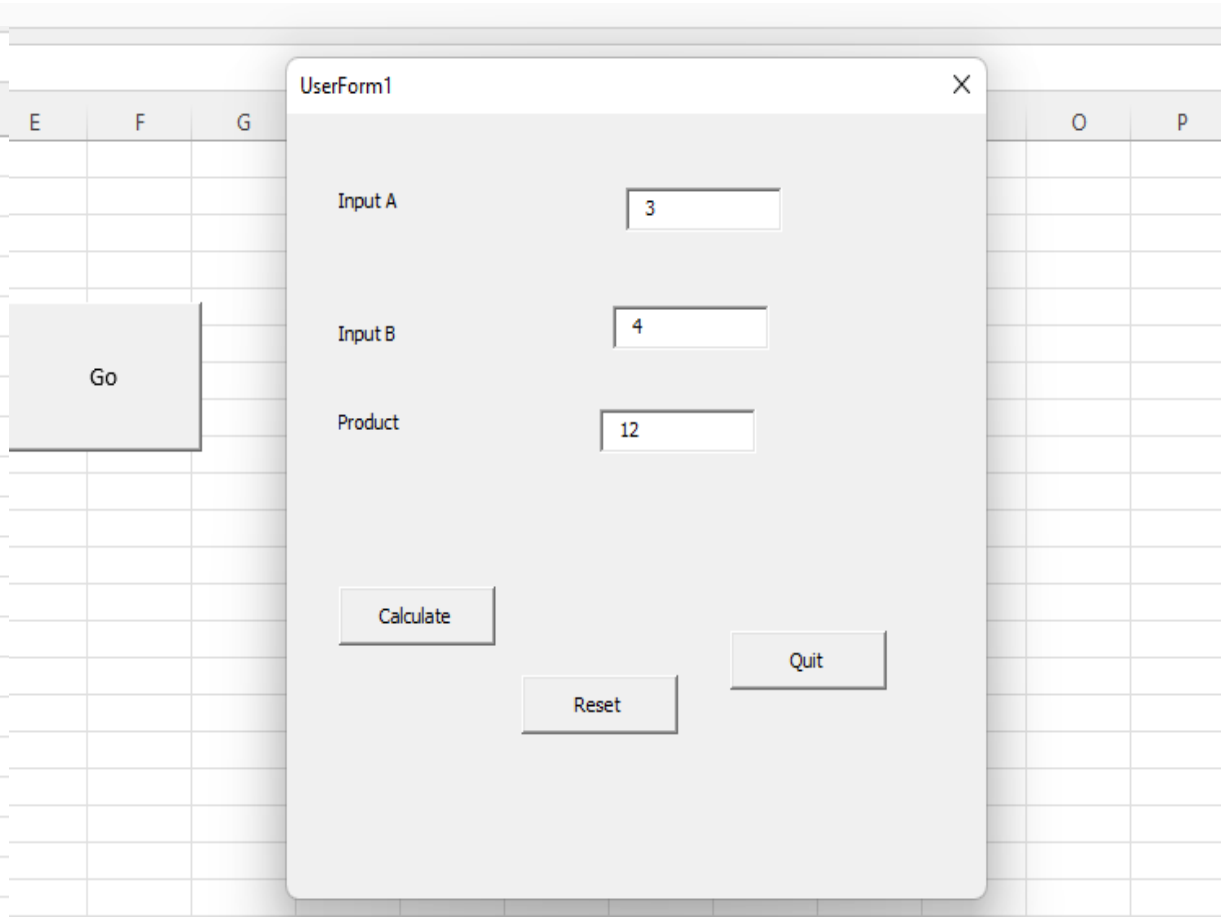
9. Create a user Form that has two text boxes and a button to calculate sum and show it in a message box.



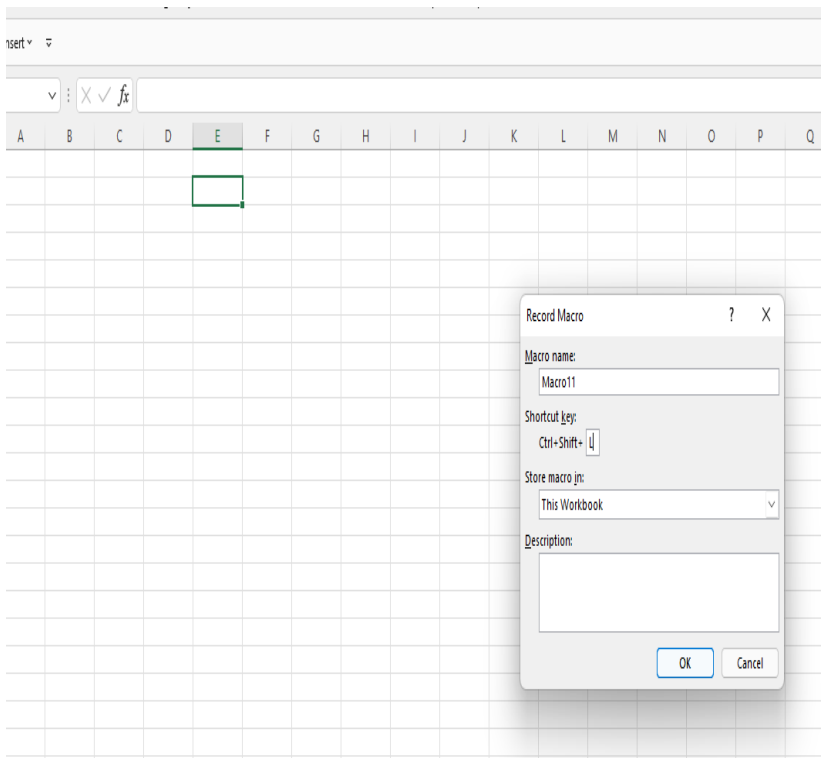


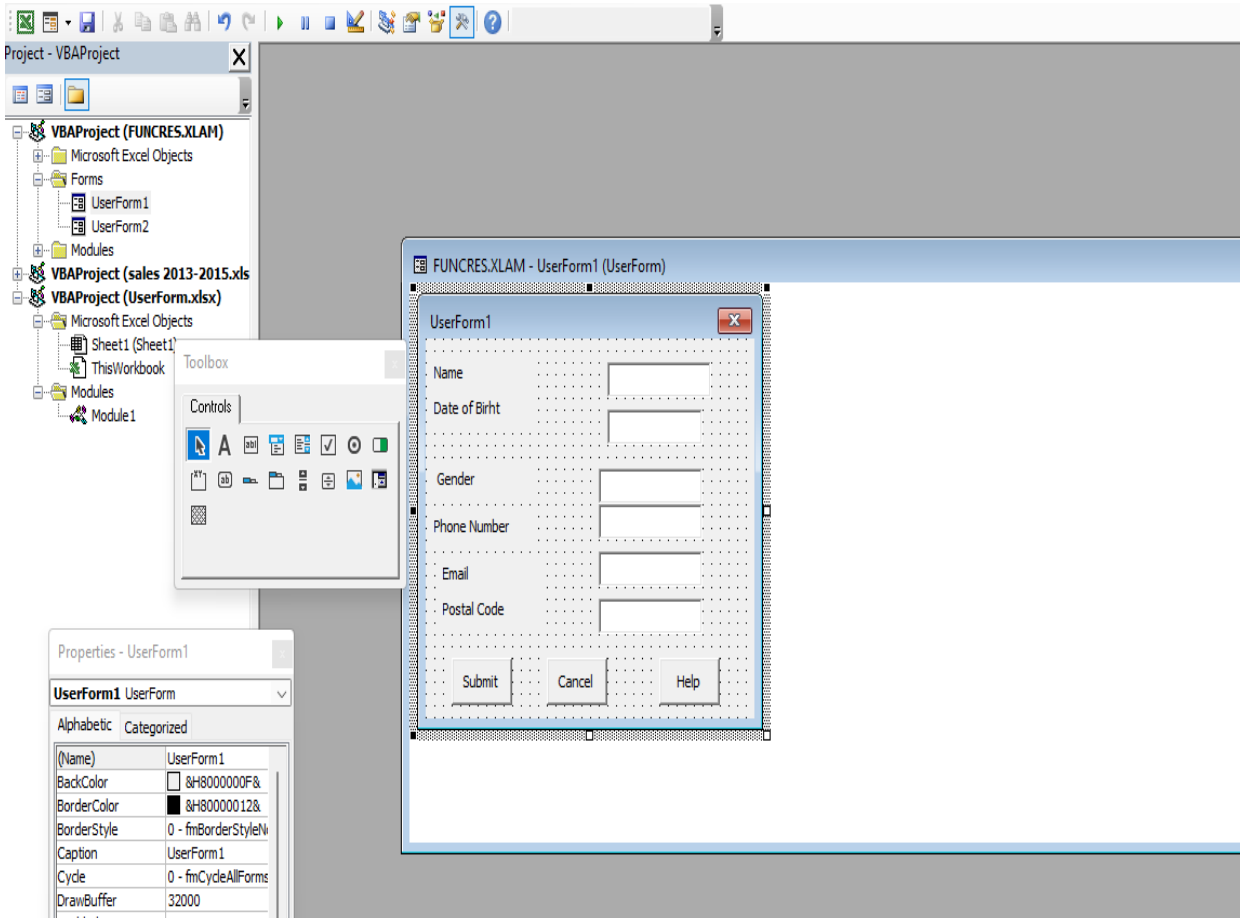
Two text boxes and a button to calculate sum Cont'd





10. create a User Form in Excel VBA to get name , date of birth , gender, telephone number, email , and postal code from the user and store the value provided by the user in the worksheet





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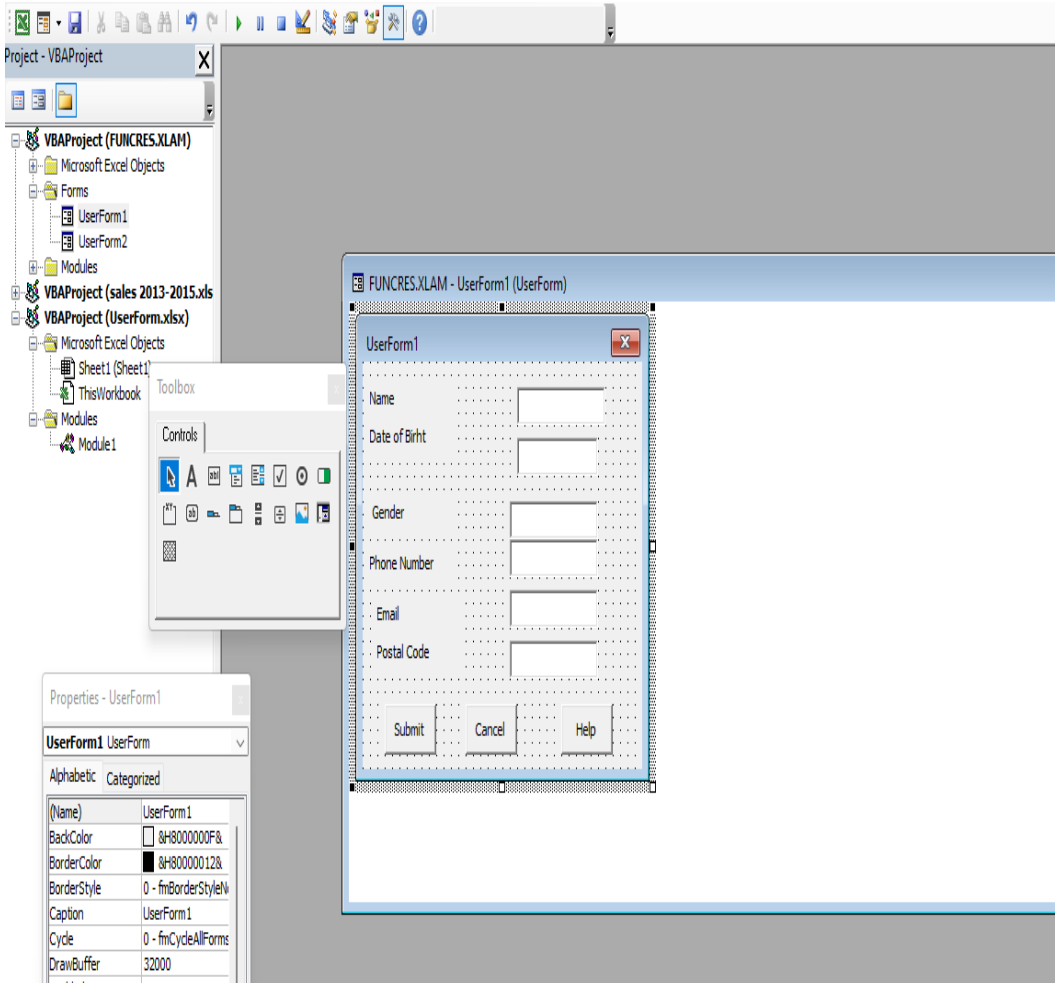
Project - VBAProject
VBAProject (FUNCRES.XLAM)
Microsoft Excel Objects
Forms
UserForm1
UserForm2
Modules
VBAProject (sales 2013-2015.xls
VBAProject (UserForm.xlsx)
Microsoft Excel Objects
Sheet1 (Sheet1)
ThisWorkbook
Modules
Module1
Toolbox
Controls
FUNCRES.XLAM - UserForm1 (UserForm)
UserForm1
Name
Date of Birht
Gender
Phone Number
Email
Postal Code
Submit
Cancel
Help
Properties - UserForm1
UserForm1 UserForm
Alphabetic
Categorized
(Name) UserForm1
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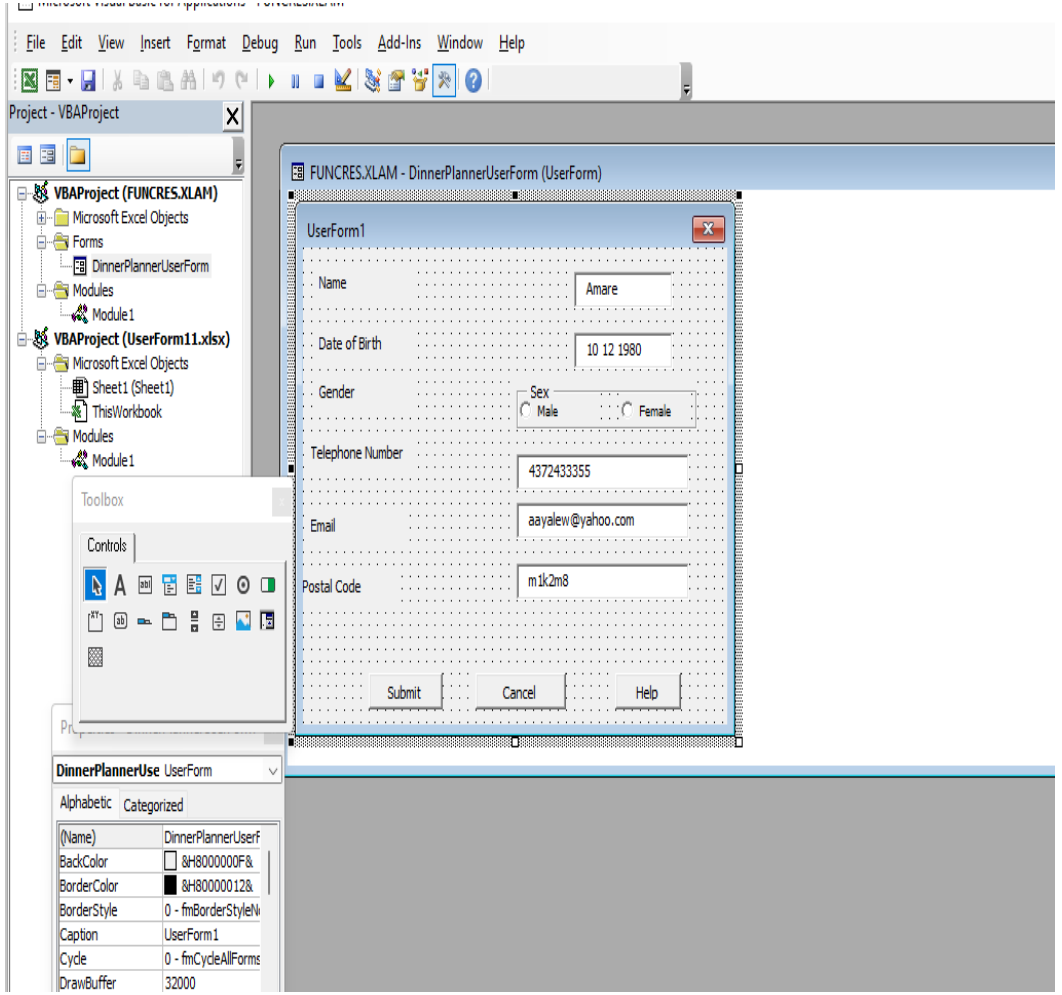
Caption UserForm1
Cycle 0 - fmCycleAllForms
DrawBuffer 32000


File Edit View Insert Format Debug Run Tools Add-Ins Window Help
Project - VBAProject
VBAProject (FUNCRES.XLAM)
Microsoft Excel Objects
Forms
DinnerPlannerUserForm
Modules
Module1
VBAProject (UserForm11.xlsx)
Microsoft Excel Objects
Sheet1 (Sheet1)
ThisWorkbook
Modules
Module1
Toolbox
Controls
FUNCRES.XLAM - DinnerPlannerUserForm (UserForm)
UserForm1
Name
Amare
Date of Birth
10 12 1980
Gender
Sex
Male
Female
Telephone Number
4372433355
Email
aayalew@yahoo.com
Postal Code
m1k2m8
Submit
Cancel
Help
DinnerPlannerUse UserForm
Alphabetic
Categorized
(Name) DinnerPlannerUserF
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Cycle 0 - fmCycleAllForms
DrawBuffer 32000

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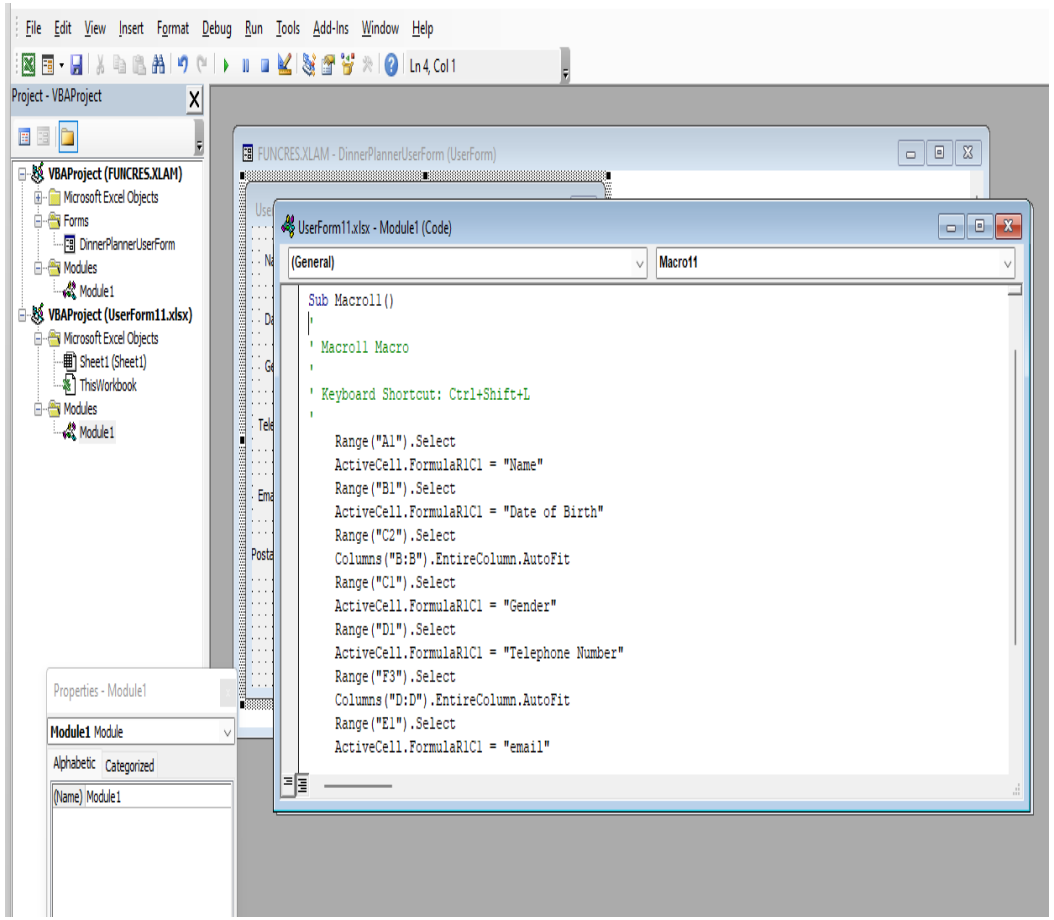
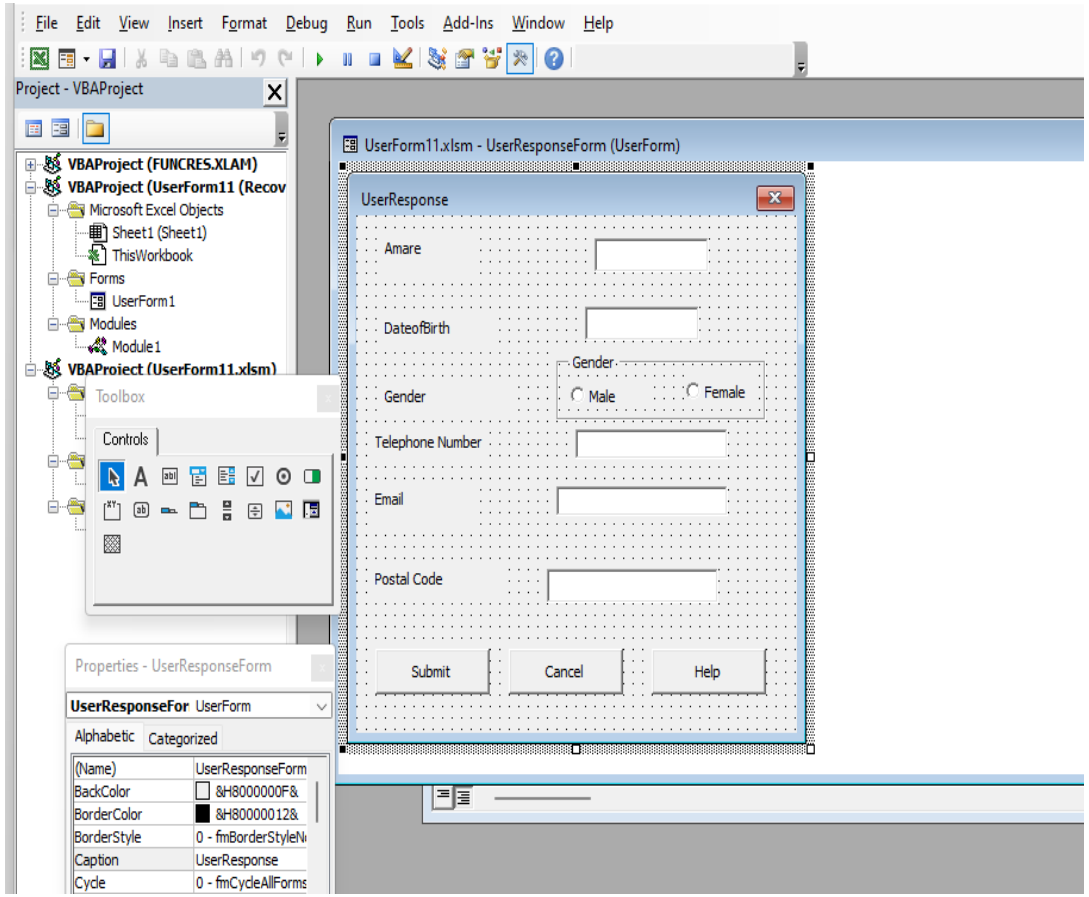

File Edit View Insert Format Debug Run Tools Add-Ins Window Help
Project - VBAProject
VBAProject (FUNCRES.XLAM)
Microsoft Excel Objects
Forms
DinnerPlannerUserForm
Modules
Module1
VBAProject (UserForm11.xlsx)
Microsoft Excel Objects
Sheet1 (Sheet1)
ThisWorkbook
Modules
Module1
FUNCRES.XLAM - DinnerPlannerUserForm (UserForm)
UserForm11.xlsx - Module1 (Code)
(General)
Macro11
Sub Macro11()
' Macro11 Macro
' Keyboard Shortcut: Ctrl+Shift+L
Range("A1").Select
ActiveCell.FormulaR1C1 = "Name"
Range("B1").Select
ActiveCell.FormulaR1C1 = "Date of Birth"
Range("C2").Select
Columns("B:B").EntireColumn.AutoFit
Range("C1").Select
ActiveCell.FormulaR1C1 = "Gender"
Range("D1").Select
ActiveCell.FormulaR1C1 = "Telephone Number"
Range("F3").Select
Columns("D:D").EntireColumn.AutoFit
Range("E1").Select
ActiveCell.FormulaR1C1 = "email"
Properties - Module1
Module1 Module
Alphabetic Categorized
(Name) Module1


File Edit View Insert Format Debug Run Tools Add-Ins Window Help
Project - VBAProject
VBAProject (FUNCRES.XLAM)
VBAProject (UserForm11 (Recov
Microsoft Excel Objects
Sheet1 (Sheet1)
ThisWorkbook
Forms
UserForm1
Modules
Module1
VBAProject (UserForm11.xlsm)
Toolbox
Controls
UserForm11.xlsm - UserResponseForm (UserForm)
UserResponse
Amare
DateofBirth
Gender
Male
Female
Telephone Number
Email
Postal Code
Submit
Cancel
Help
Properties - UserResponseForm
UserResponseFor UserForm
Alphabetic Categorized
(Name) UserResponseForm
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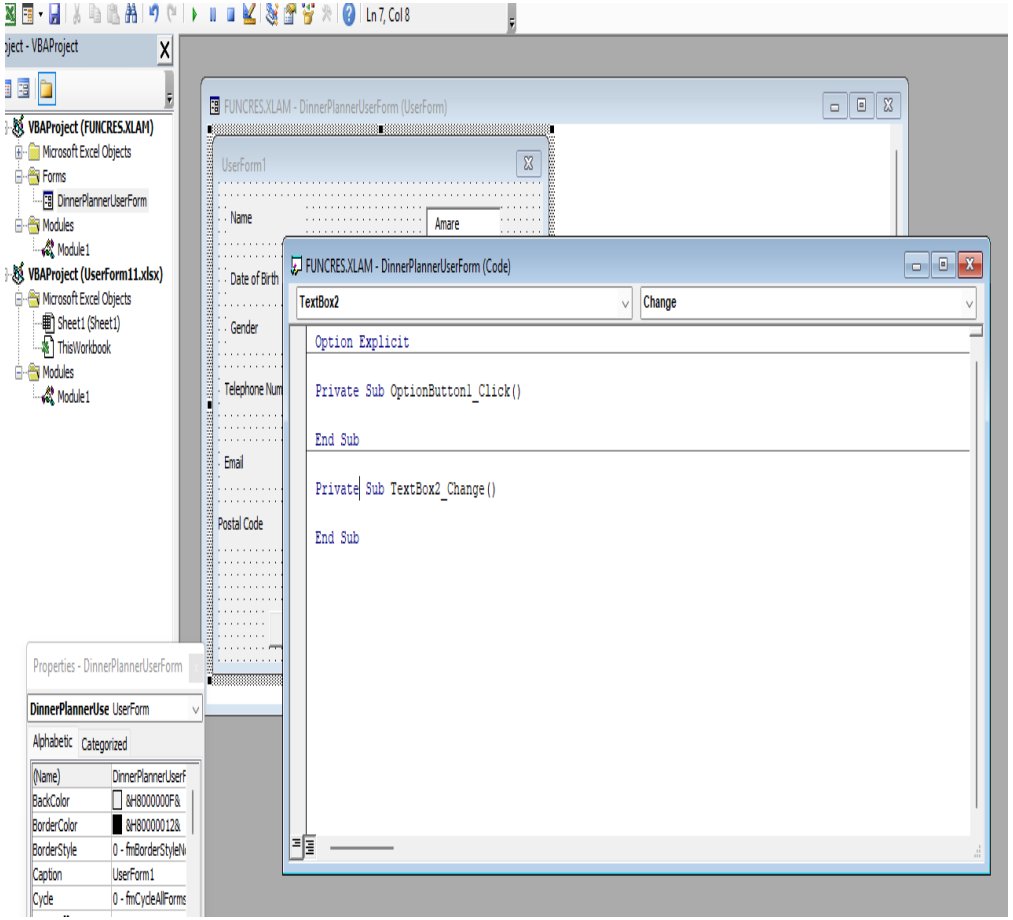
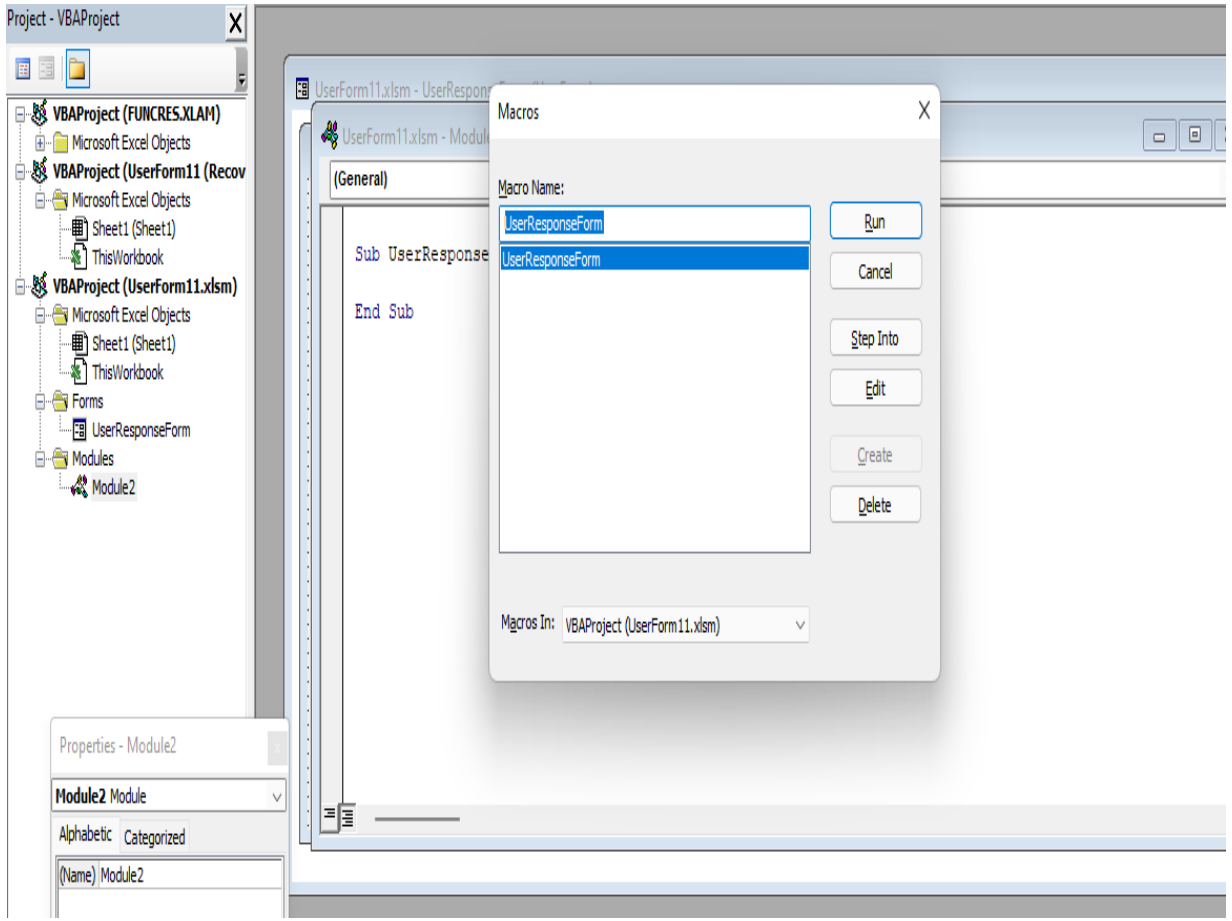
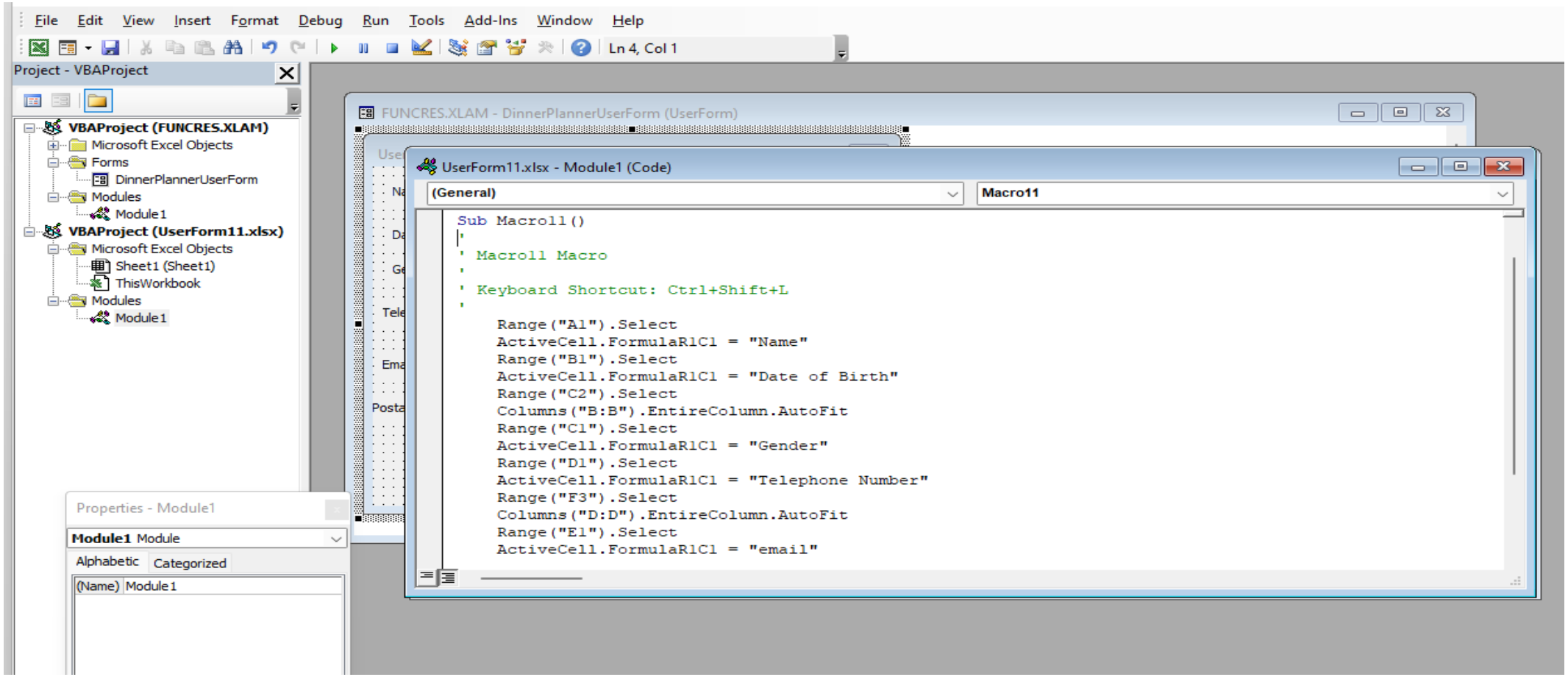
BorderStyle 0 - fmBorderStyleN
Caption UserResponse
Cycle 0 - fmCycleAllForms

Dialog Box on the module form Macro





Code for initiation



Conclusion

1. The company have been sold the greatest sales in 2015 and Parker was sold more products followed by Lee.
2. The company sales increased by 4.67% in 2015 in relation with 2014 sales. In each year(2013 & 2015) April is the good sales season and customers had some preference for some products.
3. The company have been more sales in the central region in both 2013 and 2015 years and has much more sales difference than other regions.
4. Ice-cream is the maximum sold product by the company in 2013 and 2015

Recommendations

- The company must promote all the products available for West, south and North sales regions to reach out more customers by differentiating products to customers to build its commutative advantage
- Training salespersons North, West and South sales regions to address new customers and retain royal customers by developing customer driven product features.
- Declaring the best salesperson of the year to acknowledge for employees with maximum sales for the year.
- Maximize the supply of seasonal products to customers by analyzing product attributes before shifting to other competitors.