

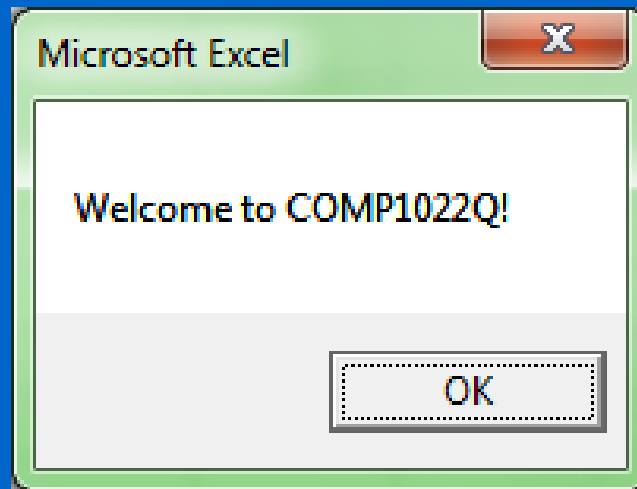
COMP1022Q  
Introduction to Computing with Excel VBA

# MsgBox and InputBox

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# What is MsgBox?

- MsgBox is a useful command to show a few words in a small window
- For example:

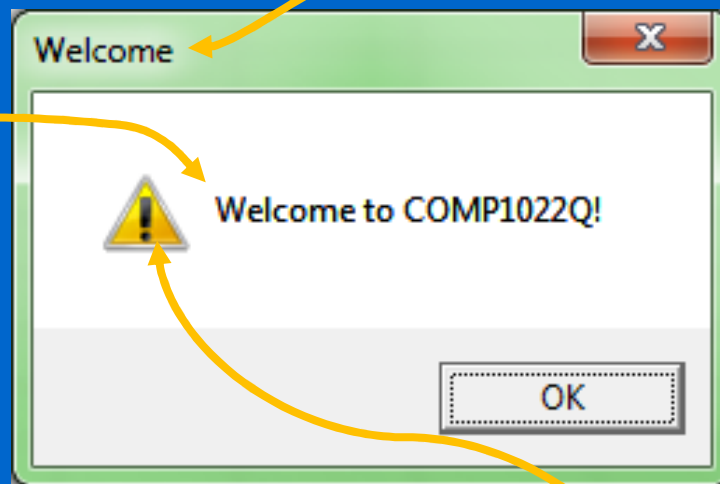


- Here is the VBA code which generates the message:

```
MsgBox "Welcome to COMP1022Q!"
```

# Changing the MsgBox Appearance

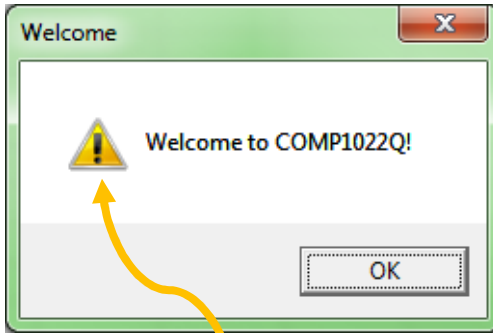
- If you want to, you can change the title and icon
- For example:







- Here is the VBA code:

```
MsgBox "Welcome to COMP1022Q!", vbExclamation, "Welcome"
```

Message text      The icon you want to use      Title of the MsgBox window



# The Types of Message

| Icon  | The name of the icon          | Description                    |
|---|-------------------------------|--------------------------------|
| (No icon)   | <code>vbDefaultButton1</code> | Default display, no icon shown |
|    | <code>vbExclamation</code>    | A warning message icon         |
|    | <code>vbCritical</code>       | A critical message icon        |
|   | <code>vbInformation</code>    | An information message icon    |
|  | <code>vbQuestion</code>       | A query icon                   |

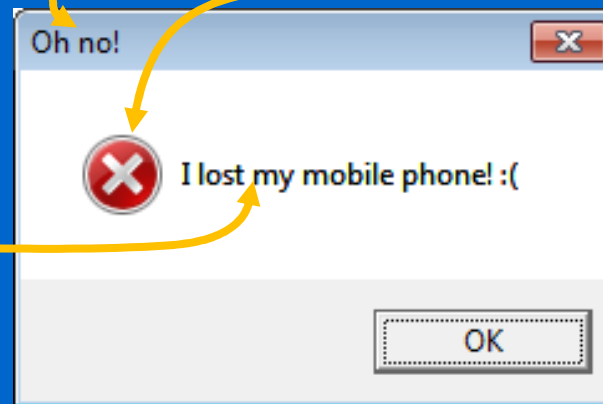
- There are some other icons you can use, but they are not very useful

# Examples

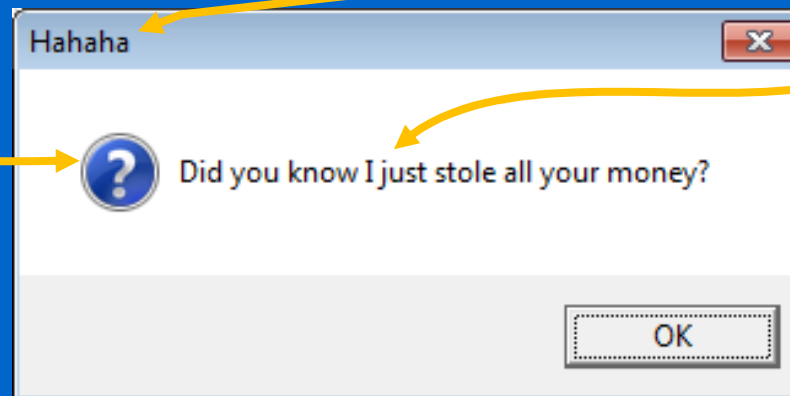
- In VBA, if you can't fit everything on one line, you can simply use an underscore, like this

```
MsgBox "I lost my mobile phone! :(" , vbCritical, _
```

```
"Oh no!"
```

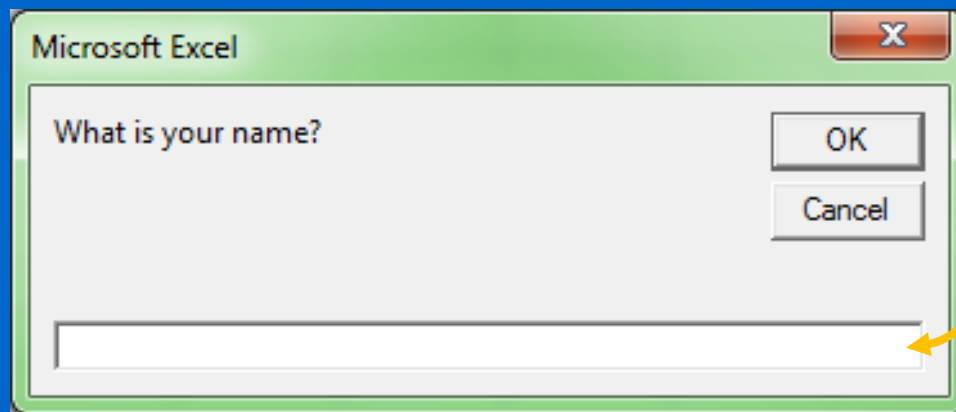


```
MsgBox "Did you know I just stole all your money?" , _  
vbQuestion , "Hahaha"
```



# What is InputBox?

- InputBox displays a message box where you can enter a value or a message



Input the  
text here

- The user simply types something, and presses OK
- After that, we need to store what the user has typed, then we can do something with it
- We store the response in a *VBA variable*

# Variables

- You can think of a variable as a box
- There are different types of box which hold different things
- In computers, 'string' means 'text'
- For our current work we want to store what text the user enters, so we want to use a *string* variable
- The VBA code looks like this:

David  
Name

*Then we  
store the  
result of the  
input box in it*

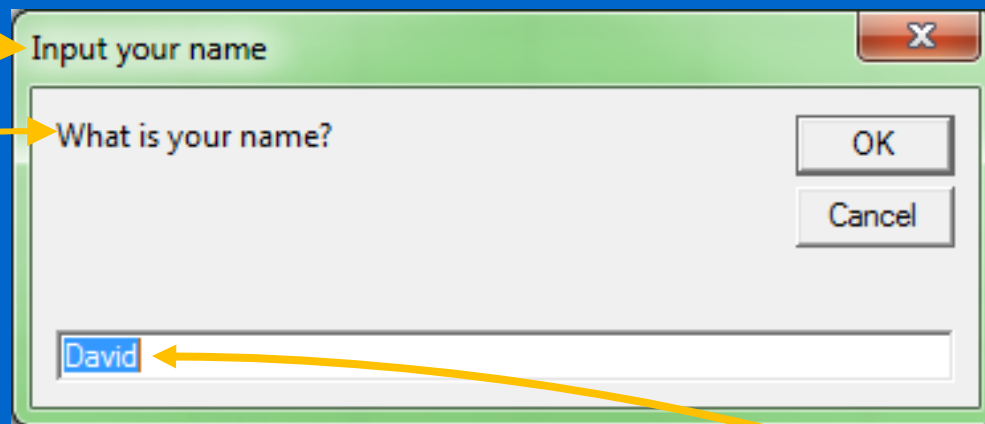
Dim Name As String

Name = InputBox("What is your name?")

*First we make  
the text variable*

# Changing the InputBox Appearance

- You can change the title and default text
- The default text is shown when the input box appears, before the user does anything
- For example:



In this example, the default text is 'David'

- The VBA code:

```
Dim Name As String
Name = InputBox( "What is your name?" , _
    "Input your name" , "David" )
```

Default  
text



# Using Both InputBox and MsgBox

- We have looked at `MsgBox` and `InputBox`
- The following example uses both
- First, it asks for a name using an input box
- Then it shows a conclusion using a message box

# Example of InputBox and MsgBox

We want this VBA code to be executed when the Excel file is opened

```
Sub Workbook_Open()
```

```
Dim Name As String
```

```
Name = InputBox("What is the best name?", _  
                "Input your name", "David")
```

The default text

```
MsgBox Name & " is the best name!", ☐, _  
      "Conclusion"
```

The title of the  
MsgBox window

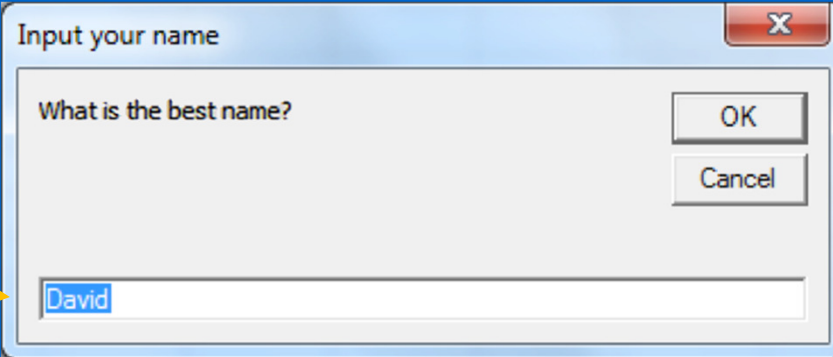
In this example we don't  
ask for any particular icon,  
so none is shown

```
End Sub
```

# Example Execution

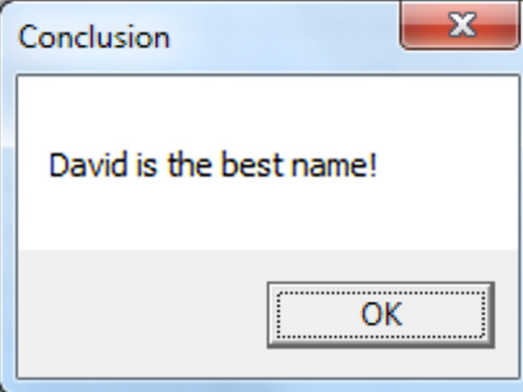
- Excel will show the input box when the Excel file is opened:

The default answer is 'David'



A dialog box titled "Input your name" with a close button (X) in the top right corner. The main area contains the text "What is the best name?" and a text input field. The input field contains the text "David". To the right of the input field are two buttons: "OK" and "Cancel".

Press OK



A dialog box titled "Conclusion" with a close button (X) in the top right corner. The main area contains the text "David is the best name!". At the bottom right is an "OK" button.

# What is the Body Mass Index?

- Let's look at another example
- Body Mass Index (BMI) is an indicator of healthiness which is calculated by your weight (kg) and height (m) like this:

$$BMI = \frac{Weight}{Height^2}$$



| Category             | BMI range       |
|----------------------|-----------------|
| Severely underweight | less than 16    |
| Underweight          | from 16 to 18.5 |
| Normal               | from 18.5 to 25 |
| Overweight           | from 25 to 30   |
| Obese                | over 30         |



# Calculating the Body Mass Index

- This example uses two input boxes
- The first input box asks for the weight (kg)
- The second input box asks for the height (cm)
- Finally, a message box shows the BMI result


# Example of Calculating the BMI

```
' This function is executed
' when the Excel file is opened
Sub Workbook_Open()
    Dim weight As Double, height As Double, BMI As Double

    weight = InputBox("Please enter your weight (kg):", _
        "Weight")
    height = InputBox("Please enter your height (cm):", _
        "Height")

    ' Change from centimeters to meters
    height = height / 100

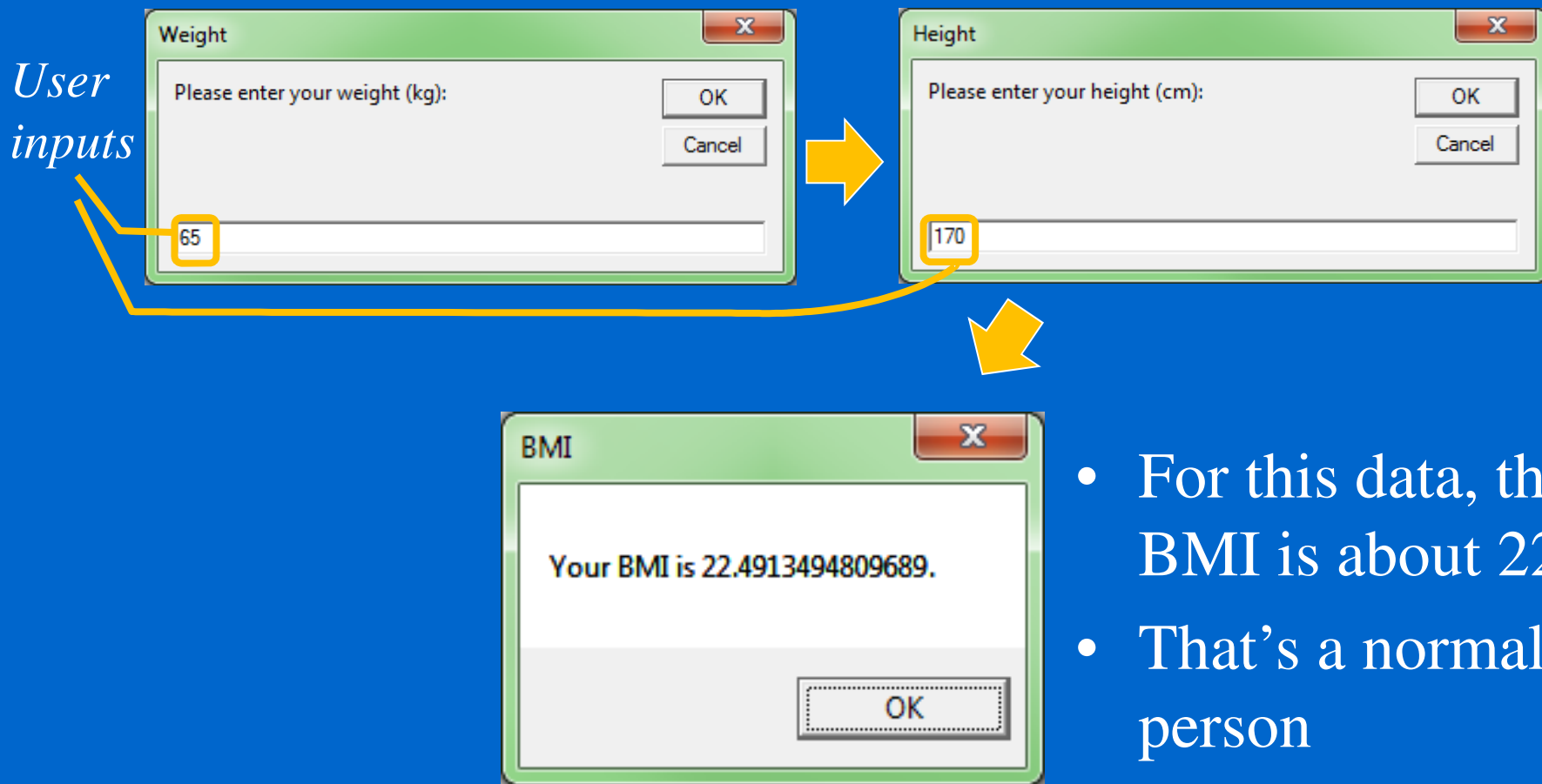
    ' Calculate the BMI
    BMI = weight / (height * height)

    MsgBox "Your BMI is " & BMI & ".", , "BMI"
End Sub
```

In this example  
we don't want to  
show an icon

# Example Execution

- Let's enter 65 for the weight and 170 for the height



- For this data, the BMI is about 22.5
- That's a normal person