COMP1022Q
Introduction to Computing with Excel VBA

Handling Errors

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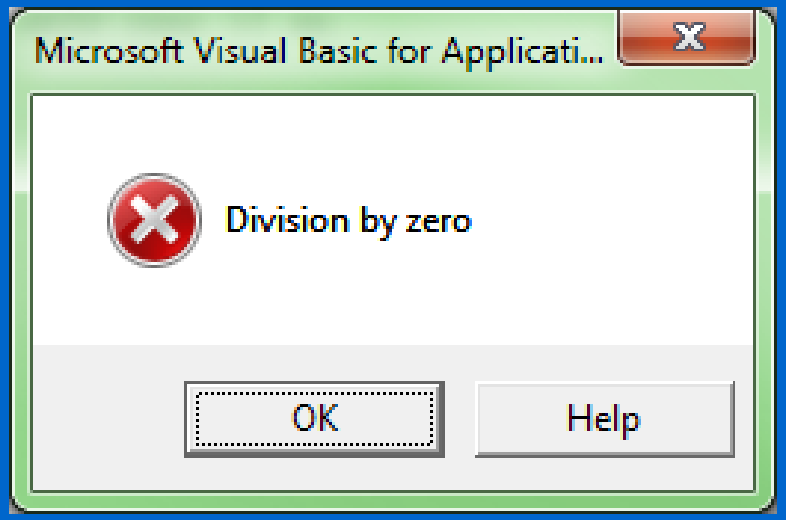
Errors in Excel VBA Programs

- It is very difficult to avoid errors while you write and run a VBA program
- If an error happens, VBA will immediately stop running the VBA code and pop up an error message
- The error message shows the type of error encountered by VBA, for example:

This error message shows that a “Division by zero” error has occurred in the VBA program



Two Types of Error

- Syntax Error
  - Occurs when you didn't write some code correctly, for example:

```
Dim x As Integer; ' VBA does not like a semi-colon!
```

  - You can fix this kind of error by fixing the bad code/bad typing
- Exception Error
  - Happens while the program is running, for example:

```
result = 42/0 ' Create a division by zero error
```

  - Sometimes this is called a 'run time error' because it happens when you run the program
  - This is the kind of error that we will consider for the rest of this presentation

Handling VBA Errors

- When an error occurs VBA shows an error message and stops running the program
- This is not very helpful because the entire program is stopped by a single error
- Sometimes you can ignore the error so that the program will not crash unexpectedly

Ignoring Errors

- *On Error Resume Next* is used to tell VBA to ignore any errors
- The meaning is “continue to run the next line of code when an error occurs”
- Here is an example:

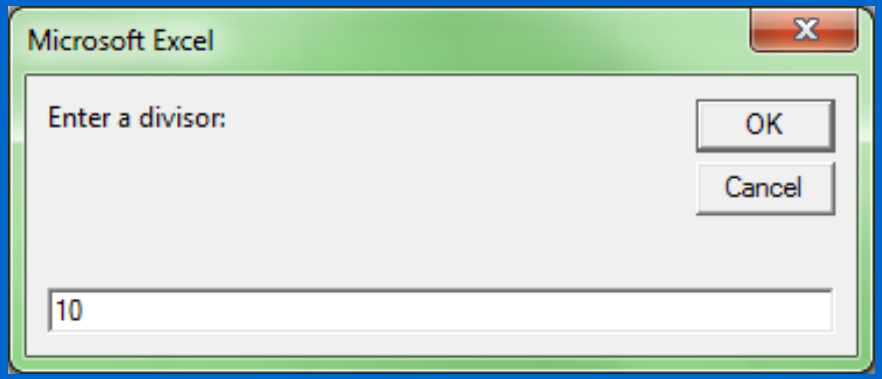
```
On Error Resume Next ' Ignore any error and continue to
                     ' run from the next line of code
InputText = InputBox("Enter a divisor: ")

MsgBox "42 / " & InputText & " = " & _
       42 / InputText & vbCrLf & _
       "The code has completed successfully!"
MsgBox "You have reached the end of the program!"
```

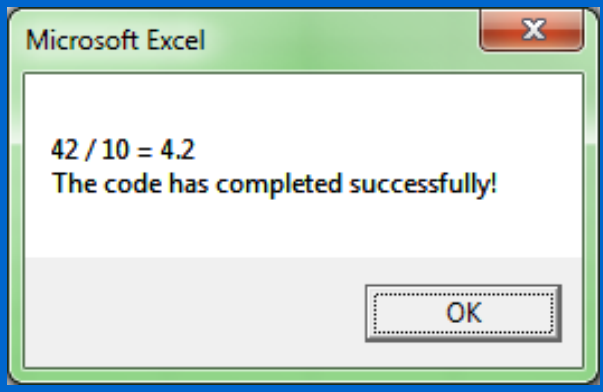
Example of Running the Program (1/3)

- '10' is entered when the program runs:

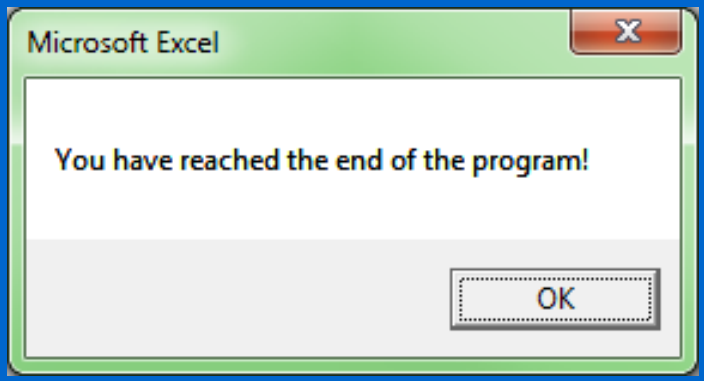
The user inputs '10' in the program:



The division is executed successfully



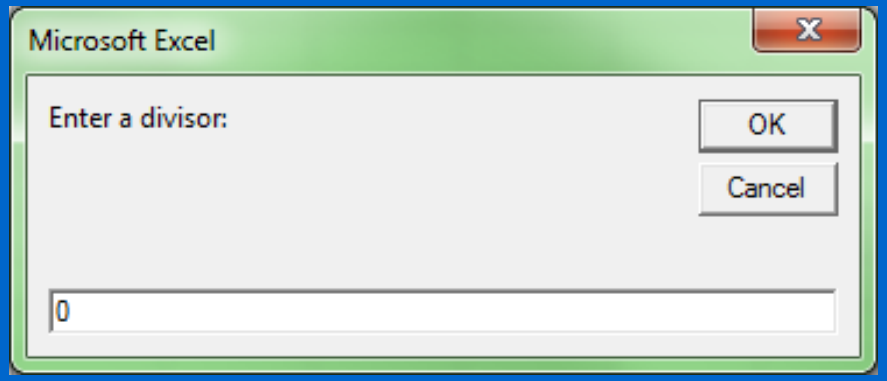
The last line of code is executed



Example of Running the Program (2/3)

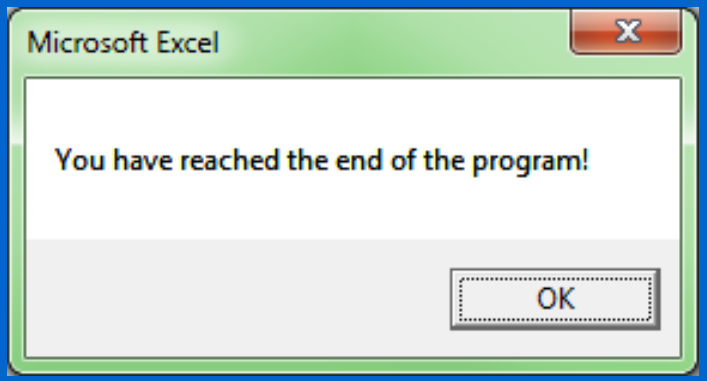
- '0' is entered when the program runs:

The user inputs '0' in the program:



- An error occurs when the program tries to divide a number by zero
- Therefore, the program continues to run from the next line of code

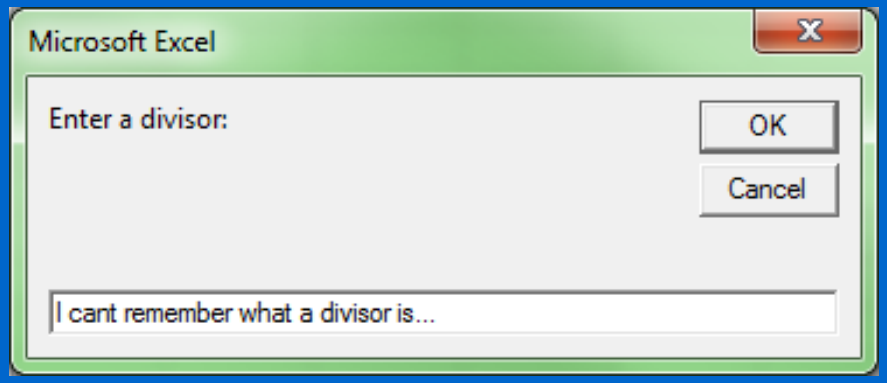
The last line of code is executed



Example of Running the Program (3/3)

- ‘I cant remember what a divisor is...’ is entered when the program runs:

The user inputs a piece of text in the program:



- An error occurs when the program expects a number but a piece of text is given instead
- This is called a ‘type mismatch’ error

The last line of code is executed