COMP1022Q
Introduction to Computing with Excel VBA
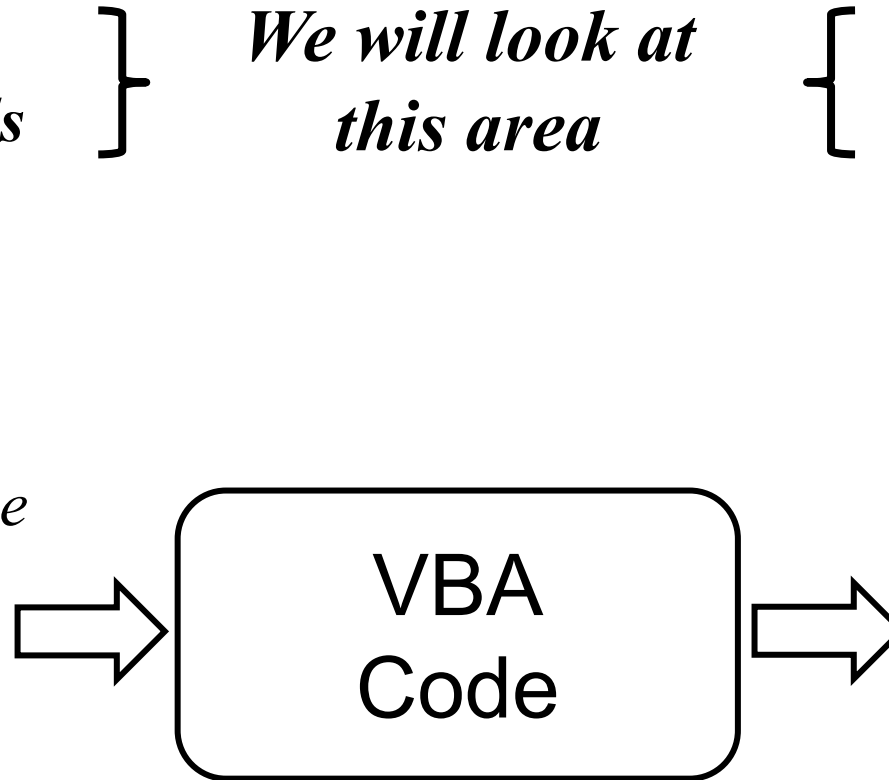
Referring to Cells in VBA

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Outcomes

- After completing this presentation, you are expected to be able to:

    1. Use the `Range` command and the `Cells` command to read and write a cell in VBA

    2. Write code to access cells in different worksheets in VBA

    3. Work with the currently selected cell and the current worksheet

Inputs

- **Inputs can come from cells**
- *Inputs can be entered in a small window (`InputBox`)*
- *Inputs can come from files*
- *Inputs can come from web pages*
- *Inputs can come from mouse movement*
- *. . . more . . .*

We will look at this area

```
VBA
Code
```

Outputs

- **Results can go in cells**
- *Results can be shown in a small window (`MsgBox`)*
- *Results can go in files*
- *Results can be sent to web pages*
- *We can generate shapes*
- *. . . more . . .*

Reading/Writing Cells Using Range

- You can use `Range` to read and write a cell value using VBA code

- For example, you can

  - read the content of cell B4 and put it into a VBA variable called `Result` using this code:

    ```
    Result = Range("B4").Value
    ```

  - put a string "Hello" into cell C4:

    ```
    Range("C4").Value = "Hello"
    ```

Range Uses Cell References

- Range uses a cell reference, e.g. "A4", like this:

```
Range("A4").Value
```

- You can also use a named cell

- For example, if a cell has been named "InputValue" to access the content you can do this:
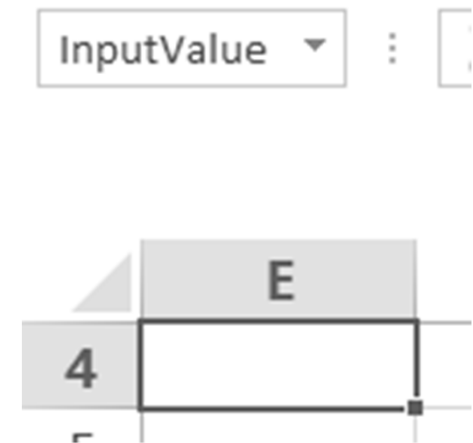
```
Range("InputValue").Value
```

to refer to that cell in VBA

- Range can also refer to multiple cells like this:

```
' Clear the content of five cells
Range("A6:A10").ClearContents
```

Using `Cells()`

- Another way to read or write a cell is to use `Cells` with the row and column number of the cell

- For example, to read cell B4 using `Cells`, you need to do this:

The row and column number of the cell

```
Result = Cells(4, 2).Value
```

- The good thing about `Cells` is that you only need to use two numbers; that is easier for programming than handling a letter and a number e.g. "A2"

- However, that means you can only refer to one single cell using `Cells`

Comparing `Range()` and `Cells()`

- To refer to the selected cell shown on the right we can use one of the following code:

  - Using `Range` with a cell reference

    ```
    Range("C10").Value
    ```

  - Using `Range` with the name of the cell

    ```
    Range("MyAge").Value
    ```

  - Using `Cells` with the row and column number

    ```
    Cells(10, 3).Value
    ```