# Building the Code and Adding References



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#### Building the Code and Adding References

Designing a Class Module

Creating a Class Module

Properties and Methods

External References and Events

Testing
Class Modules



# Planning





#### Jo's Class



**Search Processor** 



#### How to Obtain Search Data











## Properties



**Source Named Range** 



**Target Range** 



**Maximum Number of Selected Items** 



## The Database Developer





Item Name - Item Code



#### Properties



**Source Named Range** 



**Target Range** 



**Maximum Number of Selected Items** 



**Separator Symbol** 



**Separator Required** 



#### Methods



**Execute Search** 



**Process Selections** 



**User Form** 



#### VBA Class Module Properties



A property can be a value or an object



Code is encapsulated



A property can be read-only



A property can be write-only



### Property Methods



Get – returns property value



Let – assigns a value to a primitive or object property



Set - assigns a value to an object property



```
Public Property Let MaximumItems (newMaximumItems As Integer)

If newMaximumItems > 0 And newMaximumItems <= 10 Then
    pMaximumItems = newMaximumItems

Else
    Debug.Print "Invalid value specified"
End If

End Property</pre>
```

## Validating Property Values

Property Letters and Setters can do more than just assign properties



```
Example.MaximumItems = 2
```

MsgBox "Number of items: " & Example.MaximumItems

# Setting and Reading Property Values

Using properties makes this simple



## Creating Read-Write Properties



Declare a private variable



Create a Get method



Create a Set or Let method



#### Bertie's New Stored Procedure





#### Methods



**Execute Search** 



**Process Selections** 



**User Form** 



# Updated Publishers Procedure





#### Selection Processing Methods



Add Item to Selection



**Remove Item from Selection** 



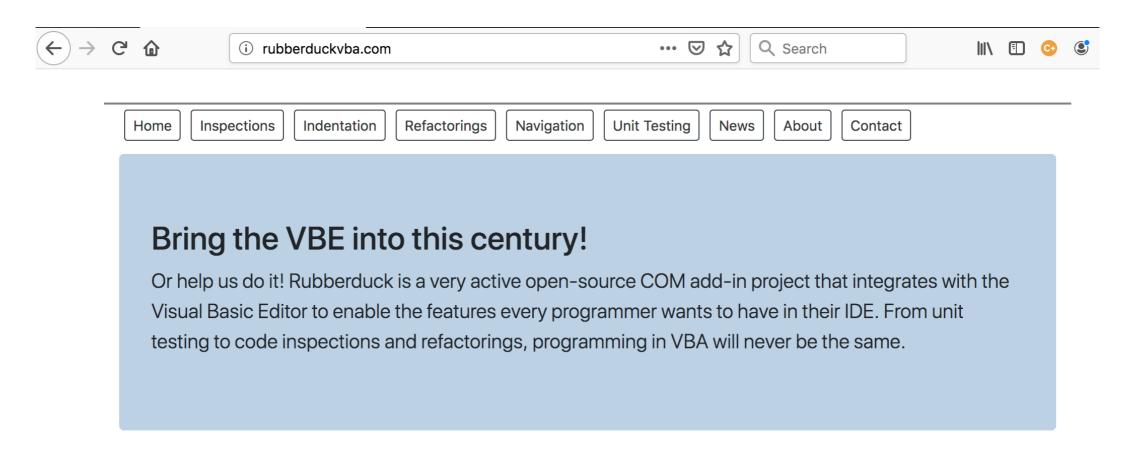
**Clear All Selections** 



**Process Selections** 



#### Unit Testing



Reference Explorer

**Navigation** 

Refactorings



#### Instr Function

```
Instr(1, "The hills are alive", "are")

11
```



## Regular Expressions





Pattern-based string searching



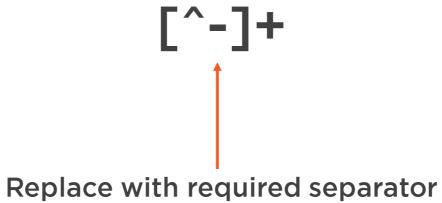
# Simple Regular Expression

Regular Expression: "a"

String: "Jo is learning VBA"

Matches: 1

## Bertie's Regular Expression





#### Off to the Pub





# Overview/ Summary



Class design

Public variables and properties

**Getters, Letters and Setters** 

**Testing** 

Adding methods to a class module

Class module events

**External references** 

