'自定义函数：顾名思义，就是自己定义的函数。

'为什么使用自定义函数：exce内置了很多有用的函数。但仍无法满足工作需求。

'自定义函数的作用：简化复杂的公式。可以和工作表函数相互嵌套使用

'

'

' Function 函数名(参数1,参数2....)

' 代码

' 函数名=代码执行的结果

' End Function

'

'1.函数名称可能有函数，也可以像now,today,rand等函数一样不需要任何参数

Public Function stname()

stname = ActiveSheet.Name '返回当前工作表名

End Function

Public Function wbname()

wbname = ThisWorkbook.Name '返回工作簿名

End Function

'有参数的自定义函数

Public Function nas(num As Integer) '提取工作表名或工作簿名

If num = 0 Then

nas = ActiveSheet.Name

ElseIf num = 1 Then

nas = ThisWorkbook.Name

End If

End Function

'1.自定义工作函数的调用

Function wbname()

wbname = ActiveWorkbook.Name

End Function

Function wbnames()

i = InStr(wbname, ".xls") '调用自定义的工作表函数

j = Left(wbname, i - 1) '调用自定义的工作表函数

wbnames = j

End Function

'2.自定义工作表函数的编写与运用范围

'

'自定义工作表函数的代码只能编写在：标准模块中，不能在工作表中或thisworkbook中

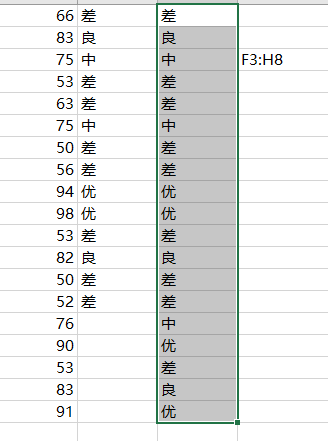
'到目前为止我们编写的自定义函数只能在当前工作簿运行。要在所有工作簿中运行则：

'A.将编写在标准模块中的自定义函数代码保存为：加载宏。

'B.将加载的宏保持运用即可

'

'提示：与应用程序事件程序的操作方法相似



Function ad(选择区域 As Range, 引用方式 As Integer)

If 引用方式 = 1 Then

ad = 选择区域.Address(1, 1)

ElseIf 引用方式 = 2 Then

ad = 选择区域.Address(0, 0)

End If

End Function

Function dj(引用 As Range, 优 As Integer, 良 As Integer, 中 As Integer)

If 引用 >= 优 Then

dj = "优"

ElseIf 引用 >= 良 Then

dj = "良"

ElseIf 引用 >= 中 Then

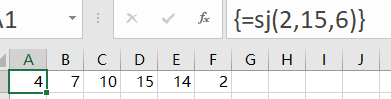
dj = "中"

Else

dj = "差"

End If

End Function



Function sjs(最小值 As Integer, 最大值 As Integer, 所需个数 As Integer)

Application.Volatile '随时能够更新的函数，比如now，date，rand等函数，每次就会出现刷新的动态变化。

Set d = CreateObject("scripting.dictionary")

Do

i = Application.RandBetween(最小值, 最大值)

d(i) = ""

Loop Until d.Count = 所需个数

sjs = d.keys

End Function

Sub dd()

Set d = CreateObject("scripting.dictionary")

Do

i = Application.RandBetween(1, 9)

d(i) = ""

Loop Until d.Count = 4

sj = d.keys

End Sub

Function cellsjoin(区域 As Range, Optional 合并字符 As String = "—")

arr = Application.WorksheetFunction.Transpose(Application.WorksheetFunction.Transpose(区域))

'转置两次才能实现一维数组。

cellsjoin = Join(arr, 合并字符)

'optional的意思是默认的选择。

End Function

Sub shl()

Dim arr

arr = Application.WorksheetFunction.Transpose([a1:e1])

arr1 = Application.WorksheetFunction.Transpose(Application.WorksheetFunction.Transpose([a1:e1]))

arr2 = [a1:e1]

End Sub

参数的默认设置：

Function 删除(单元格 As Range, Optional num As Integer = 0, Optional 大小写 As Integer = 0)

Set regex = CreateObject("vbscript.regexp")

With regex

.Global = True

If num = 0 Then

.Pattern = "\d"

result = .Replace(单元格, "")

ElseIf num = 1 Then

.Pattern = "[a-zA-Z]"

If 大小写 = 0 Then

.ignorecase = True

result = .Replace(单元格, "")

ElseIf 大小写 = 1 Then

.ignorecase = False

result = .Replace(单元格, "")

End If

ElseIf num = 2 Then

.Pattern = "[\u4e00-u9fa5]"

result = .Replace(单元格, "")

End If

删除 = result

End With

End Function

课件：

Function celljoin(区域 As Range, Optional 合并符 As String = "-")

arr = Application.Transpose(Application.Transpose(区域))

celljoin = Join(arr, 合并符)

End Function

Function 去除(rng As Range, Optional shuzi As Integer = 2)

Set regx = CreateObject("vbscript.regexp")

With regx

.Global = True

If shuzi = 0 Then

.Pattern = "\d" '去数字

ElseIf shuzi = 1 Then

.Pattern = "[a-zA-Z]" '去字母

ElseIf shuzi = 2 Then

.Pattern = "[一-龢]" '去汉字

End If

去除 = .Replace(rng, "")

End With

End Function

参数不定：

Function jia(ParamArray num())

For Each n In num

m = m + n

Next

jia = m

End Function

Function joins(ParamArray arr())

For Each ar In arr

For Each a In ar

txt = txt & a.Value

Next

Next

joins = txt

End Function

'注意：

'1.如果参数不定，那么不能指定参数的数据类型

'2.如果有不定参数，不定参数一定要写在最后。

'

自定义函数实例：

提取身份证的性别和年龄：

Function 身份证(rng As Range, Optional 提取内容 As String = "年龄")

If 提取内容 = "年龄" Then

身份证 = Year(Now()) - (19 & Mid(rng, Len(rng) / 2, 2))

ElseIf 提取内容 = "性别" Then

身份证 = IIf(Mid(rng, 15, 3) Mod 2, "男", "女")

End If

End Function

Sub test()

Dim dd As New 类1

For Each rn In [a1:a9]

dd.条件 = 4

Set dd.单元格 = rn

Next

MsgBox dd.极小值(3)

End Sub

Public 条件

Private rngs

Private n

Dim cc

Property Set 单元格(rng As Range)

If rng > 条件 Then

n = n + 1

If n = 1 Then Set rngs = rng

Set rngs = Union(rngs, rng)

End If

cc = rngs.Address

End Property

Function 求和()

求和 = WorksheetFunction.Sum(rngs)

End Function

Function 最大值()

最大值 = WorksheetFunction.Max(rngs)

End Function

Function 最小值()

最小值 = WorksheetFunction.Min(rngs)

End Function

Function 平均值()

平均值 = WorksheetFunction.Average(rngs)

End Function

Function 极大值(k As Integer)

极大值 = WorksheetFunction.Large(rngs, k)

End Function

Function 极小值(k As Integer)

极小值 = WorksheetFunction.Small(rngs, k)

End Function

Sub test1()

Dim aa As New 类1

For Each rn In [a1:a14]

Set aa.分数 = rn

aa.底纹设置

Next

End Sub

Sub test2()

Dim aa As New 类2

For Each rn In [a1:a14]

Set aa.底纹设置 = rn

Next

End Sub

Private fs

Property Set 分数(rng As Range)

Set fs = rng

End Property

Sub 底纹设置()

If fs >= 90 Then fs.Interior.ColorIndex = 3

End Sub

Property Set 底纹设置(rng As Range)

If rng >= 90 Then rng.Interior.ColorIndex = 3

End Property

Sub test1()

Dim aa As New 类1

For Each rn In [a1:a14]

Set aa.分数 = rn

aa.底纹设置

Next

End Sub

Sub test2()

Dim aa As New 类2

For Each rn In [a1:a14]

Set aa.底纹设置 = rn

Next

End Sub

Private fs

Property Set 分数(rng As Range)

Set fs = rng

End Property

Sub 底纹设置()

If fs >= 90 Then fs.Interior.ColorIndex = 3

End Sub

Property Set 底纹设置(rng As Range)

If rng >= 90 Then rng.Interior.ColorIndex = 3

End Property

类模块中私有和 共有的区别：在于在模块中能否看到属性。

'前面我们讲解过程序事件程序可以写在thisworkbook中，也可以写在类模块中

'我们在看看是如何操作的。

'1.新建一个类模块：插入-类模块,命名为"程序事件"(可自定义)

'2.在类模块中写入代码：Public WithEvents app As Application

'3.新建一个模块

'4.声明1个为"cus"(可自定义)，类型"程序事件"的变量:Public cus As New 程序事件

'5.创建1个sub过程。设置cus变量的app属性为application:Set cus.app = Application

'6.在thisworkbook中用打开事件调用过程

'7.保存为宏文件

Private Sub Workbook\_Open()

Call 引入

End Sub

Public cus As New 程序事件

Sub 引入()

Set cus.app = Application

End Sub

Public WithEvents app As Application

Private Sub app\_NewWorkbook(ByVal Wb As Workbook)

MsgBox "你真的要新建工作簿吗"

End Sub

Private Sub app\_SheetChange(ByVal Sh As Object, ByVal Target As Range)

MsgBox "改变了单元格"

End Sub