

Visual Basic 6.0 & VB.NET

丙檢設計第一站

資料系
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VB之for指令

for 變數=初值 to 終值 step 增值
多個指令

Next

中途離開用 if指令判斷條件成立後 → exit for

Ex:

Q=2, w=100, e=2, s=0

For i = q To w Step e

s = s + i

Next i

VB6提供之內建函數

- End → 執行結束
- MsgBox → 顯示訊息視窗
- Inputbox → 輸入對話視窗
- Print → 顯示訊息於Form物件上
- Val(文字串) → 文字轉數值
- Str(數值) → 數值轉文字
- Round(數值,小數幾位) → 保留幾位小數
- Mid\$(文字串,開始位置,個數)
- Len(文字串) → 文字串長度

3

VB6檔案處理

- 循序檔
 - 讀檔
 - 指令格式
open “檔案名稱” for input as #1
input#1, 變數1, 變數2, ...
close#1
 - 寫檔
 - 指令格式
open “檔案名稱” for output as #1
print#1, 變數1, 變數2, ...
close#1

4

VB.NET檔案處理

- 循序檔
 - 讀檔模式OpenMode.Input
 - 指令格式
FileOpen(1, “檔案名稱”, OpenMode.Input)
Input(1, 變數1) V.S. LineInput(1, 變數1)
Input(1, 變數2) ...
FileClose(1)
 - 寫檔模式OpenMode.Output、OpenMode.append
 - 指令格式
FileOpen(1, “檔案名稱”, OpenMode.Output)
PrintLine(1, 變數1 & 變數2, ...) V.S. Print(1,...)
FileClose(1)

5

VB.NET提供之內建函數

- End → 執行結束
- MsgBox → 顯示訊息視窗
- Inputbox → 輸入對話視窗
- CInt(文字串) → 文字轉數值
- Str(數值) → 數值轉文字
- Fix(數值) → 去尾數
- Mid\$(文字串, 開始位置, 個數)
- Len(文字串) → 文字串長度

6

VB.NET提供宣告陣列

- 一維陣列

dim a(10) as integer

a(0)	a(1)	a(2)	a(3)	a(4)	a(5)	a(6)	a(7)	a(8)	a(9)	a(10)
------	------	------	------	------	------	------	------	------	------	-------

- 二維陣列

dim a(3,4) as integer

0,0	0,1	0,2	0,3	0,4
1,0	1,1	1,2	1,3	1,4
2,0	2,1	2,2	2,3	2,4
3,0	3,1	3,2	3,3	3,4

7

於VB.NET中執行另一程式

- 指令

- Shell(“執行檔”, vbNormalFocus)
- 丙級之輸入姓名、座號及日期並列印之。

8

VB.NET之select case指令

Select case

Case 1

指令1

Case 2

指令2

End if

Case 3

指令3

End Select

9

第一站試題BASIC基本指令操作

- 編號 試題名稱
- 119-940301 迴文判斷
- 119-940302 直角三角形列印
- 119-940303 質數計算
- 119-940304 BMI值計算
- 119-940305 矩陣相加
- →五選三(45分鐘)
- →迴圈方法

10

迴圈方法

- 測試檔資料共分三組，每組各有四題資料檔。每場考試均需由應檢人員重新抽取一組測試資料及迴圈指令，所有迴圈動作，只能使用抽中之迴圈指令完成。資料組別如下：
- 組別 測試資料檔名 迴圈指令
- 第一組 940301.T01至940305.T01 For..Next迴圈
- 第二組 940301.T02至940305.T02 Do While...Loop 前測試迴圈
- 第三組 940301.T03至940305.T03 Do...Loop While後測試迴圈

11

VB6第一題累加值

- Open "a:\890301.sm" For Input As #1
- Input #1, q, w, e
- Close #1

```
For i = q To w Step e  
s = s + i  
Next i
```

```
i=q  
Do while i<=w  
s = s + I  
i=i+e  
loop
```

```
i=q  
Do  
s = s + I  
i=i+e  
Loop while i<=w
```

- Print "第一題結果: "; s

12

VB.NET 第一題迴文判斷

```
Dim i, n, t As Integer
FileOpen(1, "d:\940301.sm", OpenMode.Input)
Input(1, t)
p=t
FileClose(1)
```

13

VB.NET 第一題迴文判斷(for loop)

```
For i = 1 To 99
    z(i) = t Mod 10 : t = t \ 10
    If t = 0 Then Exit For
Next
n = i : t = 0
For i = 1 To (n + 1) \ 2
    If z(i) <> z(n - i + 1) Then
        t = 1 : Exit For
    End If
Next
```

14

VB.NET 第一題迴文判斷(do while loop)

```
i=1
Do while i<=99
    z(i) = t Mod 10 : t = t \ 10
    If t = 0 Then Exit do
    i=i+1
loop
n = i : t = 0 : i=1
Do while i<= (n + 1) \ 2
    If z(i) <> z(n - i + 1) Then
        t = 1 : Exit do
    End If
    i=i+1
loop
```

15

VB.NET 第一題迴文判斷(do loop while)

```
i=1
Do
    z(i) = t Mod 10 : t = t \ 10
    If t = 0 Then Exit do
    i=i+1
Loop while i<=99
n = i : t = 0 : i=1
Do
    If z(i) <> z(n - i + 1) Then
        t = 1 : Exit do
    End If
    i=i+1
loop while i<= (n + 1) \ 2
```

16

VB.NET 第一題迴文判斷

```
FileOpen(1, "d:\t1.txt", OpenMode.Append)
If t = 0 Then
    PrintLine(1, "第一題結果：" & p & " is a palindrome.")
Else
    PrintLine(1, "第一題結果：" & p & " is a is not a
    palindrome.")
End If
FileClose(1)
```

17

VB6 第二題數字轉換二進位

- Open "a:\890302.sm" For Input As #1
- Input #1, q, w, e
- Close #1

```
X=q ' e=2
For i = 1 To 99
    r = x Mod e
    x = x \ e
    ans = r & ans
    If x = 0 Then Exit For
Next i
```

```
X=q ' e=2
Do while x <> 0
    r = x Mod e
    x = x \ e
    ans = r & ans
loop
```

```
X=q ' e=2
Do
    r = x Mod e
    x = x \ e
    ans = r & ans
Loop while x <> 0
```

- Print "第二題結果: "; ans

18

VB.NET 第二題直角三角形列印

```
Dim i As Integer, j As Integer, k As Integer
```

```
FileOpen(1, "d:\940302.sm", OpenMode.Input) : Input(1, k) : FileClose(1)
```

```
FileOpen(1, "d:\t1.txt", OpenMode.Append) : PrintLine(1, "第二題結果：")
```

```
For i = 1 To k  
    For j = 1 To i  
        Print(1, j)  
    Next j  
    PrintLine(1, "")  
Next i  
FileClose(1)
```

```
i=1  
do while i<=k  
    j=1  
    do while j<=i  
        Print(1, j) : j=j+1  
    loop  
    PrintLine(1, "") : i=i+1  
loop  
FileClose(1)
```

```
i=1  
do  
    j=1  
    do  
        Print(1, j) : j=j+1  
    loop while j<=i  
    PrintLine(1, "") : i=i+1  
loop while i<=k  
FileClose(1)
```

19

VB.NET 第二題直角三角形列印

```
Dim j, k As Integer
```

```
FileOpen(1, "d:\940302.sm", OpenMode.Input)
```

```
Input(1, k)
```

```
FileClose(1)
```

```
FileOpen(1, "d:\t1.txt", OpenMode.Append)
```

```
PrintLine(1, "第二題結果：")
```

20

VB.NET 第二題直角三角形列印(for loop)

```
For i = 1 To k
  For j = 1 To i
    Print(1, j)
  Next j
  PrintLine(1, "")
Next i
FileClose(1)
```

21

VB.NET 第二題直角三角形列印(do while loop)

```
i=1
do wile i<=k
  j=1
  do while j<=i
    Print(1, j) : j=j+1
  loop
  PrintLine(1, "") : i=i+1
loop
FileClose(1)
```

22

VB.NET 第二題 直角三角形列印 (do loop while)

```
i=1
do
  j=1
  do
    Print(1, j) : j=j+1
  loop while j<=i
  PrintLine(1, "") : i=i+1
loop while i<=k
FileClose(1)
```

23

VB6 第三題 質數判斷

```
Open "a:\890303.sm" For Input As #1
Input #1, x
Close #1
```

```
K=0
If x >3 then
  For i = 2 To x-1
    If x Mod i = 0 Then
      k=1
      exit for
    end if
  Next I
End if
```

```
K=0
If x >3 then
  i=2
  do while i<= x-1
    If x Mod i = 0 Then
      k=k+1
      exit do
    end if
    i=i+1
  loop
End if
```

```
K=0
If x >3 then
  i=2
  do
    If x Mod i = 0 Then
      k=k+1
      exit do
    end if
    i=i+1
  loop while i<= x-1
End if
```

```
Print "第三題結果: ";
If k = 0 Then
  Print x & " is a prime number."
Else
  Print x & " is not a prime number."
End If
```

24

VB.NET 第三題質數判斷

```
FileOpen(1, "d:\940303.sm", OpenMode.Input)  
Input(1, k)  
FileClose(1)
```

25

VB.NET 第三題質數判斷(for loop)

```
j = 0  
If k >= 3 Then  
    For i = 2 To k - 1  
        If k Mod i = 0 Then  
            j = 1 : Exit For  
        End If  
    Next  
End If
```

26

VB.NET 第三題 質數判斷(do while loop)

```
j = 0
If k >= 3 Then
    i = 2
    Do While i <= k - 1
        If k Mod i = 0 Then
            j = 1 : Exit Do
        End If
        i = i + 1
    Loop
End If
```

27

VB.NET 第三題 質數判斷(do loop while)

```
j = 0
If k >= 3 Then
    i = 2
    Do
        If k Mod i = 0 Then
            j = 1 : Exit Do
        End If
        i = i + 1
    Loop While i <= k - 1
End If
```

28

VB.NET 第三題質數判斷

```
FileOpen(1, "d:\t1.txt", OpenMode.Append)
If j = 1 Then
    PrintLine(1, "第三題結果：" & k & " is not a prime number")
Else
    PrintLine(1, "第三題結果：" & k & " is a prime number")
End If
FileClose(1)
```

29

VB.NET 第三題質數判斷

```
FileOpen(1, "d:\940303.sm", OpenMode.Input) : Input(1, k) : FileClose(1)
Dim i As Integer, j As Integer, k As Integer
```

```
j = 0
If k >= 3 Then
    For i = 2 To k - 1
        If k Mod i = 0 Then
            j = 1 : Exit For
        End If
    Next
End If
```

```
j = 0
If k >= 3 Then
    i = 2
    Do While i <= k - 1
        If k Mod i = 0 Then
            j = 1 : Exit Do
        End If
        i = i + 1
    Loop
End If
```

```
j = 0
If k >= 3 Then
    i = 2
    Do
        If k Mod i = 0 Then
            j = 1 : Exit Do
        End If
        i = i + 1
    Loop While i <= k - 1
End If
```

```
FileOpen(1, "d:\res.txt", OpenMode.Append)
If j = 1 Then
    PrintLine(1, "第三題結果：" & k & " is not a prime number")
Else
    PrintLine(1, "第三題結果：" & k & " is a prime number")
End If
FileClose(1)
```

30

VB6 第四題單元矩陣

Open "a:\890304.sm" For Input As #1

Input #1, x

Close #1

Dim a(99, 99)

Print "第四題結果: "

```

For i = 1 To x
  For j = 1 To x
    a(i, j) = 0
    If (i = j) Then
      a(i, j) = 1
    End If
    Print a(i, j);
  Next j
  Print
Next i

```

```

i=1
Do while i<=x

```

```

  j=1
  do while j<=x
    a(i, j) = 0
    Print a(i, j);
    j=j+1
  loop
  i=i+1
  Print
loop

```

```

i=1
Do

```

```

  j=1
  do
    a(i, j) = 0
    If (i = j) Then a(i, j) = 1
    Print a(i, j);
    j=j+1
  loop while j<=x
  i=i+1
  Print
Loop while i<=x

```

31

VB.NET 第四題BMI值計算(for loop)

Dim min, w, h, bmi(3) As Integer

FileOpen(1, "D:\940304.t01", OpenMode.Input)

For i = 1 To 3

Input(1, h) : Input(1, w)

a = h / 100.0 ' 176==> 1.76

bmi(i) = w / (a * a)

Next

FileClose(1)

min = bmi(1)

For i = 2 To 3

If min > bmi(i) Then

min = bmi(i)

End If

Next

32

VB.NET 第四題BMI值計算(do while loop)

```
FileOpen(1, "D:\940304.t02", OpenMode.Input)
```

```
i = 1
```

```
Do While i <= 3
```

```
    Input(1, h) : Input(1, w)
```

```
    a = h / 100.0 ' 176==> 1.76
```

```
    bmi(i) = w / (a * a)
```

```
    i = i + 1
```

```
Loop
```

```
FileClose(1)
```

```
min = bmi(1)
```

```
i = 2
```

```
Do While i <= 3
```

```
    If min > bmi(i) Then
```

```
        min = bmi(i)
```

```
    End If
```

```
    i = i + 1
```

```
Loop
```

33

VB.NET 第四題BMI值計算(do loop while)

```
FileOpen(1, "D:\940304.t03", OpenMode.Input)
```

```
i = 1
```

```
Do
```

```
    Input(1, h) : Input(1, w)
```

```
    a = h / 100.0 ' 176==> 1.76
```

```
    bmi(i) = w / (a * a)
```

```
    i = i + 1
```

```
Loop While i <= 3
```

```
FileClose(1)
```

```
min = bmi(1)
```

```
i = 2
```

```
Do
```

```
    If min > bmi(i) Then
```

```
        min = bmi(i)
```

```
    End If
```

```
    i = i + 1
```

```
Loop While i <= 3
```

34

VB.NET 第四題BMI值計算

```
FileOpen(1, "d:\t1.txt", OpenMode.Append)
If min >= 20 And min <= 25 Then
    PrintLine(1, "第四題結果：" & "最小BMI值=" & min & ", 正常")
Else
    PrintLine(1, "第四題結果：" & "最小BMI值=" & min & ", 不正常")
End If
FileClose(1)
```

35

VB.NET 第四題BMI值計算

```
Dim h As Integer, w As Integer, bmi(3) As Integer, min As Integer, a As Double
FileOpen(1, "D:\940304.sm", OpenMode.Input)
For i = 1 To 3 : Input(1, h) : Input(1, w) : a = h / 100.0 : bmi(i) = w / (a * a) : Next
FileClose(1)
```

```
min = bmi(1)
For i = 2 To 3
    If min > bmi(i) Then
        min = bmi(i)
    End If
Next
```

```
i = 2
Do While i <= 3
    If min > bmi(i) Then
        min = bmi(i)
    End If
    i = i + 1
Loop
```

```
i = 2
Do
    If min > bmi(i) Then
        min = bmi(i)
    End If
    i = i + 1
Loop While i <= 3
```

```
FileOpen(1, "d:\res.txt", OpenMode.Append)
If min >= 20 And min <= 25 Then
    PrintLine(1, "第四題結果：最小BMI值=" & min & ", 正常")
Else
    PrintLine(1, "第四題結果：最小BMI值=" & min & ", 不正常")
End If
FileClose(1)
```

36

VB6 第五題矩陣相加

```
Dim b(2, 2), c(2, 2), d(2, 2)
Open "a:\890305.sm" For Input As #1
Input #1, b(1, 1), b(1, 2), b(2, 1), b(2, 2)
Input #1, c(1, 1), c(1, 2), c(2, 1), c(2, 2)
Close #1
```

```
For i = 1 To 2
  For j = 1 To 2
    d(i, j) = b(i, j) + c(i, j)
  Next j
Next i
```

```
i=1
Do while i<=2
  j=1
  do while j<=2
    d(i, j) = b(i, j) + c(i, j)
    j=j+1
  loop
  i=i+1
loop
```

```
i=1
Do
  j=1
  do
    d(i, j) = b(i, j) + c(i, j)
    j=j+1
  loop while j<=2
  i=i+1
loop while i<=2
```

```
Print "第五題結果: "
Print "["; d(1, 1); " "; d(1, 2); "]"
Print "["; d(2, 1); " "; d(2, 2); "]"
```

37

VB.NET 第五題矩陣相加

```
Dim a(2, 2), b(2, 2), c(2, 2) As Integer
FileOpen(1, "d:\940305.sm", OpenMode.Input)
Input(1, a(1, 1)) : Input(1, a(1, 2))
Input(1, a(2, 1)) : Input(1, a(2, 2))
Input(1, b(1, 1)) : Input(1, b(1, 2))
Input(1, b(2, 1)) : Input(1, b(2, 2))
FileClose(1)
```

38

VB.NET 第五題矩陣相加(for loop)

```
For i = 1 To 2
    For j = 1 To 2
        c(i, j) = a(i, j) + b(i, j)
    Next
Next
```

39

VB.NET 第五題矩陣相加(do while loop)

```
i = 1
Do While i <= 2
    j = 1
    Do While j <= 2
        c(i, j) = a(i, j) + b(i, j)
        j = j + 1
    Loop
    i = i + 1
Loop
```

40

VB.NET 第五題矩陣相加(do loop while)

```
i = 1
Do
    j = 1
    Do
        c(i, j) = a(i, j) + b(i, j)
        j = j + 1
    Loop While j <= 2
    i = i + 1
Loop While i <= 2
```

41

VB.NET 第五題矩陣相加

```
FileOpen(1, "d:\t1.txt", OpenMode.Append)
PrintLine(1, "第五題結果：")
PrintLine(1, "[" & c(1, 1) & vbTab & c(1, 2) & "]")
PrintLine(1, "[" & c(2, 1) & vbTab & c(2, 2) & "]")
FileClose(1)
```

42

VB.NET 第五題矩陣相加

```
Dim a1(2, 2), b1(2, 2), c1(2, 2) As Integer
FileOpen(1, "d:\940305.sm", OpenMode.Input)
Input(1, a1(1, 1)) : Input(1, a1(1, 2)) : Input(1, a1(2, 1)) : Input(1, a1(2, 2))
Input(1, b1(1, 1)) : Input(1, b1(1, 2)) : Input(1, b1(2, 1)) : Input(1, b1(2, 2))
FileClose(1)
For i = 1 To 2
  For j = 1 To 2
    c1(i, j) = a1(i, j) + b1(i, j)
  Next j
Next i
i=1
Do while i<=2
  j=1
  do while j<=2
    c1(i, j) = a1(i, j) + b1(i, j)
    j=j+1
  loop
  i=i+1
loop
i=1
Do
  j=1
  do
    c1(i, j) = a1(i, j) + b1(i, j)
    j=j+1
  loop while j<=2
  i=i+1
loop while i<=2
FileOpen(1, "d:\t1.txt", OpenMode.Append)
PrintLine(1, "第五題結果：")
PrintLine(1, "[" & c1(1, 1) & vbTab & c1(1, 2) & "]")
PrintLine(1, "[" & c1(2, 1) & vbTab & c1(2, 2) & "]")
FileClose(1)
```

43

VB 執行次序

- Form 事件的執行次序
 - Load → Resize → Activate
 - Form_click → 必需手動！！

一開始執行時要先設定姓名、座號等。

```
Private Sub Form_Load()
  ok = Shell("a:\title.exe", 1)
End Sub
Private Sub Form_Click()
  題目指令位置
End sub
```

44