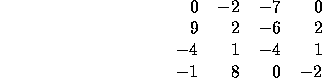
# Q108: Maximum Sum

給你一個NxN的陣列，請你找出有最大和的子區域（sub-rectangle）其和為多少。一個區域的和指的是該區域中所有元素值的和。一個區域是指相連的任意大小的子陣列。例如，對以下的二維陣列：



其最大和的子區域位於左下角，並且其和為15。如下所示：

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**Input**

只有一組測試資料，第一列有一個正整數N（N <= 100），代表此二維陣列大小為NxN。

從第二列起有N2個整數，代表此陣列的內容。每個整數都介於-127到127之間，且以列為主（row-major）的順序排列。Sample Input即為上圖所示的陣列。

**Output**

輸出有最大和的子區域其和是多少。

**Sample Input**

4

0 -2 -7 0 9 2 -6 2

-4 1 -4 1 -1

8 0 -2

**Sample Output**

15

**程式碼**

Imports System.IO

Public Class Form1

Dim fr As New FileInfo("input.txt")

Dim fw As New FileInfo("output.txt")

Dim sw As StreamWriter = fw.CreateText

Dim ii, a, b, max As Integer

Dim ia, ib As String

Private Sub Form1\_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load

If fr.Exists = False Then

End

ElseIf fw.Exists = False Then

fw.Create()

End If

Dim sr As StreamReader = fr.OpenText

ii = sr.ReadLine

Dim oa(ii - 1, ii - 1) As Integer

Do '取數

ia = Trim(sr.ReadLine) & " "

For i = 1 To Len(ia)

If Microsoft.VisualBasic.Mid(ia, i, 1) <> " " Then

ib &= Microsoft.VisualBasic.Mid(ia, i, 1)

Else

oa(a, b) = Val(ib) : ib = "": b += 1

If b = ii Then

a += 1 : b = 0

If a = ii Then Exit Do

End If

End If

Next

Loop

Dim sum(ii \* ii - 1, ii - 1, ii - 1) As Integer

For i = 0 To ii \* ii - 1 '計算從第i個數開始到第 (j,l)的矩形加總

For j = i \ ii To ii - 1

For l = i Mod ii To ii - 1

For o = i \ ii To j

For p = i Mod ii To l

sum(i, j, l) += oa(o, p)

Next

Next

Next

Next

Next

a = 0 : b = 0 : max = 0

For i = 0 To ii \* ii - 1 '輸出

For j = i \ ii To ii - 1

For l = i Mod ii To ii - 1

If sum(i, j, l) > max Then max = sum(i, j, l)

Next

Next

Next

sw.WriteLine(max)

sw.Flush() : sw.Close() : End

End Sub

End Class