Orasi Monthly Code Challenge

Silver League

July 2013

Challenge Submitted by:

Matt Watson

Challenge Winner:

Lateef Livers

July 2013 Orasi Code Challenge - Silver

Challenge Description

In math an integer greater than one is called a prime number if its only positive divisors (factors) are one and itself. The study of these numbers represents one of the most actively researched areas in all of mathematics. Around 300 BCE, the mathematician Euclid proved that there are an infinite amount of prime numbers. With this in mind, finding all possible prime numbers is impossible, but it is possible to find all primes less than or equal to a given number. The Orasi Silver League Coding Challenge for July 2013 is to find all the prime numbers less than or equal to an arbitrary number.

Submission Requirements:

Your submission must be in the form of a VBScript function that can run inside QTP. The function should accept one argument (a number) and return a string containing all prime numbers less than or equal to the number. This string should be semicolon delimited and should be ascending order. An example string for the input "11" would be "2;3;5;7;11". Do not include spaces in the string. Any variation from this format will result in having not completed the challenge.   This function must comply with Orasi Coding Standards. You will be allowed 5 minutes of execution time to accomplish this task. Anyone who successfully returns the correct string will be considered to have completed the challenge. A winner will be announced based on conformity to coding standards, efficiency, and creativity.

Suggested Research:

It is suggested that participants research the modulus function (Mod) before attempting this challenge.

Winning Solution:

```
**************************************************************
' Function Name:      GetPrimesNumber
'Author:             Lateef Livers
'Created Date:       7/19/13
'Purpose:            When given a number the function returns a list of prime numbers betweeen 1
to the given number
'**************************************************************
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Public Function LateefLivers( Num)

'*************************************************************
'Variable Declaration
'*************************************************************

Dim Counter
Dim I
Dim J
Dim List
Dim RootNum
Dim Temp
Dim Targetcell
Dim X
Dim Y


'*************************************************************
'Variable Assignment
'*************************************************************


ReDim aPrimeLists(Num)

RootNum = sqr(Num)
For I = 2 to RootNum
        If aPrimeLists(I)  ="" Then
                Temp = I^2
                X = 0
                For J = Temp to Num
                        If J > Num  Then
                                Exit for
                        End If
                        Targetcell = (I^2) + (X * I)
                        If Targetcell > Num Then
                                Exit for
                        End If
                        aPrimeLists(Targetcell) = 1
                        X = X +1

                Next
        End If
```

```
Next

For Y = 2 to Num
        If aPrimeLists(Y) <> 1Then
        List = List & Y & ";"
        End If

Next
 LateefLivers =List
End Function
```