Reading and Writing Files

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#-------------------------------------------------------------------------------

def NumLen1( filename ) :

    # Output file 'filename' to the screen, with each line
    # preceded by its line number and its length

    filehandle = open( filename, "r" )

    linenumber = 0

    for line in filehandle :
        linenumber += 1
        print( "%3i - %2i - %s" % ( linenumber, len( line ), line ), end = "" )

#-------------------------------------------------------------------------------

def NumLen2( filename ) :

    # Output file 'filename' to the screen, with each line
    # preceded by its line number and its length

    filehandle = open( filename, "r" )

    linenumber = 0

    while True :
        line = filehandle.readline( )
        if line == "" :
            break
        linenumber += 1
        print( "%3i - %2i - %s" % ( linenumber, len( line ), line ), end = "" )

#-------------------------------------------------------------------------------

def WritePowers( upperlimit, filename ) :

    # Output to the file 'filename' a table of the integers
    # from 1 to 'upperlimit', along with their squares and cubes

    filehandle = open( filename, "w" )

    filehandle.write( "Table of Powers from 1 to %i\n\n" % ( upperlimit ) )

    for n in range( 1, upperlimit + 1 ) :
        filehandle.write( "%3i %5i %5i\n" % ( n, n ** 2, n ** 3 ) )

#-------------------------------------------------------------------------------
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$ cat So-Long-Marianne
So Long, Marianne : Leonard Cohen

Come over to the window, my little darling,
I'd like to try to read your palm.
I used to think I was some kind of Gypsy boy,
Before I let you take me home.

Now So Long, Marianne,
It's time that we began
To laugh and cry,
And cry and laugh about it all again.

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>>> NumLen1( "So-Long-Marianne" )
  1 - 34 - So Long, Marianne : Leonard Cohen
  2 -  1 -
  3 - 44 - Come over to the window, my little darling,
  4 - 35 - I'd like to try to read your palm.
  5 - 46 - I used to think I was some kind of Gypsy boy,
  6 - 31 - Before I let you take me home.
  7 -  1 -
  8 - 23 - Now So Long, Marianne,
  9 - 24 - It's time that we began
 10 - 18 - To laugh and cry,
 11 - 38 - And cry and laugh about it all again.

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>>> NumLen2( "So-Long-Marianne" )

    [ exactly the same output as generated by: NumLen1( "So-Long-Marianne" ) ]

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>>> WritePowers( 10, "Table-of-Powers" )

    [ produces no output on the screen but creates the file 'Table-of-Powers' ]

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$ cat Table-of-Powers
Table of Powers from 1 to 10

  1     1     1
  2     4     8
  3     9    27
  4    16    64
  5    25   125
  6    36   216
  7    49   343
  8    64   512
  9    81   729
 10   100  1000

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