

## Exceptions

```
#-----
def NumLen( filename ) :

    # Output file 'filename' to the screen, with each line preceded by
    # its line number and its length; issue an error message and return
    # from the function if 'filename' cannot be opened for reading

    try :
        filehandle = open( filename, "r" )
    except IOError :
        print( "*** NumLen : cannot open file '%s'" % ( filename ) )
        return

    linenumber = 0

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

#-----

def Fraction( above, below ) :

    # The fraction 'above / below'; if 'below' is zero,
    # issue an error message and return 'None'

    try :
        return above / below
    except ZeroDivisionError :
        print( "*** Fraction : attempted division by zero" )
        return None

#-----

def Get( index, sequence ) :

    # Return the item at index 'index' of sequence 'sequence';
    # if 'index' is out of range, issue an error message and return 'None'

    try :
        return sequence[ index ]
    except IndexError :
        print( "*** Get : index %i is out of range" % ( index ) )
        return None

#-----
```

```
>>> NumLen( "Bogus File" )
*** NumLen : cannot open file 'Bogus File'

>>> NumLen( "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.

>>> Fraction( 20, 0 )
*** Fraction : attempted division by zero

>>> Fraction( 20, 5 )
4.0

>>> Fraction( 5, 20 )
0.25

>>> Get( 3, "abcde" )
'd'

>>> Get( 5, "abcde" )
*** Get : index 5 is out of range

>>> Get( 3, [ 7, 1, 4, 8, 6 ] )
8

>>> Get( 9, [ 7, 1, 4, 8, 6 ] )
*** Get : index 9 is out of range
```