

FUNCTION Decrypt (CipherChar: CHAR, Lookup: Array[1:26]  
OF CHAR)  
RETURNS STRING

FOR i ← 1 to 26:

IF Lookup[i] = CipherChar:

OriginalChar ← CHAR(i + 64)

RETURN OriginalChar

ENDIF

ENDFOR

RETURN 'Not found'

FUNCTION BubbleSort (UserNameArray: Array[1:100] OF STRING)  
RETURNS ARRAY

Minus ← 0

Flag ← TRUE

WHILE Flag = TRUE:

Minus ← Minus + 1

Flag ← FALSE

FOR i ← 1 TO LENGTH (UserNameArray) - Minus:

IF UserNameArray[i] > UserNameArray[i+1]:

Flag ← TRUE

Temp = UserNameArray[i]

UserNameArray[i] = UserNameArray[i+1]

UserNameArray[i+1] = Temp

ENDIF

ENDFOR

ENDWHILE

RETURN UserNameArray

FUNCTION FindRepeats (NewList: ARRAY [1:100] OF STRING)  
RETURNS INTEGER

Current  $\leftarrow$  ''

Count  $\leftarrow$  0

FOR  $i \leftarrow 1$  TO 100:

IF NewList[i]  $\neq$  Current;

Current  $\leftarrow$  NewList[i]

ELSE:

Count  $\leftarrow$  Count + 1

ENDIF

ENDFOR

RETURN Count

Total  $\leftarrow$  0

ZeroCount  $\leftarrow$  0

FOR  $i \leftarrow 1$  to LENGTH(Result):

Total  $\leftarrow$  Total + 1

IF Result[i] = 0:

ZeroCount  $\leftarrow$  ZeroCount + 1

ENDIF

ENDFOR

Average  $\leftarrow$  Total / 100

OUTPUT 'Average: ', Average

OUTPUT 'zero: ', ZeroCount