

**NAME**

RNLST – Expand a range specification and append it to a list of integers.

**SYNOPSIS**

**CALL RNLST(TOKEN,LT, LIST,LL, NL,RC)**

TOKEN(LT) is a CHARACTER\*1 string containing the range specification  
 LT is the INTEGER\*4 dimensioned size of TOKEN  
 LIST(LL) is the INTEGER\*4 list of integers input and then returned  
 LL is the INTEGER\*4 dimensioned size of LIST  
 NL is the INTEGER\*4 number of integers added to LIST on this call  
 RC is the INTEGER\*4 return code; see below

**DESCRIPTION**

If LT or LL is less than 1, the routine returns with NL=0 and LIST unchanged. Otherwise it examines the characters of TOKEN from left to right in search of a hyphen.

If a hyphen is found it uses DTB to convert the integer preceding the hyphen into a starting value and the integer following the hyphen into an ending value. Then it determines whether the range specifies increasing or decreasing values, and appends to LIST the values from starting to ending in the appropriate direction.

If no hyphen is found the routine uses DTB to convert the single integer into a single value and appends it to LIST.

**SEE ALSO**

ARGLST, which uses this routine.

**DIAGNOSTICS**

On output these are the possible RC values:

- 0 all went well
- 1 parse error
- 2 more than LL entries for LIST
- 3 the input parameters did not make sense

**LINKAGE**

gfortran source.f -L\${HOME}/lib -lmisc

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**EXAMPLE**

```

CHARACTER*12 TOKEN
INTEGER*4 LIST(20)/20*0/,RC
N=0
2 CALL PROMPT('token:',6)
  READ(5,901,END=1) TOKEN
901 FORMAT(A12)
  LT=LENGTH(TOKEN,12)
  CALL RNLST(TOKEN,LT, LIST(N+1),20, NL,RC)
  N=N+NL
  WRITE(6,902) RC,NL,(LIST(I),I=1,N)
902 FORMAT('RC=',I1,' NL=',I2,' LIST=',20I3)
  GO TO 2
1 WRITE(6,*)
  STOP
  END

```

When compiled and run this program produces the following output.

```

unix[1] a.out
token: 123
RC=0 NL= 1 LIST=123
token: 8-2
RC=0 NL= 7 LIST=123  8  7  6  5  4  3  2
token: -1
RC=1 NL= 0 LIST=123  8  7  6  5  4  3  2
token: ^D
unix[2]

```