

NAME

FRDR8V – Read from a given unit one line containing an unknown number of real values.

SYNOPSIS

CALL FRDR8V(NUNIT,X,LDX, N,RC)

NUNIT is the INTEGER*4 logical I/O unit from which to read the line
 X(LDX) is the REAL*8 vector returned
 LDX is the INTEGER*4 dimensioned size of X
 N is the INTEGER*4 number of values found
 RC is the INTEGER*4 return code; see below

DESCRIPTION

After checking for sensible parameters the routine zeros out X. Then it reads a single line from unit NUNIT into a 1024-character buffer as text. An input line may contain zero or more reals in free format, separated by blanks and/or commas. The routine blanks out from any # or * to the end of the line (this is assumed to be a comment) and changes any commas or tabs to blanks. Next it repeatedly reads the first number, blanks out those characters, and shifts the resulting string left to remove the leading blanks, counting the fields encountered. When the string is empty, the routine returns the values in X(1)...X(N) and the number of values in N, with X(N+1)...X(LDX) set to zero.

SEE ALSO

GETR8S, which reads a single real value
 FRDI4V, which reads a line containing an unknown number of integer values

DIAGNOSTICS

These are the possible values of RC.

- 0 all went well
- 1 end-of-file was encountered in trying to read the line as text
- 2 an error occurred in reading the line as text
 or in rereading the line as numbers (e.g., due to non-numeric data)
 or the parameters don't make sense (LDX < 0, NUNIT not in {1,2,3,4,5,7...99})
- 3 more than LDX data items were found
- 4 the input line was more than 1023 bytes long
- 5 the whole input line is a comment

BUGS

If character 1024 of the input line is blank, any text following it is ignored rather than flagging the line as too long. Commas in input lines are simply translated to blanks before the token search, so repeated commas are not flagged; thus, for example, "1,,2 3" is equivalent to "1 2 3", not to "1 0 2 3".

LINKAGE

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

AUTHOR

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EXAMPLE

```

REAL*8 X(10)
INTEGER*4 RC
1 CALL PROMPT('input vector:',13)
CALL FRDR8V(5,X,10, N,RC)
WRITE(6,901) RC
901 FORMAT('RC=',I1)
IF(RC.EQ.0) THEN
    WRITE(6,902) N, (X(J),J=1,N)
902    FORMAT('found ',I2,' values: '/10(1X,1PE13.6))
ENDIF
IF(RC.EQ.1) STOP
GO TO 1
END

```

This example produced the following exchange with the interactive user, who enters a control-D in response to the third prompt.

```

unix[1] a.out
input vector:  1.2  3.4  4.5  -6.7 # this is the input
RC=0
found  4 values:
  1.200000E+00  3.400000E+00  4.500000E+00  -6.700000E+00
input vector:  6.023E23  -5
RC=0
found  2 values:
  6.023000E+23  -5.000000E+00
input vector:  ^D
RC=1
unix[2]

```