
Subject: Re: splitting strings

Posted by [Benjamin Hornberger](#) on Fri, 04 Feb 2005 20:06:35 GMT

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Benjamin Hornberger wrote:

> Hi all,
>
> I would like to split a string by whitespace characters, while anything
> between quotes should be recognized as one elements (even if it contains
> whitespace). Let's say I have the string
>
> 'cat dog "ground hog" bird'
>
> I want to split it into ['cat', 'dog', 'ground hog', 'bird'].

Ok, here we go. Found on <http://php.net/split> and translated to IDL with some modifications. Any comments are welcome.

```
;+
; NAME:
;   QUOTESPLIT
;
;
;
;
; PURPOSE:
;   This function splits a scalar string into an array of substrings,
;   similar to STRSPLIT(). However, substrings enclosed in single or
;   double quotes are not split. Delimiters can be specified.
;
;
;
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;
;
;
; CATEGORY:
;   Utilities, string processing
;
;
;
; CALLING SEQUENCE:
;   Result = QUOTESPLIT(String [, Delimiters])
;
;
;
; RETURN VALUE:
;   A string array holding all the substrings of the String
;   argument. Each substring is trimmed of leading or trailing blanks
;   unless the blanks are within quotes.
;
```

```

; INPUTS:
;   String: String to be split. Must be a scalar string or one
;   element string array.
;
;

; OPTIONAL INPUTS:
; Delimiters: A string holding all characters which serve as
;   delimiters. Only single characters can be delimiters. The
;   String argument will be split on each occurrence of one or more
;   delimiters except within quotes (single or double). If a
;   string array is given, it will be joined by STRJOIN()
;   internally. Example: if Delimiters is " ,;", the string will
;   be split on each occurrence of a space, comma or semicolon, or
;   any combination thereof (except within quotes). Default:
;   Comma, Semicolon, Space, Tab, Carriage Return and Line Feed.
;
;

; SIDE EFFECTS:
; If the Delimiters argument is passed as string array, it will be
; joined by QUOTESPLIT.
;
;

; EXAMPLES:
; (quotes in the output show space characters)
;
;

; IDL> petstring = 'cat dog "ground hog" "bird"'
; IDL> pets = QUOTESPLIT(petstring)
; IDL> FOR i = 0, n_elements(pets)-1 DO print, pets[i]
;   'cat'
;   'dog'
;   'ground hog'
;   'bird'
;
;

; IDL> petstring = " cat , dog ; 'ground hog' : ' bird ' ,"
; IDL> pets = QUOTESPLIT(petstring, " ;,:")
; IDL> FOR i = 0, n_elements(pets)-1 DO print, pets[i]
;   'cat'
;   'dog'
;   'ground hog'
;   ' bird '
;
;

; MODIFICATION HISTORY:
;   Written: BH 2005-02-04, translated to IDL with some modifications
;   from http://php.net/split (User Contributed Note from "moritz").
;-

```

FUNCTION quotesplit, string, delimiters

on_error, 2

IF n_params() EQ 0 THEN \$

 message, 'STRING argument required in function QUOTESPLIT'

IF n_elements(string) NE 1 THEN \$

 message, 'STRING argument must be scalar in function QUOTESPLIT'

count = 0 ;; walk through all characters in string

length = strlen(string)

;; check delimiters

IF n_elements(delimiters) EQ 0 THEN \$

 delimiters = ','+string(9B)+string(10B)+string(13B)

IF n_elements(delimiters) GT 1 THEN delimiters = strjoin(delimiters)

WHILE count LT length DO BEGIN

 ;; pass over all delimiters

 WHILE (count LT length && strpos(delimiters, strmid(string,

count, 1)) NE -1) DO count++

 ;; double quotes

 IF strmid(string, count, 1) EQ "" THEN BEGIN

 count++

 start = count

 WHILE (count LT length && strmid(string, count, 1) NE "") DO

count++

 IF n_elements(array) EQ 0 THEN \$

 array = [strmid(string, start, count-start)] ELSE \$

 array = [array, strmid(string, start, count-start)]

 count += 2 ;; jump over 2nd quote

 ENDIF ELSE IF strmid(string, count, 1) EQ "" THEN BEGIN ;;

single quotes

 count++

 start = count

 WHILE (count LT length && strmid(string, count, 1) NE "") DO

count++

 IF n_elements(array) EQ 0 THEN \$

 array = [strmid(string, start, count-start)] ELSE \$

 array = [array, strmid(string, start, count-start)]

 count += 2 ;; jump over 2nd quote

 ENDIF ELSE BEGIN ;; all other characters

 start = count

 WHILE (count LT length && strpos(delimiters, strmid(string,

count, 1)) EQ -1) DO count++

 IF count GT start THEN \$

 IF n_elements(array) EQ 0 THEN \$

 array = [strmid(string, start, count-start)] ELSE \$

 array = [array, strmid(string, start, count-start)]

 count++

```
ENDELSE
ENDWHILE

;; array could still be undefined here if string had only delimiters
;; in it
IF size(array, /type) EQ 0 THEN array = ""

return, array

END
```
