
Subject: Re: Single Quotes, Double Quotes
Posted by [korpela](#) on Thu, 14 May 1998 07:00:00 GMT
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In article <6jfb9I\$gr7\$1@agate.berkeley.edu>,
Eric J. Korpela <korpela@islay.ssl.berkeley.edu> wrote:
> In article <MPG.fc4d67beb3ea90d989792@news.frii.com>,
> David Fanning <davidf@dfanning.com> wrote:
>> I don't know the "official" answer, but I suspect it has
>> to do with the way octal and hexadecimal numbers are
>> specified in IDL.
>
> I thought this at first, but proved myself wrong.

Actually, I stand corrected. I was unaware of IDL's "number
(no close quote) notation for octal numbers. Here I had always
used 'number'o notation.

You explanation is probably correct.

Eric

--
Eric Korpela | An object at rest can never be
korpela@ssl.berkeley.edu | stopped.
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Subject: Re: Single Quotes, Double Quotes
Posted by [korpela](#) on Thu, 14 May 1998 07:00:00 GMT
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In article <MPG.fc4d67beb3ea90d989792@news.frii.com>,
David Fanning <davidf@dfanning.com> wrote:
> I don't know the "official" answer, but I suspect it has
> to do with the way octal and hexadecimal numbers are
> specified in IDL.

I thought this at first, but proved myself wrong.

> For example, to create a hexadecimal number:
> IDL> a = "f4"x

> Thus, if the "thing" you are assigning to a variable
> is a number (but you want it as a string), you must use
> single quotes or it will be mistaken for a hexadecimal

> or octal number.

The proof that this is wrong is that attempting to create a hexadecimal number with "number"x fails if the string starts with a number.

```
IDL> a="1f"x
```

```
a="1f"x
```

```
^
```

% Syntax error.

Even hex and octal numbers must be created with 'number'x to ensure success.

An interesting aside is that the following succeeds.
(IDL doesn't check that the string converted can actually be converted successfully).

```
IDL> a="mmmm"x
```

```
IDL> print,a
```

```
-278606233
```

Eric

--

Eric Korpela | An object at rest can never be

korpela@ssl.berkeley.edu | stopped.

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Subject: Re: Single Quotes, Double Quotes

Posted by [davidf](#) on Thu, 14 May 1998 07:00:00 GMT

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Charles Cavanaugh (cavanaugh@nicole.eos.ucar.edu) writes:

> Can anyone please explain to me why the line

>

> asciutc = "1993-09-19T06:30:00.000000Z"

>

> fails compilation with the error message

>

> asciutc = "1993-09-19T06:30:00.000000Z"

>

^

> % Syntax error.

>

> but the same line, using single quotes instead of double

> quotes, compiles.

I don't know the "official" answer, but I suspect it has to do with the way octal and hexadecimal numbers are specified in IDL.

For example, to create a hexadecimal number:

```
IDL> a = "f4"x
IDL> print, a
      244
```

Or, an octal number 12:

```
IDL> a = "12
IDL> print,a
      10
```

Thus, if the "thing" you are assigning to a variable is a number (but you want it as a string), you must use single quotes or it will be mistaken for a hexadecimal or octal number. For example, this fails:

```
IDL> a = "5"
a = "5"
    ^
% Syntax error.
```

But this works:

```
IDL> a = '5'
```

And this works, because the first thing after the double quote is a letter:

```
IDL> a = "A5"
```

Not sure this "explains" it. But perhaps it illuminates the problem enough to suggest a solution. :-)

Cheers,

David

David Fanning, Ph.D.
Fanning Software Consulting
E-Mail: davidf@dfanning.com
Phone: 970-221-0438

Subject: Re: Single Quotes, Double Quotes
Posted by [offenbrg](#) on Mon, 18 May 1998 07:00:00 GMT
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Charles Cavanaugh <cavanaugh@nicole.eos.ucar.edu> writes:

```
> -----F486C25E1BA64765FD765959
> Content-Type: text/plain; charset=us-ascii
> Content-Transfer-Encoding: 7bit

> Can anyone please explain to me why the line

>   asciutc = "1993-09-19T06:30:00.000000Z"

> fails compilation with the error message

>   asciutc = "1993-09-19T06:30:00.000000Z"
>                                     ^
>   % Syntax error.

> but the same line, using single quotes instead of double
> quotes, compiles.
```

The problem has to do with the way IDL creates octal (base-8) numbers. To indicate that a number is octal, it is preceded by a double quote. The problem arises when the leading character of your string is a numeral.

In your example, the "1 indicates an octal expression, which it processes as a number (the 9s are confusing it a little); then it subtracts 09, a decimal number, subtracts 19, and then comes to a T, which makes no sense at all in an arithmetic expression, so it stops.

In short, the ' and the " are not interchangeable WHEN the first character of your string constant is a numeral.

Examples:

```
;
;
;Octal expression --- leading "
;
IDL> help,"123
```

```
<Expression>  INT    =    83
```

```
;  
;  
;String expression --- leading '  
;
```

```
IDL> help,'123
```

```
<Expression>  STRING  = '123'
```

```
;  
;  
;Hexadecimal expression --- surrounded by " with trailing x.  
;
```

```
IDL> help,'123'x
```

```
<Expression>  INT    =    291
```

Hope all this helps!

Joel Offenberg

--

"...And I am unanimous in this" - Mrs. Slocumbe

| Joel D Offenberg | Joel.D.Offenbrg.1@gsfc.nasa.gov |

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