
Subject: Re: Julian Dates...Again

Posted by [James Kuyper](#) on Tue, 01 May 2007 17:52:47 GMT

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David Fanning wrote:

- > Folks,
- >
- > OK, I don't have time for this today... :-(
- >
- > Suppose I have a time string: "2007118".
- > The first four digits are the year. The last
- > three digits are the day of the year. (e.g.,
- > Jan 10, 2007 is 010 and Feb 1, 2007 is 032, etc.)
- >
- > I can't seem to put my hands on a function that will
- > convert the day of the year to a month and day value,
- > so that I can create a Julian number with JULDAY.
- > (Although I can imagine I have written such a thing in
- > the past. All I have to do is find that damn formula
- > for leap year processing and...)

Well, you could do the following:

CALDATE,JULDAY(1, 118, 2007), month, day

But I presume the JULDAY call itself will do what you really need. :-)

This technique of using January 118th to find the 118th day of the year seems to work with a lot of different date-handling functions on a wide variety of platforms.

Subject: Re: Julian Dates...Again

Posted by [news.verizon.net](#) on Tue, 01 May 2007 18:04:15 GMT

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On May 1, 1:31 pm, David Fanning <n...@dfanning.com> wrote:

- > I can't seem to put my hands on a function that will
- > convert the day of the year to a month and day value,
- > so that I can create a Julian number with JULDAY.
- >

I am always using Ray Sterner's little procedures at
<ftp://nansen.jhuapl.edu/pub/idl/routines> for this

ydn2md Convert from year and day number of year to month and day of month.

ymd2dn() Convert from year, month, day to day number of year.

--Wayne

Subject: Re: Julian Dates...Again

Posted by [David Fanning](#) on Tue, 01 May 2007 18:14:22 GMT

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kuyper@wizard.net writes:

- > Well, you could do the following:
- >
- > CALDATE,JULDAY(1, 118, 2007), month, day
- >
- > But I presume the JULDAY call itself will do what you really need. :-)
- > This technique of using January 118th to find the 118th day of the
- > year seems to work with a lot of different date-handling functions on
- > a wide variety of platforms.

Seriously!? Of course, you have to mis-spell CALDATE as CALDAT to get it to work, but that is wonderful! :-)

I found the JHUAPL files. I wasn't relaxed enough this morning, despite my new afternoon routine of yoga and Tai Chi, to search my distribution into the "Y"s. :-(

Thanks for your help.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: Julian Dates...Again

Posted by [JD Smith](#) on Tue, 01 May 2007 18:35:44 GMT

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On Tue, 01 May 2007 10:31:00 -0700, David Fanning wrote:

- > Folks,
- >
- > OK, I don't have time for this today... :-(
- >

> Suppose I have a time string: "2007118".
> The first four digits are the year. The last
> three digits are the day of the year. (e.g.,
> Jan 10, 2007 is 010 and Feb 1, 2007 is 032, etc.)
>
> I can't seem to put my hands on a function that will
> convert the day of the year to a month and day value,
> so that I can create a Julian number with JULDAY.
> (Although I can imagine I have written such a thing in
> the past. All I have to do is find that damn formula
> for leap year processing and...)
>
> Does anyone have one of these do-hickeys available?

If you worry that Kuyper's trick goes against the documented input requirements and so could be broken by future updates, just ask for the Julian date of Jan 1st, then add 117 days:

```
IDL> print,julday(1,1,2007)+(118-1)
```

This doesn't validate your input time string (e.g. 2004366 is valid, 2000366 is not), but it will get the correct answer either way.

JD
