
Subject: Re: Identify whether value is integer in IF statement
Posted by [Helder Marchetto](#) on Tue, 09 Jun 2015 14:05:13 GMT
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On Tuesday, June 9, 2015 at 3:49:27 PM UTC+2, Jess wrote:

> I'm trying to automate identification of leap years.
>
> I was thinking something like:
>
> FOR YR=0, 10-1 DO BEGIN
> YEAR=2001+YR
> IF (YEAR/4) EQ ?an integer? THEN BEGIN
> *
> *
> *
> ENDIF
> ENDFOR
>
> How do I identify whether YEAR/4 is an integer (ie a leap year)?
>
> Thanks.

One way would be to use the isa() function with the /integer keyword. But...
when you calculate year/4 you will always get an integer because an integer divided by an integer is still an integer:

```
IDL> for yr=0,9 do help, (2001+yr)/4
<Expression> INT      =   500
<Expression> INT      =   500
<Expression> INT      =   500
<Expression> INT      =   501
<Expression> INT      =   501
<Expression> INT      =   501
<Expression> INT      =   501
<Expression> INT      =   502
<Expression> INT      =   502
<Expression> INT      =   502
```

What you really want is probably is to check if 4 is a divisor of year. To check for this condition, you can use the "mod" operator (see http://www.exelisvis.com/docs/Mathematical_Operators.html). Then you can check with
if (YEAR mod 4) eq 0 then ...

Cheers,
Helder

PS: Ups, too late, Heinz was faster...
