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**Subject:** A simple IF statement question  
Posted by [andry\\_william](#) on Mon, 14 Feb 2005 13:55:28 GMT  
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Dear IDL user,

I am using IDL 6.1 on Linux SUSE. I am writing a simple code using the IF statement and am wondering about the following result:

```
IDL> IF 1 THEN PRINT, '1' ELSE PRINT, 'None'
1
IDL> IF 2 THEN PRINT, '2' ELSE PRINT, 'None'
None
IDL> IF 19 THEN PRINT, '19' ELSE PRINT, 'None'
19
IDL> IF 24 THEN PRINT, '24' ELSE PRINT, 'None'
None
IDL> IF 0 THEN PRINT, '0' ELSE PRINT, 'None'
None
```

Am I wrong when I expect the IF statement to return always TRUE if the condition is not 0 (I mean something like 1,2,3,4,...)?

Thanks for any comments.

Andry

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**Subject:** Re: A simple IF statement question  
Posted by [Benjamin Luethi](#) on Mon, 14 Feb 2005 14:37:36 GMT  
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Excerpt from the IDL help:

The definition of true and false for the different data types is as follows:

- Byte, integer, and long: odd integers are true, even integers are false.
- Floating-point, and complex: non-zero values are true, zero values are false.

The imaginary part of a complex number is ignored.

- String: any string with a nonzero length is true, null strings are false.
- Heap variables (pointers and object references): non-null values are true,

null values are false.

In your case it's integer. So because 0, 2 and 24 are even they are "false",  
1 and 19 are "true" (odd).

Ben

On 14 Feb 2005 05:55:28 -0800, Andry William <[andry\\_william@hotmail.com](mailto:andry_william@hotmail.com)> wrote:

```
> Dear IDL user,  
>  
> I am using IDL 6.1 on Linux SUSE. I am writing a simple code using the  
> IF statement and am wondering about the following result:  
>  
> IDL> IF 1 THEN PRINT, '1' ELSE PRINT, 'None'  
> 1  
> IDL> IF 2 THEN PRINT, '2' ELSE PRINT, 'None'  
> None  
> IDL> IF 19 THEN PRINT, '19' ELSE PRINT, 'None'  
> 19  
> IDL> IF 24 THEN PRINT, '24' ELSE PRINT, 'None'  
> None  
> IDL> IF 0 THEN PRINT, '0' ELSE PRINT, 'None'  
> None  
>  
> Am I wrong when I expect the IF statement to return always TRUE if the  
> condition is not 0 (I mean something like 1,2,3,4,...)?  
>  
> Thanks for any comments.  
>  
> Andry
```

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**Subject: Re: A simple IF statement question**  
Posted by [David Fanning](#) on Mon, 14 Feb 2005 14:49:04 GMT  
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Andry William writes:

```
> I am using IDL 6.1 on Linux SUSE. I am writing a simple code using the  
> IF statement and am wondering about the following result:  
>  
> IDL> IF 1 THEN PRINT, '1' ELSE PRINT, 'None'  
> 1
```

```
> IDL> IF 2 THEN PRINT, '2' ELSE PRINT, 'None'  
> None  
> IDL> IF 19 THEN PRINT, '19' ELSE PRINT, 'None'  
> 19  
> IDL> IF 24 THEN PRINT, '24' ELSE PRINT, 'None'  
> None  
> IDL> IF 0 THEN PRINT, '0' ELSE PRINT, 'None'  
> None  
>  
> Am I wrong when I expect the IF statement to return always TRUE if the  
condition is not 0 (I mean something like 1,2,3,4,...)?
```

Yes, you are wrong. :-)

Here is an article you might want to read:

[http://www.dfanning.com/code\\_tips/bitwiselogical.html](http://www.dfanning.com/code_tips/bitwiselogical.html)

Cheers,

David

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David Fanning, Ph.D.  
Fanning Software Consulting, Inc.  
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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Subject: Re: A simple IF statement question

Posted by [David Fanning](#) on Mon, 14 Feb 2005 15:11:38 GMT

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David Fanning writes:

```
> Andry William writes:  
>  
>> I am using IDL 6.1 on Linux SUSE. I am writing a simple code using the  
>> IF statement and am wondering about the following result:  
>>  
>> IDL> IF 1 THEN PRINT, '1' ELSE PRINT, 'None'  
>> 1  
>> IDL> IF 2 THEN PRINT, '2' ELSE PRINT, 'None'  
>> None  
>> IDL> IF 19 THEN PRINT, '19' ELSE PRINT, 'None'  
>> 19  
>> IDL> IF 24 THEN PRINT, '24' ELSE PRINT, 'None'  
>> None  
>> IDL> IF 0 THEN PRINT, '0' ELSE PRINT, 'None'
```

```
>> None
>>
>> Am I wrong when I expect the IF statement to return always TRUE if the
>> condition is not 0 (I mean something like 1,2,3,4,...)?
>
> Yes, you are wrong. :-)
>
> Here is an article you might want to read:
>
> http://www.dfanning.com/code_tips/bitwiselogical.html
```

It has been pointed out to me that the article is a bit deficient in that it doesn't mention the LOGICAL\_PREDICATE compiler option. If you set:

COMPILE\_OPT LOGICAL\_PREDICATE

Then 0 is FALSE and everything else is TRUE. That probably makes more sense to \*everyone\*! :-)

Cheers,

David

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David Fanning, Ph.D.  
Fanning Software Consulting, Inc.  
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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