
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

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> 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

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

--

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