Subject: Re: Starting a for loop within an if loop
Posted by Carsten Lechte on Thu, 20 Dec 2007 11:19:26 GMT
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Mat Smith wrote:
> Basically, I need something like:
>
> IF keyword_set(mc) THEN BEGIN
> FOR i=0,n-1 DO BEGIN
> t=d[i]
> ENDIF
>
> and later in the program
>
> IF keyword_set(mc) THEN BEGIN
> ENDFOR
> ENDIF

Others have pointed out some solutions for your problem, so I will comment on why your approach must fail.

The reason is: Computers do not understand programming languages.

Source code in IDL, C, perl etc. must be translated into bit patterns (the "machine code") that the CPU of the computer can use directly. The abstract concept of a FOR loop is translated into a certain set of machine instructions and then executed. Fro this to work, the loop has to be present in the source code in its entirety.

In the source code, i.e. the stuff that the human writes, the FOR loop is often represented by several units/lines of code: The "FOR ...", the code that is to be looped over, and the termination statement "ENDFOR". In most programming languages, these are all obligatory components that have to be present at the time that the code is translated into machine code (i.e. during the compilation phase.)

What you tried was to make conditional statements that can only be evaluated during run-time, i.e. after the compilation phase -- but the compiler does not get that far. Your only hope is to use the FOR loop as a complete unit inside your conditional statements. That way, the compiler can translate the whole loop, and during run-time, the program can decide if the loop should be run or not.

I find it hard to express these concepts (other than saying "compilers do not work like that.")

Note that in C, you actually can use the preprocessor to do something like that, but this works because the conditionals are decided before compilation, and the actual compiler either sees the complete FOR loop, or none at all (or a loop with one half missing, if you messed up the #ifdef's...)

chl
