

A VERY BASIC GUIDE TO THE USE OF FORTRAN

(This is a preliminary draft and may contain errors -- use with caution)

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I. Basic advice on programming

If you follow these rules your life as a programmer, no matter what language you're using, is likely to be much less aggravating.

1. Have a clear idea of how your program is going to work. If your program involves complicated equations, make sure that you write them down on paper before you touch a keyboard
2. When ever possible work little by little and run your program as you add bits. That way if you there is an error in your program it is very easy to identify where the error is.
3. Avoid using numbers in the body of your program. Parameter values should be specified near the top of your program and then you should call those named parameters in the rest of your program. That way if you want to make a change in a parameter value you only have to do it once.
4. NEVER BLINDLY COPY A PROGRAM. It may look easier when you get started to copy someone else's program and then adopt it to your needs. But you will end up taking a lot less time if you map out your program first and then pull lines from other programs as you identify the need.

II. How a Fortran program works

A Fortran program is an ASCII text file with commands that conform to the specific syntax rules of Fortran. The old version of the rules is called Fortran 77 (this is what I know). The new version of the rules is called Fortran 90 (what I'd like to know).

A Fortran file (e.g.

III. Basic Fortran syntax

A. *Spacing on each line*

The first space is reserved for commenting out a line, in general use a

A command broken into two lines, note I'm also showing here the exponent function (