
Subject: Include diagramming in your compiler, interpreter, debugger or editor!

Posted by [grunes](#) on Fri, 08 Dec 1995 08:00:00 GMT

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Include diagramming in your compiler, interpreter, debugger or editor!

The diagramming programs just posted to alt.sources, and to the C, Fortran, IDL and PV-WAVE news groups create diagrams along the lines of

```
+----- subroutine a(x)      | 1
|+----- do i=1,5            | 2
||      x=x*i                 | 3
|+----- enddo               | 4
+----- end                   | 5
```

which make it easier to understand source code listings by drawing lines next to blocks of code to indicate the start and end of programs and statement blocks, and by printing a "*" next to jump statements. (If you have a PC, they can also draw line graphics).

Such things are especially useful when examining other people's code, or with the very very elaborate code developed by many people over a period of decades.

Actually it would be far more useful if diagramming were incorporated into other tools:

1. Compilers could add diagramming lines to their source code listings. Since compilers have a full fledged language parser, they are less easily fooled by things like variable names that match keywords, pathological spacing, etc. And it would help people figure out incorrect nesting.
2. Likewise for interpreters.
3. Interactive debuggers might also diagram the code they are displaying, to help the user execute the code through a current block.
4. Editors designed to edit a particular language could help the programmer by drawing such lines too.

I hope people who design such tools will consider including diagramming.

It would make them easier to use and more "user-friendly".

Thanks for your consideration.

Mitchell R Grunes, grunes@nrlvax.nrl.navy.mil. Opinions are mine alone.
