
Subject: Re: Tip for matching BEGIN/ENDs in editors.--Fixed DIAGRAMI

Posted by [grunes](#) on Fri, 13 Jan 1995 15:24:06 GMT

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Fix of DIAGRAMI program

I had posted a program DIAGRAMI to diagram IDL and PV-Wave programs.
Rwelti@chroma.mbt.washington.edu promptly found a couple of errors.

Examples (Note that there are no lines drawn next to each CASE instance
or next to the "ELSE :" clause
I don't use CASE in any language. Shame on me.)

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```
+-----IF (e EQ 1) and then begin
```

```
|           d=0
|           e=1
|+-----CASE cf
||           'L' : c
||+-----'C' : begin
|||           c=e
*||           return
||+-----end
||+-----'C2' : begin
|||           c=x
*||           return
||+-----end
||           else :
|+-----endcase
+-----endif
```

```
+-----case (ndim) of
```

```
|     1: result = Array(P0:bnd(0))
|     2: result = Array(P0:bnd(0),P1:bnd(1))
|     3: result = Array(P0:bnd(0),P1:bnd(1),P2:bnd(2))
|     4: result = Array(P0:bnd(0),P1:bnd(1),P2:bnd(2),P3:bnd(3))
|     5: result = Array(P0:bnd(0),P1:bnd(1),P2:bnd(2),P3:bnd(3),P4:bnd(4))
|     6: result = Array(P0:bnd(0),P1:bnd(1),P2:bnd(2),P3:bnd(3),P4:bnd(4), $
|               P5:bnd(5))
|     7: result = Array(P0:bnd(0),P1:bnd(1),P2:bnd(2),P3:bnd(3),P4:bnd(4), $
|               P5:bnd(5),P6:bnd(6))
| ; 8: result = Array(P0:bnd(0),P1:bnd(1),P2:bnd(2),P3:bnd(3),P4:bnd(4), $
| ;               P5:bnd(5),P6:bnd(6),P7:bnd(7))
+-----endcase
```

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```
c Versions: To diagram Fortran: diagram.for
c           IDL:  diagrami.for
c           C:   diagramc.for
```

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```

nline=0
iunit=1
10  read(iunit,11,end=99)a
11  format(a160)
nline=nline+1
if(nline/100*100.eq.nline)print*, 'Line ',nline

b=' '      !turn tabs to spaces
j=1
do i=1,160
  if(a(i:i).eq.char(9))then
    j=(j-1)/8*8+8+1
  elseif(j.le.160)then
    b(j:j)=a(i:i)
    j=j+1
  endif
enddo
a=b
b=' '
i=1
j=1
dowhile(i.le.160.and.j.le.160) !handle upper case
  c=a(i:i)
  b(j:j)=c
  j=j+1
  i=i+1
enddo
a=' '
iquote=0      !no ' yet
idquote=0     !no " yet
do i=1,160
  c=b(i:i)
  if(c.ge.'A'.and.c.le.'Z')c=char(ichar(c)+32)
  if(c.eq.';')goto 15
  if(c.eq.'"' .and.i.ne.6)iquote=1-iquote
  if(c.eq.'"'" .and.i.ne.6)idquote=1-idquote
  if(iquote.eq.1)then
    if(find(a,'include ',1))then
      iquote=0
      idquote=0
    endif
  endif
  if(iquote.ne.0.or.idquote.ne.0)c=' '
  a(i:i)=c
enddo
15  i2=i1
i3=i1
iflag=0      !no goto on line

```

```

if(find(a,'goto',0).or.find(a,'return',0))iflag=1
if(find(a,'include ',1))then
  a=a(icol:160)
  if(.not.find(a,"""",0))goto 16
  a=a(icol:160)
  if(.not.find(a,"""",0))goto 16
  a(icol-1:160)=' '
  close(3)
  open(3,file=a,status='old')
  iunit=3
  nlinesave=nline
  i2=i2+1
  i3=i3+1
  i4=i4+1
16  continue
elseif(find(a,'begin ',0))then
  i4=i4+1
  if(.not.find(a,'else',0))then
    i2=i2+1
    i3=i3+1
  endif
elseif(find(a,'case ',0).and.find(a,' of ',0))then
  i4=i4+1
  i2=i2+1
  i3=i3+1
elseif(find(a,'endif ',1).or.find(a,'endfor ',1)
& .or.find(a,'endelse ',1).or.find(a,'endwhile ',1)
& .or.find(a,'endcase ',1))then
  i3=i3-1
  i4=i4+1
elseif(find(a,'function ',1).or.find(a,'pro ',1))then
  if(lnSub.eq.0)then
    lnSub=1
    i2=i2+1
    i3=i3+1
    i4=i4+1
    if(i3.ne.1)then
      PRINT*, '***ERROR--INVALID DIAGRAMMING INDEX line',nline
      WRITE(2,*) '***ERROR--INVALID DIAGRAMMING INDEX!***'
      print*,char(7)
    endif
  endif
  i3=1
elseif(find(a,'end ',1))then
  if(i3.gt.0.or.lnSub.gt.0)then      !Problem: IDL end may actually
    i3=i3-1                        ! be an endif, endelse, etc.
    i4=i4+1
    if(i3.eq.0.and.lnSub.ne.0)lnSub=0

```

```

else
  nMainEnd=nMainEnd+1
  print*, '***MAINLINE END line ', nline
  if(nMainEnd.gt.1)then
    PRINT*, '***ERROR--TOO MANY MAINLINE ENDS!***'
    WRITE(2,*) '***ERROR--TOO MANY MAINLINE ENDS!***'
    print*, char(7)
  endif
endif
endif
20  a=' '
if(i1.lt.0.or.i2.lt.0.or.i3.lt.0.or.i4.lt.0)then
  PRINT*, '***ERROR--INVALID DIAGRAMMING INDEX line', nline
  WRITE(2,*) '***ERROR--INVALID DIAGRAMMING INDEX!***'
  print*, char(7)
  i1=max(i1,0)
  i2=max(i2,0)
  i3=max(i3,0)
  i4=max(i4,0)
endif
jj=max(1,min(16,2*i2-1))
if(i2.gt.0)a=aa(1:jj)
if(i4.ne.0)then
  jjj=1
  dowhile(jjj.lt.160.and.b(jjj:jjj).eq.' ')
    jjj=jjj+1
  enddo
  if(jjj.gt.1)b(1:jjj-1)=
&  '-----'
  a(jj:16)='-----'
endif
do i=0,i4-1
  a(max(1,min(15,jj-i*2)):max(1,min(15,jj+1-i*2)))='+-'
enddo
i4=0
if(iline.ne.0.and.b(max(1,iline):160).eq.' ')then
  write(form,'(i5)')nline          !line #
  if(nline.eq.0)write(form,'(i5)')nlinesave
  if(form(1:1).eq.' ')form(1:1)='|'
  b(iline:iline+4)=form
endif
n=160
dowhile(n.gt.1.and.b(n:n).eq.' ')
  n=n-1
enddo
if(iflag.ne.0)a(1:1)='*'
c last minute change to reduce spaces in diagram block:
write(2,2)(a(i:i),i=1,15,2),(b(i:i),i=1,n)

```

```

2    format(132a1)
    i1=i3
    goto 10
99   if(iunit.eq.3)then
    iunit=1
    nline=nlinesave
    i1=i1-1
    close(3)
    goto 10
    endif
    end
cccccccccccccccccccc
    logical function find(a,b,iflag) !find b in a.
                                ! if iflag.ne.0, must be first
                                ! non-blank in a.

    implicit integer*2 (i-n)
    integer iflag
    character*(*) a,b
    common icol
    ii=len(a)
    jj=len(b)
    do i=1,ii-jj+1
        if(a(i:i+jj-1).eq.b)then
            icol=i+jj          ! icol=column after item found
            if(i.gt.1.and.iflag.ne.0)then
                if(a(1:i-1).eq.' ')goto 10
            else
                goto 10
            endif
        endif
    enddo
    find=.false.
    return

10   find=.true.
    return
    end

```

-----CUT HERE-----

(opinions expressed are mine alone)
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