
Subject: Re: Tip for matching BEGIN/ENDs in editors.
Posted by [grunes](#) on Wed, 11 Jan 1995 20:01:27 GMT
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In article <Pine.SOL.3.91.950111111010.6577A-100000@chroma> Russ Welti
<rwelti@chroma.mbt.washington.edu> writes:

> If your editor supports a matching function for characters
> such as '(' '{' '[' etc. (e.g. the % key in vi) then you
> might like this little technique I started using one day
> when I could not find the matching END for an IDL construct.
...

Personally I would rather have a program to diagram them for me.

I assume you have a Fortran compiler (-:

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program diagrami
c Diagrams IDL if-else-elseif-endif and do-enddo constructs.
c Program by Mitchell R Grunes, ATSC/NRL.
c Note--this is a quick and dirty attempt--may not always work quite right.
c It is assumed that no fortran carriage control exists.

c Versions: To diagram Fortran: diagram.for

c IDL: diagrami.for
c C: diagramc.for

```
implicit integer*2 (i-n)
character*160 a,b
character*16 aa
character*5 form
character*1 c
logical find
external find
common icol
print*, 'IDL source filename?'
a= ' '
read(*,1)a(1:132)
1  format(a132)
open(1,file=a,status='old')
print*, 'output file?'
b= ' '
read(*,1)b(1:132)
open(2,file=b)
c last minute change to reduce spaces in diagram block:
c  print*, 'column for line #(60 for screen,91 for laser,112 for print,0 for none)?'
c  print*, 'column for line #(68 for screen,99 for laser,'
c  print*, ' 120 for print,0 for none)?'
```

```

iline=0
read*,iline
cwrite(2,*)a
cwrite(2,*)'*****'
aa='|'||'||'||'||'||'||'||'||'||'||'||'||'||'||'||'|'
i1=0      !# of nest levels before current line
i2=0      !# of nest levels on current line
i3=0      !# of nest levels after current line
i4=0      !1 to flag start or end of block
InSub=0    !Inside a procedure or function?
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

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        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
    i4=0
    iflag=0      !no goto on line
    if(find(a,'goto',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,'endif ',1).or.find(a,'endfor ',1)
& .or.find(a,'endelse ',1).or.find(a,'endwhile ',1))then
            i3=i3-1
            i4=i4+1
        elseif(find(a,'function ',1).or.find(a,'pro ',1))then
            i2=i2+1
            i3=i3+1
            i4=i4+1
            InSub=1
            if(i3.ne.1)then
                PRINT*, '*****ERROR--INVALID DIAGRAMMING INDEX!*****'
                WRITE(2,*) '*****ERROR--INVALID DIAGRAMMING INDEX!*****'
                print*,char(7)
            endif
            i3=1
        elseif(find(a,'end ',1))then

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    if(lnSub.ne.0)then
        i3=i3-1
        i4=i4+1
        lnSub=0
    endif
    if(i3.ne.0)then
        PRINT*, '*****ERROR--INVALID DIAGRAMMING INDEX!*****'
        WRITE(2,*) '*****ERROR--INVALID DIAGRAMMING INDEX!*****'
        print*,char(7)
    endif
    i3=0
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!*****'
        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
    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

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        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

```

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