!\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

! Calculation time

! 言語: FORTRAN90

! コンパイル環境: DIGITAL Visual Fortran

!

! [使用法]

! call time\_start ! 時間カウント開始場所

! call time\_stop ! 時間カウント終了場所

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module cal\_time

character(64),parameter :: time\_file\_name="cal\_time.txt"

real(8) :: rtc\_start,rtc\_stop

end module

!----------------------------------------------------------------------

! 計算開始時間

!----------------------------------------------------------------------

subroutine time\_start

use dfport ! rtc

use cal\_time

implicit none

character(len=12) real\_clock(3)

integer :: date\_time\_start(8),date\_time\_stop(8)

integer :: fp=10

open(fp,file=time\_file\_name,access='SEQUENTIAL')

call date\_and\_time(real\_clock (1),real\_clock (2),real\_clock (3), &

date\_time\_start)

write(\*,"('START TIME: ',i4.4,a1,i2.2,a1,i2.2,' ', &

i2.2,':',i2.2,' ',i2.2,'sec ',i3.3,'msec')") &

date\_time\_start(1),'/',date\_time\_start(2),'/',date\_time\_start(3), &

date\_time\_start(5),date\_time\_start(6),date\_time\_start(7),date\_time\_start(8)

write(fp,"('START TIME: ',i4.4,a1,i2.2,a1,i2.2,' ', &

i2.2,':',i2.2,' ',i2.2,'sec ',i3.3,'msec')") &

date\_time\_start(1),'/',date\_time\_start(2),'/',date\_time\_start(3), &

date\_time\_start(5),date\_time\_start(6),date\_time\_start(7),date\_time\_start(8)

! the number of seconds elapsed since 00:00:00 Greenwich mean time, January 1, 1970.

rtc\_start=rtc()

close(fp)

return

end subroutine

!----------------------------------------------------------------------

! 計算終了時間＆計算時間

!----------------------------------------------------------------------

subroutine time\_stop

use dfport ! rtc

use cal\_time

implicit none

character(len=12) real\_clock(3)

integer :: date\_time\_start(8),date\_time\_stop(8)

integer :: fp=10

open(fp,file=time\_file\_name,access='APPEND')

call date\_and\_time(real\_clock (1),real\_clock (2),real\_clock (3), &

date\_time\_stop)

write(\*,"('STOP TIME: ',i4.4,a1,i2.2,a1,i2.2,' ', &

i2.2,':',i2.2,' ',i2.2,'sec ',i3.3,'msec')") &

date\_time\_stop(1),'/',date\_time\_stop(2),'/',date\_time\_stop(3), &

date\_time\_stop(5),date\_time\_stop(6),date\_time\_stop(7),date\_time\_stop(8)

write(fp,"('STOP TIME: ',i4.4,a1,i2.2,a1,i2.2,' ', &

i2.2,':',i2.2,' ',i2.2,'sec ',i3.3,'msec')") &

date\_time\_stop(1),'/',date\_time\_stop(2),'/',date\_time\_stop(3), &

date\_time\_stop(5),date\_time\_stop(6),date\_time\_stop(7),date\_time\_stop(8)

! the number of seconds elapsed since 00:00:00 Greenwich mean time, January 1, 1970.

rtc\_stop=rtc()

close(fp)

call elapsed\_time

return

end subroutine

!----------------------------------------------------------------------

! 計算時間

! 計算時間が一日以内

!----------------------------------------------------------------------

subroutine elapsed\_time

use cal\_time

implicit none

real(8) :: time\_spent

integer :: h,m,s

integer :: fp=10

open(fp,file=time\_file\_name,access='APPEND')

time\_spent=rtc\_stop-rtc\_start

s=mod(int(time\_spent),60)

m=mod(int(time\_spent/60),60)

h=time\_spent/60/60

write(\*,"('ELAPSED TIME (HOUR:MINUTE:SECOND): ',i2.2,':',i2.2,':',i2.2)") h,m,s

write(fp,"('ELAPSED TIME (HOUR:MINUTE:SECOND): ',i2.2,':',i2.2,':',i2.2)") h,m,s

close(fp)

return

end subroutine