```
c This program calculates the F Factor for a Shell & Tube HX
c
      implicit real*8(a-h,o-z)
      data Th_i, Th_e, Tc_i, Tc_e/195,160,65,105/
        print *,'To erminate enter 0,0,0,0'
        print *,' '
        print *,' '
c       Print *,'Enter  >   Th_i, Th_e, Tc_i, Tc_e'
c       read(*,*) Th_i, Th_e, Tc_i, Tc_e
c       if(Th_i.eq.0) stop
        P=(Tc_e-Tc_i)/(Th_i-Tc_i)
        R=(Th_i-Th_e)/(Tc_e-Tc_i)
        RR=sqrt(R*R+1.)
        term1=RR/(R-1.)
        anom1=(1.-P)/(1.-P*R)
        anom2=dlog(anom1)
        dnom1=2.-P*(R+1-RR)
        dnom2=2.-P*(R+1+RR)
        dnom3=dlog(dnom1/dnom2)
        term2=anom2/dnom3
        F=term1*term2
        write(*,3) Th_i, Th_e, Tc_i, Tc_e
        write(*,3)  P, R, F
2       continue
3     format(4f12.4)
      stop
      end
```