

EK-1

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program main
IMPLICIT REAL*8 (A-H,O-Z)
character*20 DATA,OUTPUT
DIMENSION DI(2001),X1(2001),X2(2001)
WRITE(*,*) 'DATA DOSYASININ ADINI VERINIZ'
READ(*,100) DATA
OPEN(10,FILE=DATA,FORM='FORMATTED',STATUS='OLD')
100 FORMAT(1A20)
WRITE(*,*) 'CIKTI DOSYASININ ADINI VERINIZ'
READ(*,100) OUTPUT
OPEN(5,FILE=OUTPUT,FORM='FORMATTED')
WRITE(*,*) 'SONUM ORANINI VERINIZ'
READ(*,*) SO
WRITE(*,*) 'ZAMAN ADIMINI VERINIZ'
READ(*,*) DZ
WRITE(*,*) 'IVME SAYISINI VERINIZ'
READ(*,*) NZD
WRITE(*,*) 'MAKSIMUM PERIYODU VERINIZ'
READ(*,*) TMAX
C
DO 10 I=1,NZD
READ(10,*) DI(I)
10 DI(I)=DI(I)*9.81D0
CLOSE(10,STATUS='KEEP')
C
T=0.05D0
DT=(TMAX-T)/100.D0
WRITE(5,*) DATA,' DOSYASINDAKI DEPREM KAYDINA AIT'
WRITE(5,*) ' SPEKTRUM DEGERLERI'
WRITE(5,*) ' '
WRITE(5,*) ' '
WRITE(5,*) ' '
WRITE(5,121) SO
121 FORMAT(' SONUM ORANI=',1F5.2)
WRITE(5,*) ' '
WRITE(5,*) ' '
C
WRITE(5,*) 'PERIYOT SD SV SA'
WRITE(5,*) '-----'
DO 200 I=1,100
WRITE(*,*) 'I=',I
W=2*22/(7*T)
XMAX=0.
X1(1)=0.
X2(1)=0.
DO 30 J=1,NZD
A1=DZ*X2(J)
A2=DZ*(-2.*SO*W*X2(J)-W**2*X1(J)-DI(J))
B1=DZ*(X2(J)+A2/2)

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B2=DZ*(-2.*SO*W*(X2(J)+A2/2.)-W**2*(X1(J)+A1/2.)-  
%((DI(J)+DI(J+1))/2.))  
C1=DZ*(X2(J)+B2/2.)  
C2=DZ*(-2.*SO*W*(X2(J)+B2/2.)-W**2*(X1(J)+B1/2.)-  
%((DI(J)+DI(J+1))/2.))  
D1=DZ*(X2(J)+C2)  
D2=DZ*(-2.*SO*W*(X2(J)+C2)-W**2*(X1(J)+C1)-DI(J+1))  
X1(J+1)=X1(J)+((A1+2.*B1+2.*C1+D1)/6.)  
X2(J+1)=X2(J)+((A2+2.*B2+2.*C2+D2)/6.)  
IF(ABS(XMAX).LT.ABS(X1(J+1))) THEN  
XMAX=X1(J+1)  
END IF  
30 CONTINUE  
SD=ABS(XMAX)  
SV=W*SD  
SA=W**2*SD  
WRITE(5,2) T,SD,SV,SA  
2 FORMAT(F7.3,5X,F10.5,5X,F10.5,5X,F10.5)  
T=T+DT  
200 CONTINUE  
END
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