**Script**

clear all

clc

Kdd = [ 6, -3; -3, 3] ; % 1/L^3 çarp?m? var

Kds = [0, 0, -3/2, -3/2; 3/2, 3/2, 3/2, 3/2] ; % 1/L^2 çarp?m? var

Ksd = [ 0, 3/2; 0, 3/2; -3/2, 3/2; -3/2, 3/2]; % 1/L^2 çarp?m? var

Kss = [ 8, 2, 1, 0; 2, 8, 0, 1; 1, 0, 6, 2; 0, 1, 2, 6]; % 1/L çarp?m? var

B=inv(Kss);

Kd= Kdd - Kds\*B\*Ksd;

Fi1=[ 1; 2.012]

Fi2=[ 1; -0.249]

mass = [ 1, 0; 0, 2]

Birim=[1; 1]

L1 = transpose(Fi1)\*mass\*Birim

M1 = transpose(Fi1)\*mass\*Fi1

M2 = transpose(Fi2)\*mass\*Fi2

L2 = transpose(Fi2)\*mass\*Birim

f1=L1/M1\*(mass\*Fi1)

f2=L2/M2\*(mass\*Fi2)

F1=[0.5523;2.2225;0;0;0;0]

F2=[0.4466;-0.2224;0;0;0;0]

%Let L=1 m

Ksys=[6,-3,0,0,-3/2,-3/2;-3,3,3/2,3/2,3/2,3/2;0,3/2,8,2,1,0;0,3/2,2,8,0,1;-3/2,3/2,1,0,6,2;-3/2,3/2,0,1,2,6]

U1=inv(Ksys)\*F1

U2=inv(Ksys)\*F2

kac=[12/8,-12/8,-12/8,-12/8;-12/8,16/8,12/8,8/8;-12/8,12/8,12/8,12/8;-12/8,8/8,12/8,16/8]

kec=[12/8,-12/8,-12/8,-12/8;-12/8,16/8,12/8,8/8;-12/8,12/8,12/8,12/8;-12/8,8/8,12/8,16/8]

kcd=[12,6,-12,6;6,4,-6,2;-12,-6,12,-6;6,2,-6,4]

kef=kcd

kdf=kec

kbd=kac

Fac1=kac\*[0;0;1.2961;-0.3712]

Fac2=kac\*[0;0;0.0736;0.0011]

Fec1=kec\*[1.2961;-0.3712;2.6077;-0.1995]

Fec2=kec\*[0.0736;0.0011;-0.0188;0.0172]

Fcd1=kcd\*[0;-0.3712;0;-0.3712]

Fcd2=kcd\*[0;0.0011;0;0.0011]

Fef1=kef\*[0;-0.1995;0;-0.1995]

Fef2=kef\*[0;0.0172;0;0.0172]

Fdf1=kdf\*[1.2961;-0.3712;2.6077;-0.1995]

Fdf2=kdf\*[0.0736;0.0011;-0.0188;0.0172]

Fbd1=kbd\*[0;0;1.2961;-0.3712]

Fbd2=kbd\*[0;0;0.0736;0.0011]

**Results**

Fi1 =

1.0000

2.0120

Fi2 =

1.0000

-0.2490

mass =

1 0

0 2

Birim =

1

1

L1 =

5.0240

M1 =

9.0963

M2 =

1.1240

L2 =

0.5020

f1 =

0.5523

2.2225

f2 =

0.4466

-0.2224

F1 =

0.5523

2.2225

0

0

0

0

F2 =

0.4466

-0.2224

0

0

0

0

Ksys =

6.0000 -3.0000 0 0 -1.5000 -1.5000

-3.0000 3.0000 1.5000 1.5000 1.5000 1.5000

0 1.5000 8.0000 2.0000 1.0000 0

0 1.5000 2.0000 8.0000 0 1.0000

-1.5000 1.5000 1.0000 0 6.0000 2.0000

-1.5000 1.5000 0 1.0000 2.0000 6.0000

U1 =

1.2961

2.6077

-0.3712

-0.3712

-0.1995

-0.1995

U2 =

0.0736

-0.0188

0.0011

0.0011

0.0172

0.0172

kac =

1.5000 -1.5000 -1.5000 -1.5000

-1.5000 2.0000 1.5000 1.0000

-1.5000 1.5000 1.5000 1.5000

-1.5000 1.0000 1.5000 2.0000

kec =

1.5000 -1.5000 -1.5000 -1.5000

-1.5000 2.0000 1.5000 1.0000

-1.5000 1.5000 1.5000 1.5000

-1.5000 1.0000 1.5000 2.0000

kcd =

12 6 -12 6

6 4 -6 2

-12 -6 12 -6

6 2 -6 4

kef =

12 6 -12 6

6 4 -6 2

-12 -6 12 -6

6 2 -6 4

kdf =

1.5000 -1.5000 -1.5000 -1.5000

-1.5000 2.0000 1.5000 1.0000

-1.5000 1.5000 1.5000 1.5000

-1.5000 1.0000 1.5000 2.0000

kbd =

1.5000 -1.5000 -1.5000 -1.5000

-1.5000 2.0000 1.5000 1.0000

-1.5000 1.5000 1.5000 1.5000

-1.5000 1.0000 1.5000 2.0000

Fac1 =

-1.3874

1.5730

1.3874

1.2018

Fac2 =

-0.1121

0.1115

0.1121

0.1126

Fec1 =

-1.1114

1.0255

1.1114

1.1972

Fec2 =

0.1112

-0.1192

-0.1112

-0.1031

Fcd1 =

-4.4544

-2.2272

4.4544

-2.2272

Fcd2 =

0.0132

0.0066

-0.0132

0.0066

Fef1 =

-2.3940

-1.1970

2.3940

-1.1970

Fef2 =

0.2064

0.1032

-0.2064

0.1032

Fdf1 =

-1.1114

1.0255

1.1114

1.1972

Fdf2 =

0.1112

-0.1192

-0.1112

-0.1031

Fbd1 =

-1.3874

1.5730

1.3874

1.2018

Fbd2 =

-0.1121

0.1115

0.1121

0.1126

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