

```
1 using System;
2 using Matrix_0;
3
4 namespace ConsoleApp33
5 {
6     internal class Program
7     {
8         static void Main(string[] args)
9         {
10             // 建構系統矩陣A。
11             double[,] M0 = { {2, 0}, {0, 1} };
12             ReMatrix M = new ReMatrix(M0);
13             double[,] K0 = { {3, -1}, {-1, 1} };
14             ReMatrix K = new ReMatrix(K0);
15             double[,] C0 = { {0.4, -0.05}, {-0.05, 0.2} };
16             ReMatrix C = new ReMatrix(C0);
17             Console.WriteLine("\n 質量矩陣M :\n{0}", new PR(M));
18             Console.WriteLine("\n 勁度矩陣K :\n{0}", new PR(K));
19             Console.WriteLine("\n 阻尼矩陣C :\n{0}", new PR(C));
20
21             MKCMatrix MKC = new MKCMatrix(M, K, C);
22             ReMatrix A = MKC.Matrix;
23             Console.WriteLine("\n 系統矩陣A :\n{0}\n", new PR(A));
24
25             // 建構系統矩陣B : (使用矩陣運算子, 兩者相同)
26             Iden Id = new Iden(2);
27             ReMatrix I = Id.GetMatrix;
28             Zero Ze = new Zero(2);
29             ReMatrix O = Ze.GetMatrix;
30
31             ReMatrix B = (-1.0 * ~M * C & -1.0 * ~M * K) | (I & O);
32             Console.WriteLine("\n 系統矩陣B :\n{0}\n", new PR(B));
33         }
34     }
35 }
36 /*輸出結果如下:
37 質量矩陣M :
38     2.00000    0.00000
39     0.00000    1.00000
40 勁度矩陣K :
```

```
41      3.00000      -1.00000
42      -1.00000      1.00000
43  阻尼矩陣C :
44      0.40000      -0.05000
45      -0.05000      0.20000
46  系統矩陣A :
47  -0.20001  0.02500  -1.50000  0.50000
48  0.05000  -0.20000  1.00000  -1.00000
49  1.00000  0.00000  0.00000  0.00000
50  0.00000  1.00000  0.00000  0.00000
51  系統矩陣B :
52  -0.20000  0.02500  -1.50000  0.50000
53  0.05000  -0.20000  1.00000  -1.00000
54  1.00000  0.00000  0.00000  0.00000
55  0.00000  1.00000  0.00000  0.00000
56  */
57
```