

```
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
```