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1  /// Quiz 5 2557-1: Matrix Switch using a simple case separation.
2  /// This version separates loops and makes things easy to understand.
3  /// It lacks mathematical elegance, but probably the fastest way to
4  /// compute. However, the speed gain may be insignificant because modern
5  /// computer architecture is so great at pipelining.
6  ///
7  /// Author: Pinyo Taeprasartsit, Dec 2, 2014
8  #include <stdio.h>
9
10 int A[200][200];
11 int main() {
12     int N, D;
13     scanf("%d", &N);
14     for(int row = 0; row < N; ++row) {
15         for(int col = 0; col < N; ++col) {
16             scanf("%d", &A[row][col]);
17         }
18     }
19
20     scanf("%d", &D);
21     if(D == 1) {
22         for(int row = 0; row < N; ++row) {
23             // Print the left side
24             for(int col = 0; col < N / 2; ++col) {
25                 printf("%d ", A[row][col + N/2]);
26             }
27
28             // Print the right side
29             for(int col = N / 2; col < N; ++col) {
30                 printf("%d ", A[row][col - N/2]);
31             }
32             printf("\n");
33         }
34     } else if(D == 2) {
35         // Print upper part
36         for(int row = 0; row < N / 2; ++row) {
37             for(int col = 0; col < N; ++col) {
38                 printf("%d ", A[row + N/2][col]);
39             }
40             printf("\n");
41         }
42
43         // Print lower part
44         for(int row = N / 2; row < N; ++row) {
45             for(int col = 0; col < N; ++col) {
46                 printf("%d ", A[row - N/2][col]);
47             }
48             printf("\n");
49         }
50     }
51
52     return 0;
53 }

```