

```
1 #include <stdio.h>
2 #include <conio.h>
3 #include <stdbool.h>
4
5 int main()
6 {
7     int row = 0, column = 0;
8     printf("Enter the Number Of the row in the Matrix: ");
9     scanf("%d", &row);
10    printf("Enter the Number of the Column in the Matrix: ");
11    scanf("%d", &column);
12    int array[row][column];
13    bool flag;
14
15    for (int i = 0; i < row; i++)
16    {
17        printf("Enter the Elements for the row %d ", i);
18        printf("\n");
19        for (int j = 0; j < column; j++)
20        {
21            printf("Enter the Elements for the column %d: ", j);
22            scanf("%d", &array[i][j]);
23        }
24    }
25    printf("\n");
26    for (int i = 0; i < row; i++)
27    {
28        for (int j = 0; j < column; j++)
29        {
30            printf("%d ", array[i][j]);
31        }
32        printf("\n");
33    }
34
35    for (int i = 0; i < row; i++)
36    {
37        for (int j = 0; j < column; j++)
```

```
37        for (int j = 0; j < column; j++)
38        {
39            printf("Enter the Elements for the column %d: ", j);
40            scanf("%d", &array[i][j]);
41        }
42    }
43    printf("\n");
44    for (int i = 0; i < row; i++)
45    {
46        for (int j = 0; j < column; j++)
47        {
48            printf("%d ", array[i][j]);
49        }
50        printf("\n");
51    }
52
53    for (int i = 0; i < row; i++)
54    {
55        for (int j = 0; j < column; j++)
56        {
57            if (i != j && array[i][j] != 0)
58            {
59                flag = true;
60            }
61        }
62    }
63    if (flag)
64    {
65        printf("The given Matrix is the diagonal Matrix");
66    }
67    else
68    {
69        printf("The given Matrix is not the diagonal Matrix");
70    }
71}
```

