```cpp
#include <iostream>
using namespace std;

int main()
{	int r,c,i,j,count,arr[50][50];
	count=0;
	int oned[50];
	int k=0;

	cout<<"Enter r: "<<endl;
	cin>>r;
	cout<<"Enter c: "<<endl;
	cin>>c;

	//input the matrix
	for(i=0;i<r;i++)
	{	for(j=0;j<c;j++)
		{	cout<<"Enter element arr["<<i<<"]["<<j<<"] of matrix: "<<endl;
			cin>>arr[i][j];

		}

	}
	cout<<"The Matrix is:\n\n";
	//print the 2d matrix
	for(i=0;i<r;i++)
	{	for(j=0;j<c;j++)
		{
			cout<<arr[i][j]<<"\t";

		}
		cout<<"\n";
	}
	cout<<"The following Matrix can be mapped to a 1D array as follows: \n\n";
	//Map 2d array to 1d array
	for(i=0;i<r;i++)
	{	for(j=0;j<c;j++)
		{	if(arr[i][j]!=0){

				oned[k]=arr[i][j];
				k++;

			}
		}

	}
	//Display 2d array
	for(i=0;i<k;i++)
		cout<<oned[i]<<"\t";
	int m,n,location;
	cout<<"\nEnter the rowno and colno of the element you want to retrive: " ;
	cin>>m>>n;
	location=(m*c)+n;
	cout<<"\nThe element "<<arr[m][n]<<" is present in location "<<location<<endl;

}
```

```
Enter r:
3
Enter c:
3
Enter element arr[0][0] of matrix:
1
Enter element arr[0][1] of matrix:
2
Enter element arr[0][2] of matrix:
3
Enter element arr[1][0] of matrix:
4
Enter element arr[1][1] of matrix:
0
Enter element arr[1][2] of matrix:
0
Enter element arr[2][0] of matrix:
0
Enter element arr[2][1] of matrix:
5
Enter element arr[2][2] of matrix:
6
The Matrix is:

1       2       3
4       0       0
0       5       6
The following Matrix can be mapped to a 1D array as follows:

1       2       3       4       5       6
Enter the rowno and colno of the element you want to retrive: 1 0

The element 4 is present in location 3
```