Lab manual 9(home task):

Question 1:

```cpp
#include <iostream>
using namespace std;
int main()
{
    int i,j;
    double array[3][3];
    cout<<"enter array\n";
    for (i=0;i<3;i++){
        for(j=0;j<3;j++){
            cin>>array[i][j];
        }
    }
    cout<<"you entered \n";
        for (i=0;i<3;i++){
        for(j=0;j<3;j++){
            cout<<array[i][j]<<" ";
        }
        cout<<endl;
    }
    double det=array[0][0] * (array[1][1] * array[2][2] - array[2][1] * array[1][2]) - array[0][1] * (array[1][0] * array[2][2] - array[2][0] * array[1][2]) +
        array[0][2] * (array[1][0] * array[2][1] - array[2][0] * array[1][1]);
    double adj[3][3];
        adj[0][0] = array[1][1] * array[2][2] - array[2][1] * array[1][2];
        adj[0][1] = -(array[1][0] * array[2][2] - array[2][0] * array[1][2]);
        adj[0][2] = array[1][0] * array[2][1] - array[2][0] * array[1][1];
        adj[1][0] = -(array[0][1] * array[2][2] - array[2][1] * array[0][2]);
        adj[1][1] = array[0][0] * array[2][2] - array[2][0] * array[0][2];
        adj[1][2] = -(array[0][0] * array[2][1] - array[2][0] * array[0][1]);
        adj[2][0] = array[0][1] * array[1][2] - array[1][1] * array[0][2];
        adj[2][1] = -(array[0][0] * array[1][2] - array[1][0] * array[0][2]);
        adj[2][2] = array[0][0] * array[1][1] - array[1][0] * array[0][1];
        if (det == 0) {
        cout << "The matrix is singular" <<endl;
        }
        else{
            double inv[3][3];
       for (int i = 0; i < 3; i++) {
        for (int j = 0; j < 3; j++) {
            inv[i][j] = adj[i][j] / det;
        }
    }
    cout << "Inverse of the matrix is:" <<endl;
        for (int i = 0; i < 3; ++i) {
            for (int j = 0; j < 3; ++j) {
            cout << inv[i][j] << " ";
        }
        cout <<endl;
    }
        }
    }
```

```
enter array
1 0 1 0 1 0 1 0 1 0
you entered
1 0 1
0 1 0
1 0 1
The matrix is singular

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Process exited after 20.79 seconds with return value 0
Press any key to continue . . .
```