Mariia Shyian
ID: 756283

Semestral Project

Project idea:

The idea is to create a program that helps to compute different operations with matrices (such as addition, multiplication, finding inverse, and determinant).

Addition and multiplication will be computed directly (by definition).

Inverse:

The algorithm will use the adjugate matrix (also called the classical adjoint) and the cofactor matrix for the inverse. There is a theorem which says:

A^(-1) = 1/det(A)*adj(A)

Determinant:

To find the determinant there will be a Gauss algorithm.

Interface:

To run the program, one will need C# invironment, with .NET 7.

The program will run in the console, and input for matrices is the same as for Mathlab, i.e.:

[1, 2, 3; 4, 5, 6; 7, 8, 9] — for the matrix 3x3 with entries 1-9.