Lecture Note 5- Gaussian Elimination

Conversion of System of Equations to Matrix form [Simulation of Augmented Matrix]

1. Read the system of Equations:
2. Convert the equations to Matrix form using the in-built Matlab function equationsToMatrix();

The challenging part here is going to be taking equations as input from user in a loop as strings and converting them into equations.

The procedure will be as follows:

1. In a loop, take an equation as input from user using the ***input()*** command. Like this:

eqn = input(‘Enter equation’,'s');

1. Converting the string form of equation to a function such that Matlab recognizes its coefficients and variables. This will be done using the inline()function. Like this:

L = inline(eqn,'x','y','z');

1. Collect these functions in a vector and increment its counter.

Vec(i) = L(x,y,z);

1. After the while loop ends, convert the equations in Vector Vec to Matrices using the in-built Matlab function equationsToMatrix(). Like this:

[A,b] = equationsToMatrix([Vec], [x, y, z])