SPL1 Project Proposal Form, 2022
Institute of Information Technology (IIT)
University of Dhaka

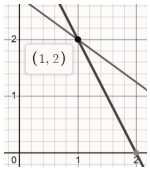
Student's Name:	**Amit Kumar Roy**		
Student's Roll:	**BSSE-1314**	**Phone:**	**01521705586**

Project Name & Description : Equation Solver and plotter

Equation Solver and plotter is a tool to simplify mathematical analysis of Linear and Polynomial expressions. The program takes linear and polynomial equation as input and shows step by step solution process .Finally shows output with plotting graph. Thus while trying to solve a given expression the program frequently outputs the current state of the given expression. So the user can keep track of the whole process.Such as,

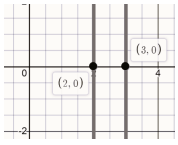
1. Linear equation solver: This program takes N input equation each line has N variables. Then solves equation using **matrix method** and print step by step solution.For example, 3x + 4y = 11 & 2x + y =4 two equations.

Final Solution : x = 1 and y= 2

Sample graph plotting: 

2. Polynomial Equation Solver: Here,the process of analyzing a polynomial function is shown using the **remainder theorem.** It takes a polynomial equation as input,then it shows steps how to solve the equation and plotting graph .I have used the process of finding the factors of a higher degree expression and reducing the function bit by bit .Example, $2x^2 - 10x + 12 = 0$ is a polynomial equation.

Final output, x=2 or x=3

Sample graph plotting: 

Languages or Tools to be used: C, C++,Git,GitHub,Visual Studio

Supervisor's Name: Kishan Kumar Ganguly

Signature of the supervisor:

Date: 04-01-2023