

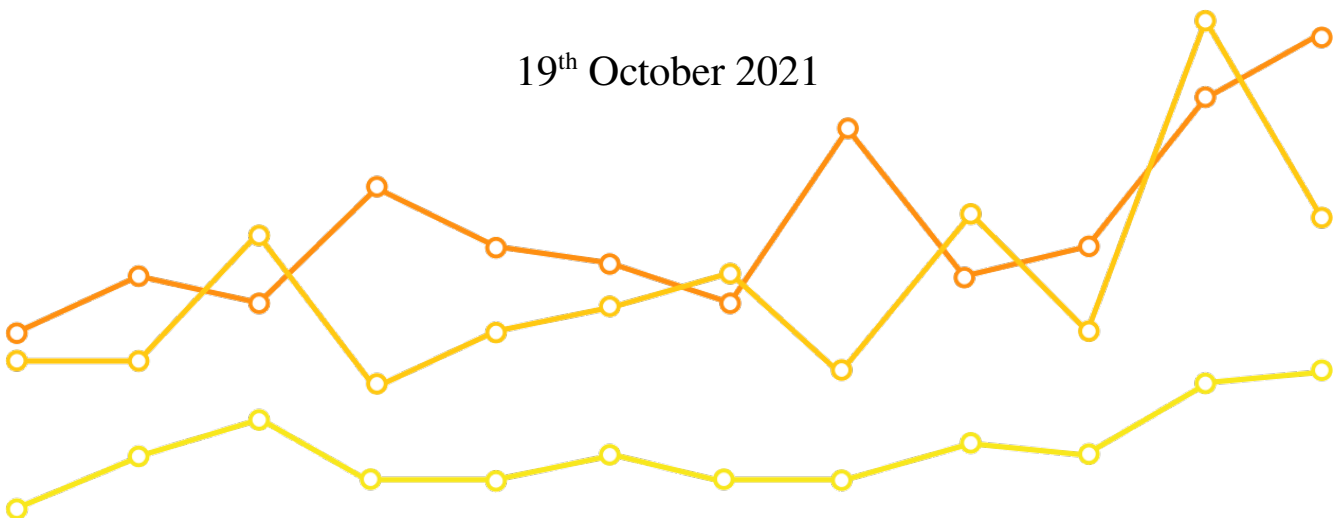


# Bangladesh University of Business & Technology

Department of Computer Science & Engineering

[ Faculty of Engineering]

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# Project Proposal

## Linear Equations & Function Analysis using C Program

CSE100 – Software Development 1

Submitted to

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## **Project Name**

Program to solve mathematics and graphs related problems.

## **Description**

Functional analysis is a branch of mathematical analysis, may be viewed as the application of linear algebra to spaces of functions. There are a lot of mathematical problems regarding straight lines, linear programs, coordinate geometry, functions, differentiation, integration, etc. This program is about to solve them.

## **Experimental Plan and Milestone**

We aim to make a program that will take required inputs from a user, analyze and convert to desired function and/or equation to solve as what the user wants.

## **Related Work Elsewhere**

There are some online platforms already there. Some of them are programmed very broadly. Unlike them this program is limited to certain functionalities.

## **Feasibility Study**

In order to complete the project we will be needing to contented with some components. Since it is not one of a big project so the component count is not that enormous.

For the project, we will be needing

1. A computer,
2. Compiler to run the program,
3. Time to complete the project,
4. Above average / Good coding knowledge,
5. Ability to solve / deal with mathematical problems.

## **Project Functionalities**

The program will have following functionalities:

- A welcome screen with Login / Registration options. Depending on the user's the program will run a sign in / sign up function which will take a user's name / password in order to sign him/her in/up and save his login info.
- After logging in, there will be a welcome screen with instructions and options shown to the user to work on.
- The program will contain several options for the user like conversion between polar and cartesian coordinates, distance between two straight lines, intersection points of straight lines, linear program, maxima/minima, differentiation or integration of a function, a dedicated function that will analyze efficiency of investment on a business etc.
- The user will be asked to select in which option he/she wants to work on.
- An input stage, where the user will be asked to input required data.
- And a calculated result stage where the result/solve to the problem will be shown.
- An end screen with several options (Solve another problem / return to home / log out etc).