

# Project Report

The aim of our project was to have the graphical plot of various continuous functions. The solution of the first problem was given by fparser open source library. Special thanks to prof. Ranade's book on "Introduction to programming through C++". Simplecpp graphics program in that has indeed acted as a source of boon to implement our ideas. This has indeed been source of inspiration to the graphical portion of our program. During coding we encountered the problem of string concatenation which we learned from one of our classmate.

While testing the plot of various graph of functions we encountered the problem with the plot of function  $\exp(x)$  as its plot came correct upto interval 6.5 unit (unit was taken 50) but at point 6.5 on x axis blue line was plotted which was incorrect. Solution to this problem was that we noticed it was because of simple cpp graphics canvas if the point on canvas is crossed then immediate point becomes the point on the opposite side. Due to resolution of this problem we could even plot exactly the graph of function such as  $(1/x)$  with no blue line on y axis at  $x=0$  point on canvas wrt to new co-ordinate system (which is not of graphics canvas of simplecpp whose origin lies in extreme left upper corner and y axis is downward).

The idea of making our application more filled with features we added application of statistics and also with the help of string concatenation we could provide the functionality of getting the standard statistical continuous distribution curve with just the input of parameter and interested range of plot taken from user. This application hold feature also for using it for few statistical calculation. The line of best fit can also be plotted with the corresponding scattered diagram on initCanvas for visualization.

We 4 members of our team, 2 being from Msc statistics and 2 being Msc Mathematics handled with  $\frac{1}{2}$  of the code for statistical facility and  $\frac{1}{2}$  of the code for graphical representation, usage fparser, simplecpp and string concatenation.