**SCOPE OF THE PROJECT**

This program can be used in schools and colleges to visualize the equation to the students in the form of graph. It can be particularly useful for the students who struggle with traditional methods of learning. It can be used to create online tutoring platforms that allow students to receive personalized math instructions and receive visual explanation of math concepts. People wanting to learn more about mathematical equations are highly encouraged to use this project.

We can further add 3d to this program which can render the 3-dimensional shapes of the given equation which helps to learn the equation and relate it to real life.

**BACKGROUND**

Equations are the foundation of modern mathematics, but many students find it quite difficult to understand. If there was a way for the students to visualize the equation in the form of the graph, it would have been easy for them to understand it. So, this project “equation visualizer” was made with the motto to provide the understanding of the equation through graph. This can be helpful in understanding the properties and behavior of the equation, as well as in solving problems involving the equation.

With the increasing need of mathematics in this modern era it is necessary for every student to learn it. Keeping that in mind, equation visualizer is a program created where students can give their equation as input and see them rendered visually in the form of graph.

An equation visualizer is a concept that plots the equation in the graphical form. It is basically the programs used to plot a wide variety of equations, including linear equation, polynomial equation and many more. Many schools, colleges and online tutoring platforms are using equation visualizer in their teaching process. Instead of plotting the equation in the graph paper a user can get it plotted by the use of equation visualizer.

**PROJECT OBJECTIVE**

* To take the equation from user as input
* To render the equation in the form of graph

**PROJECT APPLICATION**

* To visualize the equation in the graph
* To plot the graph precisely
* To save the time

**PROBLEM DEFINITION**

Taking equation as input from the user and displaying the equation in a graph, with adjustable axes and other formatting options

**MOTIAVTION**

The main motivation behind this project is to make learning mathematics fun and easy. We as students have faced the problem in the past to precisely plot the equation in the graph as we didn’t have access to any tools to visualize it. With the objective of improving education by providing a tool that helps people better understand and analyze mathematical equations, this project is made.