National University of Computer & Emerging Sciences
Karachi Campus

Project Report
Programming Fundamentals
Section: I

CALCULATOR PLUS PLUS

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Introduction

We have developed a scientific Calculator that is also capable of plotting graphs from a given polynomial equation.

Existing System

We have seen many scientific calculator like the one which is in our study bag. This idea of building scientific came from that calculator that we use.

Problem Statement

We have seen many scientific calculators but none of them was capable of solving equations and plot a graph from that equation.

Proposed Solution

We are designing a calculator which can perform all scientific operations plus it will plot graphs from a given equation

Salient Features

Applications Of Graph Plotting

1. Our program can recognize the plane of the graph by lighting up the quadrant in which the point we entered lies.
2. By entering any two points we can find out the midpoint and can represent it on a graph.
3. Verification of points on graph if the distance and a point is entered in our program.
4. our program can find out the intersection of the two lines and show us by plotting a graph.
5. We can find out distance between any two points entered by the user. This is also Represented on graph plane.
6. By entering the coordinates of the centre point and the radius of the circle, Our program can sketch the a circle and show its radius line.
7. By entering the values of axis (h,k)&a ..here (h.k) represent the axis of parabola and ‘a’ represents focus of parabola our program can plot parabola on the plane.
8. By entering the values of axis (h,k)&a ((h.k) represent the axis of hyperbola and ‘c’ represents focus of hyperbola and ‘a’ represents major axis whereas ‘b’ represents minor axis of hyperbola) our program can plot hyperbola based on the values mentioned above.
9. Our calculator can also plot graphs from maximum 4^{th} degree and minimum 1^{st} degree polynomial equation

Applications Of Scientific Calculator

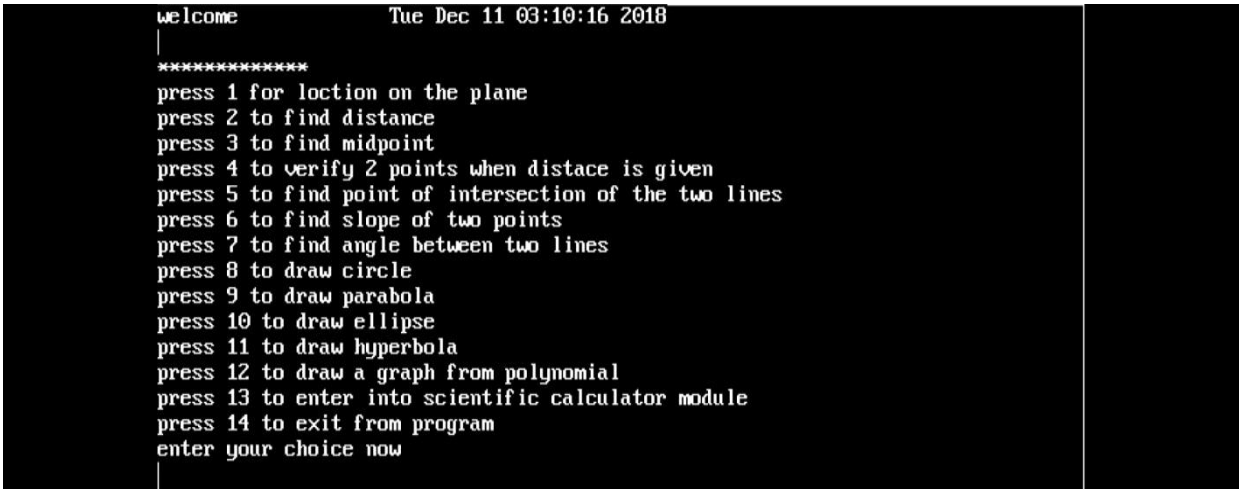
This program consists of all the functions that a hand held scientific calculator possesses

Tools & Technologies

Programming language used is C
Operating system used is windows 10 64 bit
Turboc++ is used as our compiler

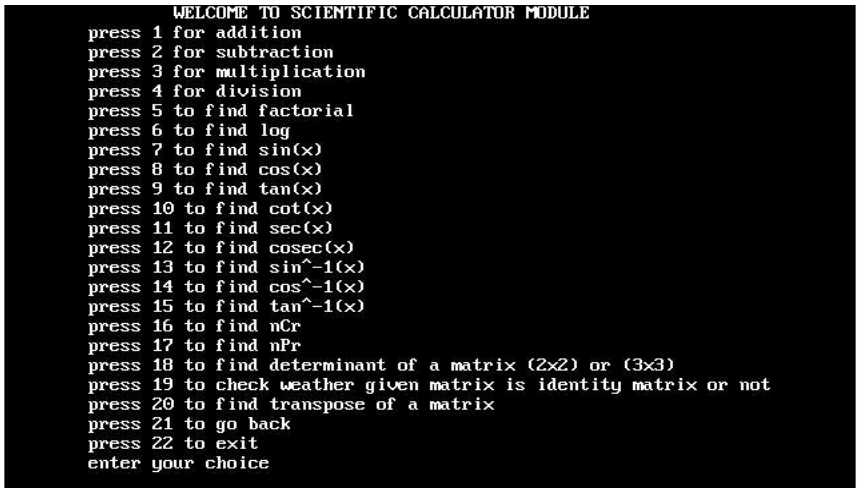
PHOTO GALLERY

1 MAIN MENUE

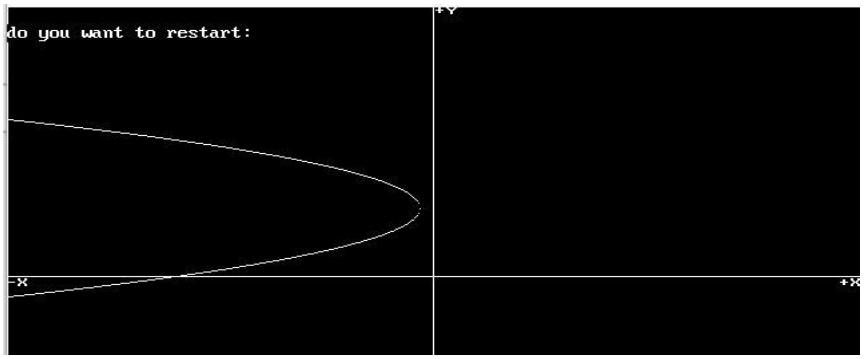


2

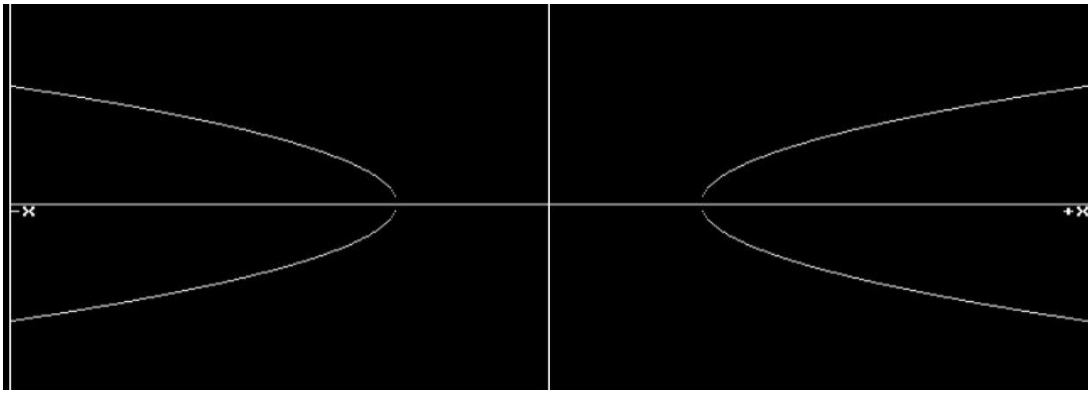
SCIENTIFIC CALCULATOR MENUE



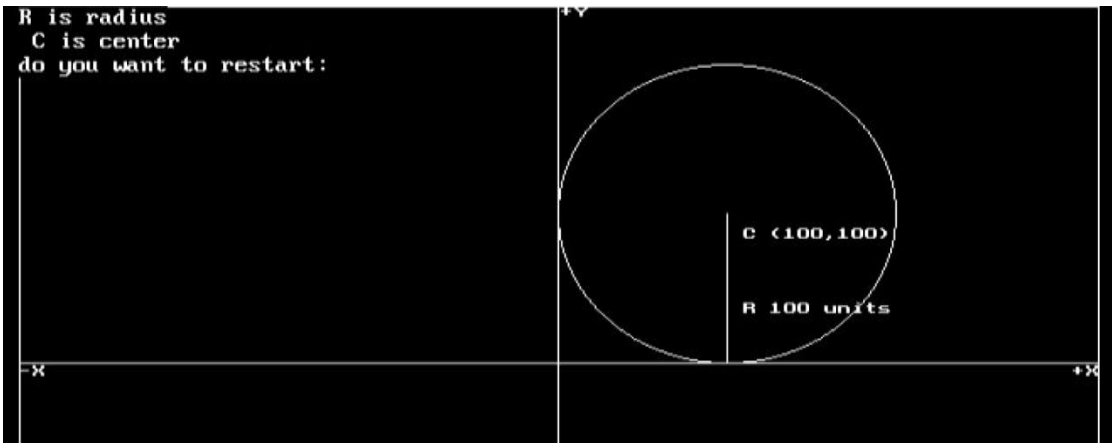
3 PARABOLAS



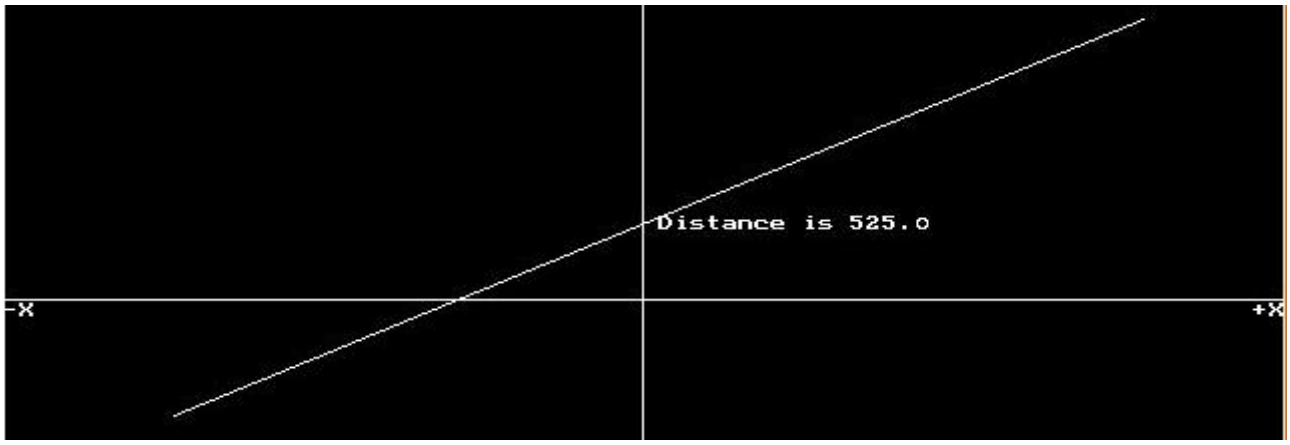
4 HYPERBOLAS



5 CIRCLE



6 DISTANCE BETWEEN TWO POINTS



7 INTERSECTION 0F TWO LINES USING THEIR EQUATOIN

(OUR GRAPH(BLACK WINDOW) AND DESMOS BEHIND)