Reports complex numerical operations and solvers of quadratic equations introduction This report describes a C program for complex numerical functions and quadratic equations. The program contains three main files: complex.c, complex_D1271403.h, and verifier.c. The complex.c file contains various functions for performing complex basic calculations, while the complex_D1271403.h file acts as a header file describing complex structures and functional examples The verifier.c file provides those number functions that are this den is used to solve quadratic equations and verify the obtained roots . Complex number functions complex.c file describes a number of functions to perform arithmetic operations on complex numbers. These activities include: complex_add: Adds two complex numbers. complex_subtract: Subtract one complex number from another. complex_multiply: Multiplies two complex numbers. complex_divide: Divides one complex number by another. complex_abs: Calculate the number(s) of complex numbers. complex_from_real: Generates complex numbers from real numbers. print_complex: Prints complex numbers in a readable format. Quadratic Equation Solutions verifier.c file implements a quadratic equation solver using the functions defined in complex.c. The first requires the user to plug in the coefficients of the quadratic equation in the form $aX^2 + bX + c = 0$ and then use the quadratic formula to calculate the roots of the equation Depending on the discrimination of the equation , the roots may be true or solid.

The program prints the quadratic equation entered by the user and then prints the root of the equation. It checks that the obtained roots are correct by evaluating the equations with the obtained roots. If the equation evaluates to zero with the calculated roots, the verification succeeds; otherwise it fails.

conclusion

In conclusion, the presented C program provides a complete solution for solving complex mathematical functions and quadratic equations. It shows how complex numbers can be used in practical applications such as mathematics and engineering. The modular design of the application allows for easy maintenance and expansion with additional functionality as required. Overall, it is a useful tool

for students and professionals in understanding and solving problems with complex numbers and quadratic equations