ASSIGNMENT – 4

OBJECTIVE-

Create a library called arbprecision . Implement complex number arithmetic and link arbprecision. Note the difference in run time for your implementation of complex arithmetic (using arbprecision) and the standard C library implementation. Plot the observations in GNU Plot by calling GNUPlot from the C file.

IMPLEMENTATION-

The complex arithmetic is implemented as Ass4.c . The library made for this is implemented as arbprecision. The libraries are described as calculator.c .
All these are executed on the terminal using Makefile and the executable is named as mainfile.

The output is shown in the form of (a,b) where a is real and b is imaginary for operations add ,sub ,prod ,quot. The output is shown in the form a for abs operation.

The operation ABS gives a precision of atleast 20 digits but for very large values of the operation the precision may go to 17-18 digits.

All other operations give a precision of atleast 20 digits.

I have tried to reduce the memory leakage as much as I could but there may be an error if the input file is very large.

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