CS 4900

Project: Quad Solver

Stories

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A quadratic formula solver is to be developed for JKK Consulting so an IT technician may solve quadratic equations of the form via a command line by supplying three floating point coefficients -- a, b, and c from the formula above -- returning two real roots with high accuracy. All calculations must be compliant to normalized IEEE F32 standards, with four significant figures of precision, and the input prompts must accept both floating point decimals and scientific notation. The program is to loop until the user quits the program. Examples of acceptable and unacceptable inputs will be provided for the engineer.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Task | Time to complete | Risk (1-10) | Actual time | % Complete |
| Command line inputs via prompt | 1 Hour or less | 1 | TBD | 50% |
| Examples of acceptable and unacceptable inputs | 1 hour or less | 1 | 1 hour | 100% |
| Interpreter for scientific notation | 1 hour or less | 1 | TBD | 50% |
| Algorithm development for solving the equation, outputs must be 4 sig figs. | 1-2 weeks | 3 | TBD | 50% |
| Program must be installed via tarball | 1-2 weeks | 5 | TBD | 0% |
| Choose a make standard | 1 hour | 1 | 1 hour | 100% |
| Choose a C standard | 1 hour | 1 | 1 hour | 100% |
| Create makefile for program | 1 hour | 1 | 1 hour | 100% |
| Choose a licence for the quadsolver | 1 hour | 1 | 1 hour | 100% |
| Ask client for elaboration on sigfigs on inputs and outputs | 1 hour | 1 | TBD | TBD |