Shared Library Module

The Main Question for Math 4610 at USU

The following is a list of tasks to complete for this module.

- Create a C-file that implements one of the following algorithms:
  - Determination of the single precision digits of accuracy.
  - Determination of the double precision digits of accuracy.
  - Linear Least Squares to project data onto a linear polynomial.

There should be 3 files, each containing one of the codes.

- Next, compile each of the C-files to create it's own object module. This requires a compilation of the code in the file. Use a terminal window to do the compilation. Recall that you can always use a virtual machine to perform the work in this assignment.

- Next use the archive command, **ar**, to create the shared library.

- You will need to test that the work is correct in the tasks you have completed. To do this, create a code that calls each of the codes in the three C-files that you have created. Output the results of the test.

- Add a fourth C-file compiled code that returns the Euclidean length of a vector of length n.

- Write a few sentances to summarize what you learned in this module.