Numerical Methods for Data Science - (SC602)
Assignment -1

1. Write a Program to find the Square Root of a given number N using Babylonian square root method (N=299,225).

2. Take Two points from the user and plot the line using linear interpolation method.

3. Estimate the natural logarithm of 2 using linear interpolation. First, perform the computation by interpolating between In 1 =0 and In 6 = 1.791759. Then, repeat the procedure, but use a smaller interval from In 1 to In 4 (1.386294). Note that the true value of In 2 is 0.6931472.
   Try for some different intervals and show errors for all intervals.
   Write your observation for the relationship between error and intervals.