```
% Matthew Lazarus 100962142
```

Assignment 4

Part 4

In order to deal with the non-linear element in the circuit, a new column matrix ('f(x)') is introduced into the equation (Gx +f(x) = b -- DC Case). Then, in order to solve the system, the jacobian of the matrix would need to be calculated. The jacobian is added to the derivative of the new column matrix (for the imaginary values). The sum is then divided by the sum of G*x+f(x)-b, giving the change in the result (delta X) Then, the Newton Raphson method is applied until the change in resulting values is sufficiently small. The time can be advanced and the jacobian+newton raphson method can be applied again.

Published with MATLAB® R2018a