**ECSE 597 Assignment 2 Report**

**TestDCsolve.m**

Figure 1 shows the implementation of dcsolve.m, and results of TestDCsolve.m are shown in Figure 2.

Chart

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Figure - TestDCsolve.m Results

Text

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Figure - dcsolve Implementation

**BJT\_CB.m**

The implementation of dcsolvealpha.m and dcsolvecont.m are shown in Figure 5 and 6. The results of BJT\_CB.m are shown in Figure 3 and 4. The dcsolve.m implemented previously does not guarantee convergence, as shown in Figure 3. In contrast, the dcsolvecont.m converges, and the results are shown in Figure 4.

Graphical user interface

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Figure - BJT\_CB.m DCSolve Result

A picture containing background pattern

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Figure - BJT\_CB.m DCsolve\_cont Result

Text

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Figure - dcsolvealpha.m Implementation

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Figure - dcsolvecont.m Implementation

**BJT\_CE2.m**

The results of DC analysis of BJT\_CE2.m are shown in Figure 7 and 8. The dcsolve.m does not converge whereas the dcsolvecont.m converges. The implementation of nonlinear\_fsolve.m is shown in Figure 9, and the results is shown in Figure 10.

Timeline

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Figure - BJT\_CE2 dcsolve Result

Background pattern

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Figure - BJT-CE2 decolvecont Result

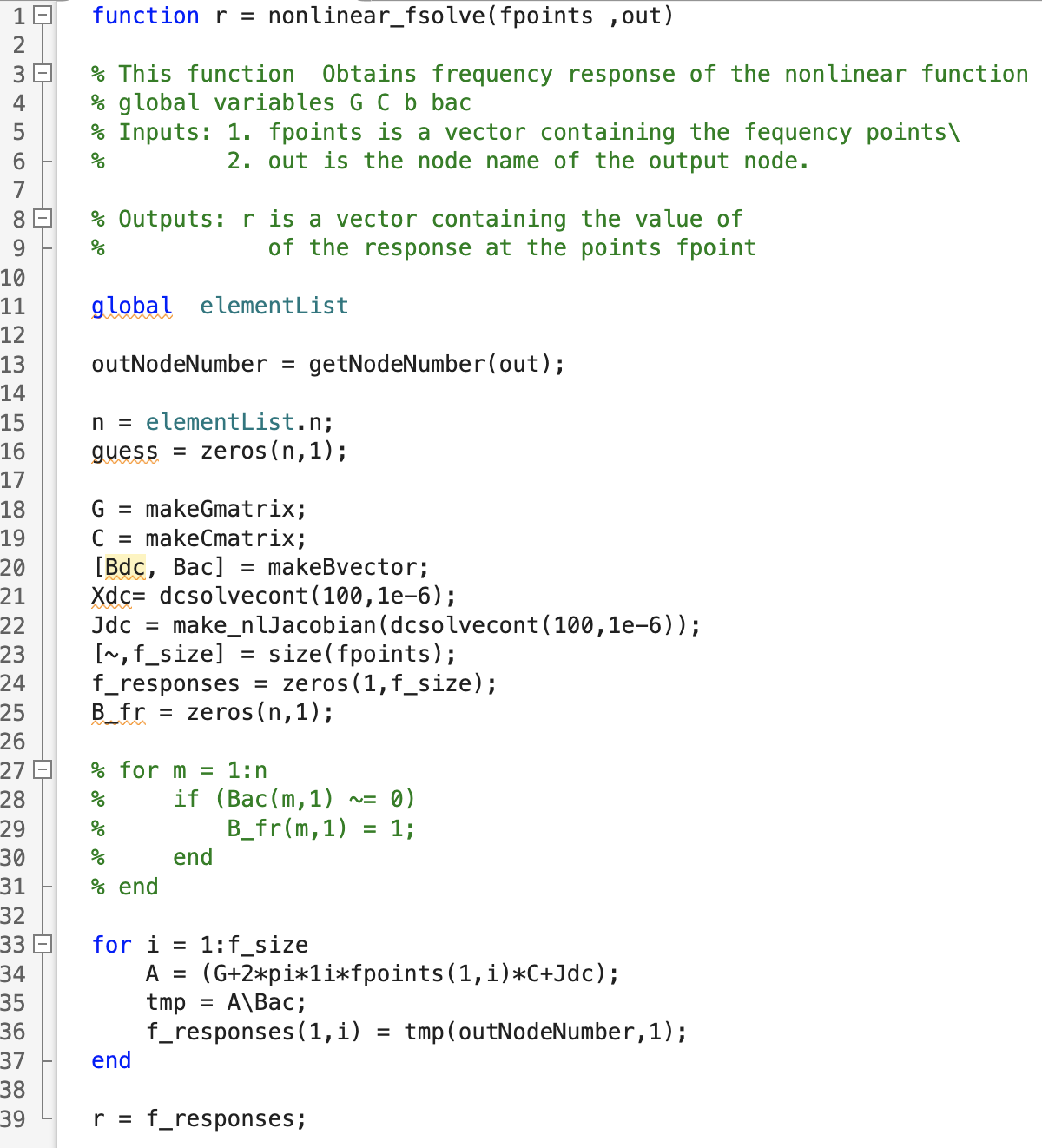


Figure - nonlinear\_fsolve Implementation

Chart, line chart

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Figure - Frequency Analysis of BJT\_CE2