Issue #7869:

Take text objects into account in legend auto positioning
Branch with fix: https://github.com/RiazCharania/matplotlib/tree/issue_7869

System testing:

Check status at: https://travis-ci.com/github/RiazCharania/matplotlib/branches

For this phase, all the system tests pass. The build is successful.

Acceptance testing:

1. If you haven't already, follow the instructions in the Deliverable 2 README
2. cd to directory dir
3. Checkout and build branch issue_7869 by running
   a. cd matplotlib
   b. git checkout issue_7869
   c. python setup.py build
   d. cd ..
4. Download Issue_7869_Acceptance_Test.py to dir
   a. There are three test cases included in the file (1 test per window)
      i. Test legend doesn't show errors with no text
      ii. Test legend doesn't overlap with one text
      iii. Test legend doesn't overlap with two texts
5. run Issue_7869_Acceptance_Test.py
   a. python Issue_7869_Acceptance_Test.py
6. Verify that
   a. In the window titled, No Text, verify that there is a graph with a line and a legend. (Figure 1)
   b. In the window titled, One Text, verify that there is a graph with a legend, a line and a textbox and that the legend has been moved to a different location to not overlap with the text. (Figure 2)

c. In the window titled, Two Texts, verify that there is a graph with a legend, a line and 2 textboxes and that the legend has been moved to a different location to not overlap with either of the texts. (Figure 3)
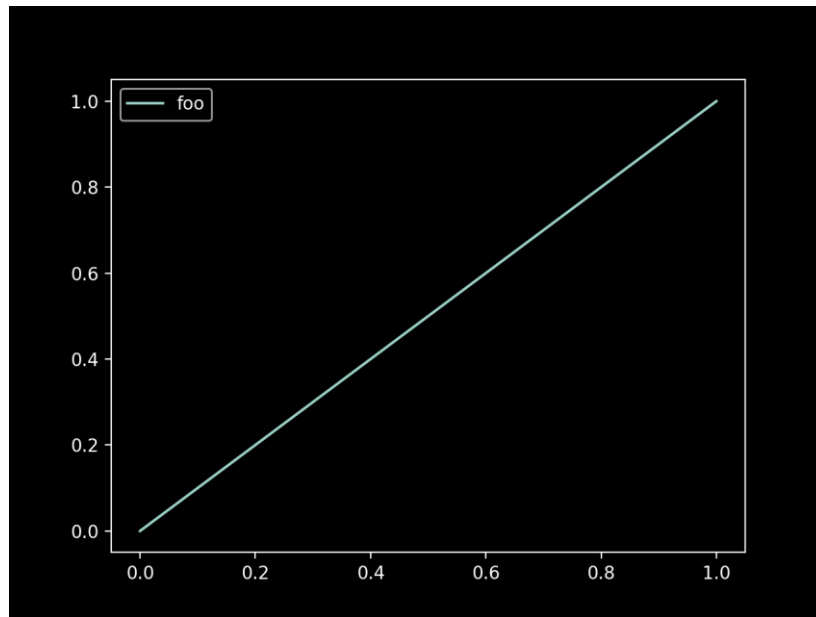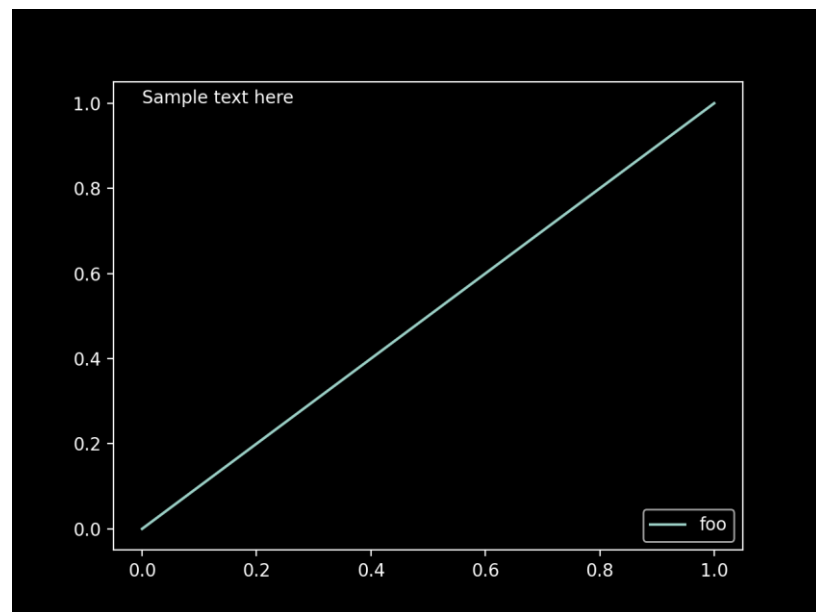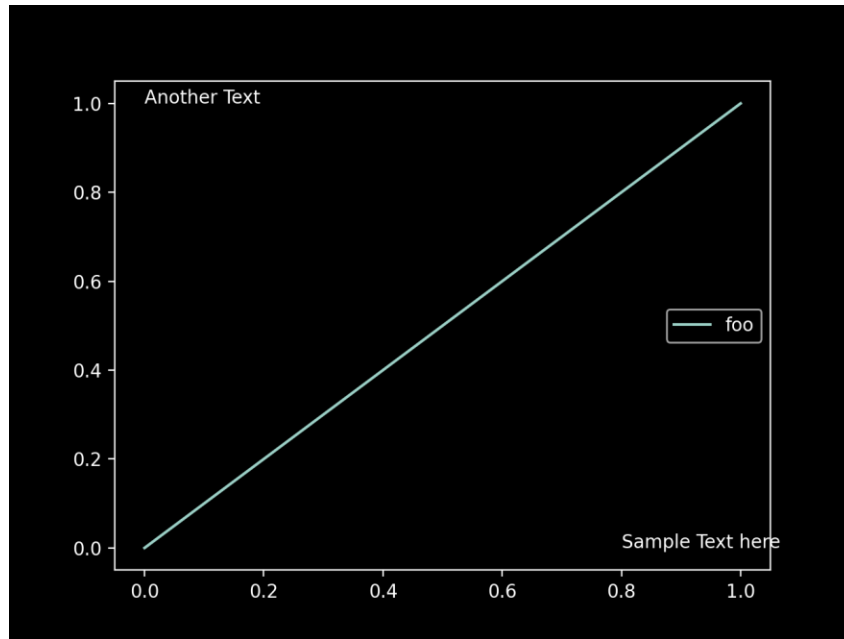

Figure 1

Figure 2

Figure 3