Program_07_3

Requirements

Complete problem 9.7 on page 235 (7th Edition) of the text with the following requirements

- Create four subplots on a single Figure 1 window
- Subplot 1 shall plot the first 250 points of the x and y vectors
- Subplot 2 shall plot the first 2,500 points of the x and y vectors
- Subplot 3 shall plot the first 5,000 points of the x and y vectors
- Subplot 4 shall plot all 20,000 points of the x and y vectors
- The script shall be efficient using only one loop to generate all of the data at one time.
- Provide a title, and axis labels for all four plots using your previously generated function **labelPlot**

Figure 1:

- Have four plots, plot(x,y), loglog(x,y), semilogx(x,y), and semilogy(x,y)
- Provide a title, and axis labels for all four plots using your previously generated function **labelPlot**

Figure 2:

- Use **polyfit()** along with the correct linear model to find the **m** and **b** coefficients.
- Provide the functional form, along with numerical values of the best fit coefficients in a text object on the plot.
- Use the fit equation to create a linear plot of the data and the fit equation plotted with at least 100 points.
- Format the plot with blue asterisk markers, and a solid red line.
- Add a legend indicating the functional form of the fit line in the lower right
- Provide a title, and axis lavels for the plot using your previously generated function **labelPlot**

Program

In the code block below, create your program, editing the existing text as necessary.

Note: If you are using Octave then you will need to create a separate script file, save that separate file as the name **Program_07_03**. It will not conflict with this file of the same name since the extension will be different.

Tips:

- Recall, to plot only points, simply omit the linetype from the **plot** function

```
% Filename: Program_07_3
% Author:
% Assisted by:

% Program Description:
```

Example Output

When running your program from the **Command Window**, your output should match the following.