

Homework (BE0B17MTB)

Problem Set 3

April 28, 2020

1 Assignment

Create a recorder of slider position as a simple application with a graphical user interface (GUI). To do so, implement a function called `problem3.m` which creates GUI according to the following requirements:

- Create a figure and graphic components (checkbox, slider, axes, and button) and position them so that the GUI will approximately correspond to Figure 1.
- Create appropriate callback functions so that:
 - moving the slider add corresponding values to a line placed in axes,
 - new values are added to the line during movement of the slider,
 - rotating the mouse wheel increase and decrease slider value and add corresponding values to the line,
 - limit the recorded values within limits of slider even when using mouse wheel,
 - checking/unchecking of the checkbox enables/disables the recording of the slider value,
 - Reset button clears so far recorded values,
 - x- and y-axis of a graph are limited to a specific range regardless of values and number of values recorded,
 - when the size of the figure is changed, adapt the height of slider and axes and with of axes.
- Try to run file `problem3.p` to check the complete functionality of the application on your platform.
- Your application does not necessarily look exactly like our solution (colors, markers, fonts, sizes, ...), but the functionality should be the same.

(5 points)

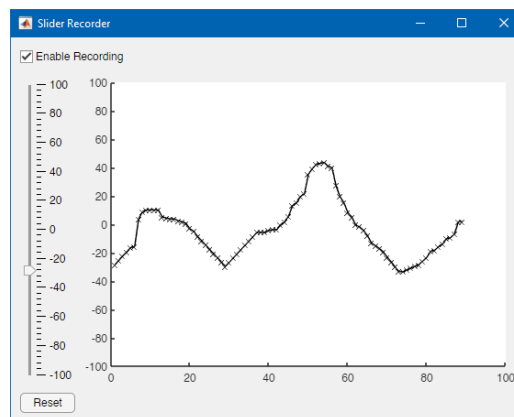


Figure 1: Resulting GUI of a the slider recorder.

2 Instructions

Complete all the assignments till May 6th, 7:59 a.m. Created m-file upload to the BRUTE system. The problem shall be solved by the students individually (notice the BRUTE system has a duplicity checker). Do not use MATLAB App Designer and functions from MATLAB Toolboxes. Contact matlab@elmag.org with any questions.