Mastery Assignment #5 Basics
Fall 2022
Matthew Woodring

This file contains the basics of the fifth mastery assignment. It is intended to provide a basic overview of the assignment and help with any tricky parts.

General Overview:

- Submit your code on Zybooks in the "34. Mastery Assignment #5" section
- All code is automatically graded by Zybooks
- You can submit your code as many times as needed before the deadline
- The assignment is due Sunday, October 16th, 2022 by 11:59pm
- No late work is accepted
- There are no known errors in the grading script as of October 10th, 2022

Task 1:

- Is a 'while' or 'for' loop better for when you don't know the precise amount of iterations that will occur?
- Recall that the user exiting out of a menu results in a '0' being returned

Task 2:

- This task involves coding a function and calling the function in your main script
- The input of your function is a string representing a prompt
- You should use the built-in 'input' function in your user-defined function
- Is a 'while' or 'for' loop better for when you don't know the precise amount of iterations that will occur?
- The 'abs' function will be useful here
- The 'warning' function will be useful here
- The 'error' function will be useful here

Task 3:

- The 'sprintf' function will be useful here
- The 'linspace' function will be useful here
- Make sure you type the equations properly and avoid any order-of-operation errors
- Is there a certain tool (or technique) you could use to calculate the deflection of the beam for the piecewise function?
- The 'xlabel', 'ylabel', 'xlim', and 'ylim' functions will be useful here
- The 'grid' function will be useful here

Task 4:

- The 'sprintf' function will be useful here
- Is a 'while' or 'for' loop better for when you don't know the precise amount of iterations that will occur?
- Think about which values need to be recalculated from Task 3 (hint: it is not all of them)
- Make sure you type the equations properly and avoid any order-of-operation errors
- Is there a certain tool (or technique) you could use to calculate the deflection of the beam for the piecewise function?
- The 'figure' function will be useful here
- The 'xlabel', 'ylabel', 'xlim', and 'ylim' functions will be useful here
- The 'grid' function will be useful here

Task 5:

- Remember how to ask the user to repeat the program (hint: you can do it in 4 lines of code and we covered it in class)
- Make sure you only repeat Task 4 if the program is repeated

Mastery Assignment #5 is a relatively easy MA compared to the other ones. However, this does not mean you should wait until the last minute to start because there are some sections that can easily cause issues. Most of this MA is about data validation and how to properly use a 'while' loop. Please make sure you can complete all of MA5 by yourself without the aid of notes or other people. Also, before the second exam, make sure you can complete MA5 in the recommended proficiency time of 50 - 70 minutes.