

Mastery Assignment #1 Basics

Fall 2022

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This file contains the basics of the first 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 “30.1 Mastery Assignment #1” 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, September 11th, 2022 by 11:59pm
- No late work is accepted
- There are no known errors in the grading script as of September 7th, 2022

Task 1:

- Recall when it is appropriate to use the ‘load’ and ‘csvread’ functions
- Does the ‘input’ function allow string (word) inputs?
- Does the direction of temperature change matter for thermal energy?
- $\text{specificGravity} = \text{densityObject} / \text{densityWater}$
- $\text{densityObject} = \text{massObject} / \text{volumeObject}$
- Sofia has a great explanation of this on Discord in the #mastery-assignment channel
- Did you convert your volume of cooling liquid to gallons?

Task 2:

- The first part of Task 2 can be thought of as an extended version of Task 1
- Recall when to use element-by-element operations (the dot operator)
- Recall the difference between a comma and semicolon when dealing with vectors/matrices
- Use the ‘save’ function to save the matrix

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Task 3:

- Recall what the 'menu' function returns when the user makes a selection (hint: it does *not* store the actual string the user chose)
- Recall how to remove items from a vector/matrix
- Recall that you have a lot of useable data that may be helpful in the matrix you saved in Task 2

Task 4:

- Useful functions for this task include: 'plot', 'title', 'xlabel', 'ylabel', 'grid on', and 'figure'

Mastery Assignment #1 covers the basic topics in MATLAB that you have to understand well to pass the course. Please make sure you can complete all of MA1 by yourself without the aid of notes or other people. Also, before the first exam, make sure you can complete MA1 in the recommended proficiency time of 1.00 - 1.50 hours.