

CSE 4500 – Platform Computing
Professor Lawrence Orijuela
Midterm Project
Due Midnight March 24th

Instructions:

1. Download this assignment as an editable word doc from Canvas.
2. Write your name and student ID.
3. Select one of the two options. (Please only select one, there is no incentive for you to do both):
 - a. **Option1: DistanceConverter**
 - b. Option2: VolumeConverter
4. For the option that you have chosen, read the list of requirements and create the web application.
5. After you confirm that the application works, attach the appropriate screenshots as required for the option you've chosen.
6. Export this doc with your name and answers as a PDF:
 - a. Use this as your title: CSE4500_YourName_Midterm_Option#
 - b. Example: CSE4500_BobSmith_Midterm_Option1
7. In the MidtermProject Canvas submission page, please submit the following:
 - a. This document as a PDF, filled out and with screenshots.
 - b. A ZIP file of your MidtermProject.

Name: Hector Najera _____ Student ID #:006868830 _____ Points: ____/100 _____

For your Midterm, you are required to demonstrate your knowledge of the material by reading an application description and creating the web application from scratch. You are given two options. Please only select one and indicate which option you have chosen. After that, read the application description and create the application using HTML and JavaScript. The option you've chosen has a different set of screenshots that you have to make to demonstrate that the program works. Attach them to this document in the space provided. Then upload this document as well as a zip file containing your project to the Midterm Submission page on Canvas.

For either option, you will need to include the following files from canvas:

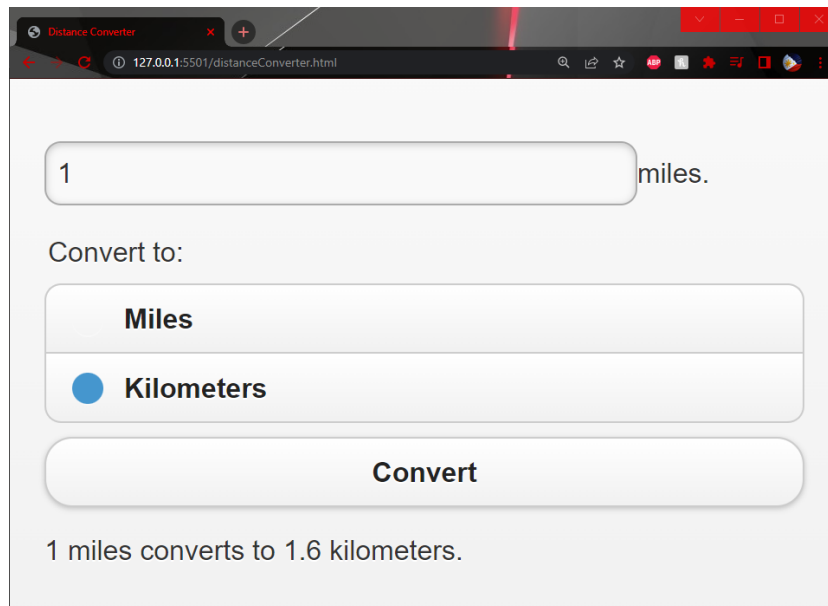
- jquery.mobile-1.3.1.min.css
- chromeFileProtocolFix.js
- jquery.mobile-1.3.1.min.js
- jquery-1.8.3.min.js

Accompanying Video (for hints): <https://www.youtube.com/watch?v=ypzuyCyY-M4>

Option 1: DistanceConverter

Application Description: You are hired by a company to create a web application that can convert a distance that a user inputs, in miles, and convert it to kilometers, and vice versa. The application should:

1. Have a textbox on the top of the screen that allows the user to enter a numeric value.
 - a. Next to the textbox is a label. When the project first starts, the default setting should be *converting miles to kilometers*. Therefore, the label next to the text box must read *'miles.'*, but then change to *'kilometers.'* when the *Miles* radio button is selected by the user.
2. Underneath, there should be a label with the words 'Convert to:'
3. Underneath the label, there should be a series of two radio buttons. One called *Miles*, and another called *Kilometers*; and underneath that, there should be a *Convert* button.
 - a. When the user clicks *Convert*:
 - i. If the *Miles* radio button is selected, it will take the numeric value that the user entered, as kilometers, and convert to miles.
 1. $\text{distanceInKilometers} = \text{distanceInMiles} * 1.609$
 - ii. If the *Kilometers* radio button is selected, it will take the numeric value that the user entered, as miles, and convert to kilometers.
 1. $\text{distanceInMiles} = \text{distanceInKilometers} * 0.621$
 - iii. It then shows a label underneath with the conversion.
 1. *ie. 1 kilometers converts to 0.6 miles.*
4. Picture of application:

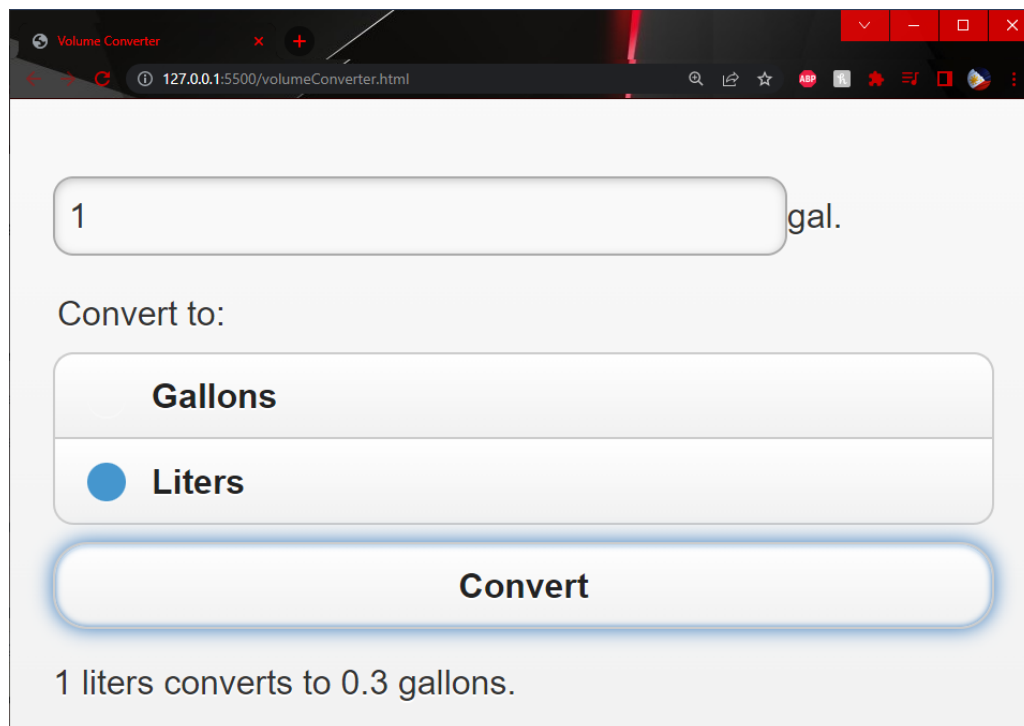


5. When you finished the application, please take two screenshots:
 - a. Converting 100 miles to kilometers.
 - b. Converting 100 kilometers to miles.

Option 2: VolumeConverter

Application Description: You are hired by a company to create a web application that can convert a volume that a user inputs, in gallons, and convert it to liters, and vice versa. The application should:

1. Have a textbox on the top of the screen that allows the user to enter a numeric value.
 - a. Next to the textbox is a label. When the project first starts, the default setting should be *converting gallons to liters*. Therefore, the label next to the text box must read '*gallons.*', but then change to '*liters.*' when the *Gallons* radio button is selected by the user.
2. Underneath, there should be a label with the words 'Convert to:'
3. Underneath the label, there should be a series of two radio buttons. One called *Gallons*, and another called *Liters*; and underneath that, there should be a *Convert* button.
 - a. When the user clicks *Convert*:
 - i. If the *Gallons* radio button is selected, it will take the numeric value that the user entered, as liters, and convert to gallons.
 1. $\text{volumeInLiters} = \text{volumeInGallons} * 3.785$
 - ii. If the *Liters* radio button is selected, it will take the numeric value that the user entered, as gallons, and convert to liters.
 1. $\text{volumeInGallons} = \text{volumeInLiters} * 0.264$
 - iii. It then shows a label underneath with the conversion.
 1. ie. *1 liters converts to 0.3 gallons.*
4. Picture of application:



5. When you finished the application, please take two screenshots:
 - a. Converting 100 gallons to liters.
 - b. Converting 100 liters to gallons.

[Put Screenshots in this section.]

A screenshot of a web browser displaying a "Distance Converter" application. The address bar shows the file path "C:/Users/hecto/Downloads/cse4500Projects/Midterm/MidtermProject.html". The application has a text input field containing "100" and a unit selector set to "miles.". Below this, a "Convert to:" section shows two radio buttons: "Miles" (unselected) and "Kilometers" (selected). A "Convert" button is positioned below the radio buttons. The result of the conversion is displayed at the bottom: "100 miles converts to 160.9 kilometers".

A screenshot of the same "Distance Converter" web application, but with the input field set to "100" and the unit selector set to "kilometers.". The "Convert to:" section now shows "Miles" (selected) and "Kilometers" (unselected). The "Convert" button remains. The result displayed at the bottom is "100 kilometers converts to 62.1 miles".