Lab 4 Instructions, Selection, Group C
CS 133JS, Beginning Programming: JavaScript

Overview

The objective of this lab is to give you practice using:

- While loops.
- Do-while loops.
- For loops.
- Nested loops.

Part 1: Exercises

Do the "Try it yourself" exercises (but <u>not</u> the "Test yourself" exercises) on these two pages from W3Schools:

- https://www.w3schools.com/js/js_loop_while.asp

- https://www.w3schools.com/js/js_loop_for.asp

Skip the exercises that use arrays.

Experiment by changing the code to make it do something a little different in each one.

Copy the code you wrote for each one into a word document (or a .js file) and submit this for part 1 of the lab assignment.

Part 2: Web Apps

For each of these pages:

- Put the code that does processing or calculations in a function in a .js file.
- Use `prompt` functions in a script element in the web page to get user input.
- Use `getElementById` and `innerHTML` to show output on the web page.
- Use `onload="someFunction()"` to delay execution of code on the page until after the page has loaded.

I. <u>Cycling Plan</u>

You have set a goal to increase the distance you ride your bike every week. You will ride for half an hour and start at 5 miles. Enter the distance you will add to your ride each week. Show the total distance to ride and the speed (speed = miles/hours). Show this for six weeks. Example output if the user enters 0.5 mile

Distance, speed

5 miles, 10 mph

5.5 miles, 11 mph

6 miles, 12 mph

6.5 miles, 13 mph

7 miles, 14 mph

7.5 miles, 15 mph

II. Trail Difficulty Rating

Add an input validation loop to the web app you made for the previous lab.
- Limit user input to reasonable values.
- Pop up an alert telling the user what the acceptable input range is.
- Keep prompting the user for input until it is valid.

III. Trail Types

Add an input validation loop and a way to ask the user if they want to enter another grade level. After the results have been shown on the page, prompt the user by asking them if they want to run the program again.

Submitting your lab work on Moodle

Beta Version

Post the following in the *Lab Beta forum*:

1. The web pages you created for part 2.
   (Zip the files for you web pages and attach them to the post.)
2. A code review of your lab partner's web page for part 2.
   (Review one of your lab partners' web pages using the Code Review Form provided.)

Code Review
1. Submit a copy of the code review above to the *Lab Code Review assignment*.

Production Version
Based on the review and helpful advice from your lab partner, you may revise your web page. On the code review from your lab partner, complete the "Production" column to show what you revised. Upload the following to the *Lab Production Version* assignment:

1. A Word document containing all the code you ran for part 1.
2. The web pages you created for part 2.
3. The code review <u>from</u> your lab partner with the <u>"Prod" column filled in by you</u>.