

Lab 3 Instructions, Selection, Group C

CS 133JS, Beginning Programming: JavaScript

Overview

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

- if, else-if, else statements.
- Comparison operators.
- switch case statements.
- Logical operators.

Part 1: Exercises

Do the exercises described in [the CS133JS Lab03 Instructions Part1.html](#) document.

Part 2: Web Pages

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.

I. Cost of Tuition

Create a web page that determines the cost of tuition at Mt. Pisgah Community College. This is the criteria:

- Tuition is \$100 per credit hour.
- If a student has paid for at least 16 credits in one term, additional credits are free.
- Out of state students pay double.

Create a web page that prompts the user to enter:

- a. The number of credits.
- b. Whether the student is from out of state (yes or no).

Show the correct cost of tuition on the web page.

II. Trail Difficulty Rating

Create a web page that rates the difficulty of a hiking trail. There are four categories of difficulty:

- Easy: Less than 4 miles round-trip and less than 500 ft. elevation gain.
- Moderate: Less than 8 miles round-trip and less than 1,500 ft. elevation gain.
- Hard: Less than 12 miles round-trip and less than 3,000 ft. elevation gain.
- Challenging: Anything over the limit for a hard trail.

Create a web page that prompts the user to enter:

- a. The round-trip distance.
- b. The over-all elevation gain.

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The difficulty level for the trail will be shown on the web page.

III. Trail Types

Create a web page that lists trails depending on the type of activity allowed on the trail. The user will enter an activity type and the web page will show a list of trails appropriate for that activity. Here are the activity types:

- Hiking
- Bike touring
- Mountain biking
- Horseback riding

Use a switch case statement to determine which trails match the activity and show the trail names on the web page.

- You can find local trails and filter them by activity (using the “More filters” button) here: <https://www.alltrails.com/explore/us/oregon/eugene>
- Your switch case should include at least six trails (some will be in multiple activity categories).
- For any activity the user enters that isn’t in your switch case, display “unknown activity”.

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. The html and .js files you completed for part 1.
2. The web pages¹ you created for part 2.
3. The code review from your lab partner with the “Prod” column filled in by you.

¹ For each web page upload a .js and a .html file.