**SENECA POLYTECHNIC**

**FACULTY OF CONTINUING EDUCATION**

**FINAL EXAMINATION- 2251**

**SUBJECT NAME: WEB PROGRAMMING PRINCIPLES**

**SUBJECT CODE: WEB222V1Q**

**EXAMINATION DATE: APRIL 12th, 2025**

**INSTRUCTOR NAME: GEORGE TSANG**

**TIME ALLOTTED: 3 HOURS**

**MARKS ALLOTED: 100**

**WEIGHTING: 30%**

**SPECIAL INSTRUCTIONS:**

Exam Aids: Permitted: X Not Permitted:

Approved by:

Sheri Ladoucier

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Sheri Ladoucier, Academic Program Manager

**Academic Policy Section 9:**

**Engaging in any form of academic dishonesty to obtain any type of advantage or credit is an offence and will not be tolerated by the College. Such offences under this policy include, but are not limited to, cheating, plagiarism, falsification, impersonation, misrepresentation and procurement.**

WEB222V1Q

Mini Project – Cars

You are required to create a webpage that presents a chosen country’s list of cars sold in a calendar year.

### Assignment Specifications

Your HTML/CSS/JavaScript deliverable must address the following:

Webpage

The initial state of your webpage when first loaded is to present:

* An **<h1>** heading
* An **<article>** container with border

A screenshot of a computer

AI-generated content may be incorrect.

* The country names found in the **Cars** array (see Technical Specifications) are to be displayed in reverse alphabetical order with accompanying radio buttons
* You are not to display the same country name more than once
* A disabled submit **<button>** is to be displayed under the list of country names
* The **Cars** array may contain any number of elements with different brands and country names (i.e., your code should be able to handle arrays with more or less elements than the 17 elements shown in the Technical Specifications section)

A screenshot of a computer

AI-generated content may be incorrect.

* The submit button is to be enabled when any of the radio button is selected
* The selection of the enabled submit button can result in the display of cars sold of individual brands of selected county as shown in the next screenshot

**A screenshot of a car sales report

AI-generated content may be incorrect.**

* The selection of the submit button will result in the display of the webpage with
* The selected country
* The list of all the brands originating from the selected country ordered by their respective sales figures from the highest number to the lowest number
* The total number of cars sold for that country
* REMEMBER: the HTML elements inside the container are NOT hardcoded in HTML but are dynamically generatedwith JavaScript object (e.g., DOM) methods

Technical Specifications

* Code one HTML/CSS/JavaScript webpage application that presents car manufacturing information that are in an array
* The individual array elements may be objects

[

{ brand: "Audi", country: "Germany", sold: 1614231 },

{ brand: "BMW", country: "Germany", sold: 2400000 },

{ brand: "Ferrari", country: "Italy", sold: 13221 },

{ brand: "Fiat", country: "Italy", sold: 1170000 },

{ brand: "Ford", country: "USA", sold: 4200000 },

{ brand: "General Motors", country: "USA", sold: 5900000 },

{ brand: "Honda", country: "Japan", sold: 21100000 },

{ brand: "Lamborghini", country: "Italy", sold: 9233 },

{ brand: "Maserati", country: "Italy", sold: 25900 },

{ brand: "Mazda", country: "Japan", sold: 1100000 },

{ brand: "Mercedes", country: "Germany", sold: 2043900 },

{ brand: "Nissan”, country: "Japan", sold: 3310000 },

{ brand: "Porsche", country: "Germany", sold: 309884 },

{ brand: "Suburu”, country: "Japan", sold: 850000 },

{ brand: "Tesla", country: "USA", sold: 1313581 },

{ brand: "Toyota”, country: "Japan", sold: 10480000 },

{ brand: "Volkswagen", country: "Germany", sold: 8262776 }

]

Or the individual array elements may be arrays themselves

[

[ "Audi", "Germany", 1614231 ],

[ "BMW", "Germany", 2400000 ],

[ "Ferrari", "Italy", 13221 ],

[ "Fiat", "Italy", 1170000 ],

[ "Ford", "USA", 4200000 ],

[ "General Motors", "USA", 5900000 ],

[ "Honda", "Japan", 21100000 ],

[ "Lamborghini", "Italy", 9233 ],

[ "Maserati", "Italy", 25900 ],

[ "Mazda", "Japan", 1100000 ],

[ "Mercedes", "Germany", 2043900 ],

[ "Nissan”, "Japan", 3310000 ],

[ "Porsche", "Germany", 309884 ],

[ "Suburu”, "Japan", 850000 ],

[ "Tesla", "USA", 1313581 ],

[ "Toyota”, "Japan", 10480000 ],

[ "Volkswagen", "Germany", 8262776 ]

]

* You are free to choose to use either one of the two array formats
* Each array element contains the three values: **brand** (String), **country** (String) and **sold** (Number)
* For example, the car brand “Honda”, a product of “Japan”, sold a total of 21100000 cars in the calendar year
* Recommended, but not limited to, JavaScript object methods are: **createElement**, **createTextNode**, **setAttribute**, **appendChild**, **removeChild**, **getElementById**, and **addEventListener**
* Changing the layout and structure of the provided **Cars** array is prohibited
* Hardcoding of HTML elements other than the heading and the container is strictly prohibited
* Hardcoding of data, for it to be **brand**, **country** or **sold**, is strictly prohibited

Project Requirements

* Submit your deliverables BEFORE the end of the exam
* The completed mini project is to include one **js** file, one **html** file and one **css** file all compressed into one **zip** file
* Usage of any bootstrap software is prohibited
* Your mini project is to be submitted via Blackboard