WEB222 Assignment 4 – DOM Manipulation

Due date

Grade value: 6% of your final course grade

Objective

Practise DOM/JavaScript coding, dynamically adding image and populating HTML table using DOM (rather than innerHTML property), and updating the text in HTML element using the innerHTML property.

Specifications

To begin, download **assign4-template.zip** file from **My.Seneca/Blackboard** and unpack the zip file. In this assignment, you'll build up a front-end web app which queries data from a given array of Country objects, named **countries,** and show the results on a web page using HTML DOM API. The array of Country objects is provided in the **js/a4-country-data.js** file and all countries' flag images are stored under the **flages** folder. And your tasks are to update JavaScript code in the **myscript.js** file according to the instructions below.

Open the **assignment4.html** file in a browser, a 2-level menu will show up on the page,

Your tasks are that when the menu items are clicked, appropriate country data should be populated into the HTML table as specified.

BASIC REQUIREMENTS

1. You should not change the given files **assignment4.html**, **a4-country-data.js** or image files under flags folder. The **myscript.js** and **honesty.html** are the two files that you are allowed to update. Note: you should create event handlers to the menu items (the **assignment4.html** document's unorder list **<li id="menu_??">** items) using JavaScript code inside the **myscript.js** file. When one of these items is clicked, a corresponding function should be called to change the subtitle and populate the country table.
2. You **must not** use the DOM/Node innerHTML property to populate HTML tables, including adding images. However, using innerHTML property to update the text of the "**subtitle**" (<h4 id="subtitle">List of Countries and Dependencies</h4>) on the page is appropriate.
3. When running you web app on a browser, no errors should occur on the browser web console.

DETAILED INSTRUCTIONS

The **Country List** item

When the **Country List** item is clicked, the web page **assignment4.html** will be (re)loaded into the browser. Complete the following tasks upon the page is loaded:

1. Update the text of the "**subtitle**" (<h4 id="subtitle">List of Countries and Dependencies</h4>) to **"List of Countries and Dependencies"** on the page.
2. Populate the HTML table with the data including all countries. The results should be as the screenshot below. Click the screenshot to see the full-screen image.

WEB222 Assignment 4 - DOM Manipulation

| Country List | By Population | By Area & Continent | Language | Honesty | |

List of Countries and Dependencies

Flag	Code	Country/Dep. Name	Continent	Area (Km²)	Population	Capital
	AF	Afghanistan	Asia	652230	35530081	Kabul
	AL	Albania	Europe	28748	2930187	Tirana
	DZ	Algeria	Africa	2381741	41318142	Algiers
	AD	Andorra	Europe	468	76965	Andorra la Vella
	AO	Angola	Africa	1246700	29784193	Luanda
	AI	Anguilla	Americas	91	14909	The Valley
	AQ	Antarctica	Antarctica	14000000		Antarctica
	AG	Antigua and Barbuda	Americas	442	102012	St. John's
	AR	Argentina	Americas	2780400	44271041	Buenos Aires
	AM	Armenia	Asia	29743	2930450	Yerevan
	AW	Aruba	Americas	180	105264	Oranjestad
	AU	Australia	Oceania	7692024	24450561	Canberra
	AT	Austria	Europe	83871	8735453	Vienna
	AZ	Azerbaijan	Asia	86600	9827589	Baku

3. Note: the flag images are provided under the **flags** folder. The flag image of each country has the file name which is same as the code of the country, e.g. Canada's **ccTLD** (**country code** / top-level domain) is "**CA**", and Canada's flag image is named "**ca.png**" under the flags folder.

The **By Population, "> 100,000,000"** item

Complete the following tasks once the item is clicked:

1. Update the text of the "**subtitle**" to **"List of Countries and Dependencies - Population greater than 100 million"** on the page.
2. Populate the HTML table with the data including countries whose population is greater than 100 million. The results should be as the screenshot below. Click the screenshot to see the full-screen image.

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| Country List | By Population | By Area & Continent | Language | Honesty | |

List of Countries and Dependencies - Population greater than 100 million ⇐

Flag	Code	Country/Dep. Name	Continent	Area (Km²)	Population	Capital
🔴	BD	Bangladesh	Asia	147570	164669751	Dhaka
🟢	BR	Brazil	Americas	8515767	209288278	Brasília
🇨🇳	CN	China	Asia	9640011	1409517397	Beijing
	ET	Ethiopia	Africa	1104300	104957438	Addis Ababa
	IN	India	Asia	3287263	1339180127	New Delhi
	ID	Indonesia	Asia	1910931	263991379	Jakarta
⚫	JP	Japan	Asia	377930	127484450	Tokyo
	MX	Mexico	Americas	1964375	129163276	Mexico City
	NG	Nigeria	Africa	923768	190886311	Abuja
	PK	Pakistan	Asia	881912	197015955	Islamabad
	PH	Philippines	Asia	300000	104918090	Manila
	RU	Russian Federation	Europe	17098246	143989754	Moscow
	US	United States of America	Americas	9525067	324459463	Washington DC
		World	—	510072000	7550262101	

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The **By Population, "1 ~ 2 million"** item

Complete the following tasks once the item is clicked:

1. Update the text of the "**subtitle**" **to "List of Countries and Dependencies - Population between 1 and 2 million"** on the page.
2. Populate the HTML table with the data including countries whose population is between 1 and 2 million. The results should be as the screenshot below. Click the screenshot to see the full-screen image.

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| Country List | By Population | By Area & Continent | Language | Honesty | |

List of Countries and Dependencies - Population between 1 and 2 million ⇐

Flag	Code	Country/Dep. Name	Continent	Area (Km²)	Population	Capital
	BH	Bahrain	Asia	765	1492584	Manama
	CY	Cyprus	Europe	9251	1179551	Nicosia
	GQ	Equatorial Guinea	Africa	28051	1267689	Malabo
	EE	Estonia	Europe	45227	1309632	Tallinn
	GW	Guinea-Bissau	Africa	36125	1861283	Bissau
	LV	Latvia	Europe	64559	1949670	Riga
	MU	Mauritius	Africa	2040	1265138	Port Louis
	SZ	Swaziland	Africa	17364	1367254	Mbabane
	TL	Timor-Leste	Asia	n/a	1296311	Dili
	TT	Trinidad and Tobago	Americas	5130	1369125	Port of Spain

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The **By Area & Continent, "1 million km², Americas"** item

Complete the following tasks once the item is clicked:

1. Update the text of the "**subtitle**" to **"List of Countries and Dependencies - Area greater than 1 million Km2, Americas"** on the page.
2. Populate the HTML table with the data including countries whose area is greater than 1 million km², and the countries are in **Americas.** The results should be as the screenshot below. Click the screenshot to see the full-screen image.

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Country List	By Population	By Area & Continent	Language	Honesty	

List of Countries and Dependencies - Area greater than 1 million Km^2, Americas ⇐

Flag	Code	Country/Dep. Name	Continent	Area (Km^2)	Population	Capital
	AR	Argentina	Americas	2780400	44271041	Buenos Aires
	BO	Bolivia (Plurinational State of)	Americas	1098581	11051600	La Paz
	BR	Brazil	Americas	8515767	209288278	Brasília
	CA	Canada	Americas	9984670	36624199	Ottawa
	CO	Colombia	Americas	1141748	49065615	Bogotá
	GL	Greenland	Americas	2166086	56480	Nuuk
	MX	Mexico	Americas	1964375	129163276	Mexico City
	PE	Peru	Americas	1285216	32165485	Lima
	US	United States of America	Americas	9525067	324459463	Washington DC

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The **By Area & Continent, "All size, Asia"** item

Complete the following tasks once the item is clicked:

1. Update the text of the "**subtitle**" to **"List of Countries and Dependencies - All countries in Asia"** on the page.
2. Populate the HTML table with the data including all Asia countries. The results should be as the screenshot below. Click the screenshot to see the full-screen image.

WEB222 Assignment 4 - DOM Manipulation

Country List	By Population	By Area & Continent	Language	Honesty	

List of Countries and Dependencies - All countries in Asia ⇐

| Flag	Code	Country/Dep. Name	Continent	Area (Km^2)	Population	Capital
	AF	Afghanistan	Asia	652230	35530081	Kabul
	AM	Armenia	Asia	29743	2930450	Yerevan
	AZ	Azerbaijan	Asia	86600	9827589	Baku
	BH	Bahrain	Asia	765	1492584	Manama
	BD	Bangladesh	Asia	147570	164669751	Dhaka
	BT	Bhutan	Asia	38394	807610	Thimphu
	BN	Brunei Darussalam	Asia	5765	428697	Bandar Seri Begawan
	KH	Cambodia	Asia	181035	16005373	Phnom Penh
	CN	China	Asia	9640011	1409517397	Beijing
	GE	Georgia	Asia	69700	3912061	Tbilisi
	HK	Hong Kong	Asia	2755	7364883	Hong Kong
	IN	India	Asia	3287263	1339180127	New Delhi
	ID	Indonesia	Asia	1910931	263991379	Jakarta
	IR	Iran (Islamic Republic of)	Asia	1648195	81162788	Tehran
	IQ	Iraq	Asia	438317	38274618	Baghdad
	IL	Israel	Asia	28292	8321570	Jerusalem

The **Language, English** item

Same as the **Country List** item

The **Language, ?** item

Select and implement only one language from **Arabic**, **Chinese**, **French**, **Hindi**, **Korean**, **Japanese**, and **Russian**. Complete the following tasks once the item is clicked:

1. Update the text of the "**subtitle**" to fit selected language on the page, e.g. **"List of Countries and Dependencies – Country / Dep. Name in Chinese (中文)"** if Chinese is selected.
2. Populate the HTML table with the data including all countries, and show the "Country/Dep. Name" in the selected language**.** The results, e.g. "中文 (Chinese)"

selected, should be as the screenshot below. Click the screenshot to see the full-screen image.

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WEB222 Assignment 4 – DOM Manipulation

| Country List | By Population | By Area & Continent | Language | Honesty | |

List of Countries and Dependencies – Country/Dep. Name in Chinese (中文) ⇐

Flag	Code	Country/Dep. Name	Continent	Area (Km²)	Population	Capital
	AF	阿富汗	Asia	652230	35530081	Kabul
	AL	阿尔巴尼亚	Europe	28748	2930187	Tirana
	DZ	阿尔及利亚	Africa	2381741	41318142	Algiers
	AD	安道尔	Europe	468	76965	Andorra la Vella
	AO	安哥拉	Africa	1246700	29784193	Luanda
	AI	安圭拉	Americas	91	14909	The Valley
	AQ	南极洲	Antarctica	14000000		Antarctica
	AG	安提瓜和巴布达	Americas	442	102012	St. John's
	AR	阿根廷	Americas	2780400	44271041	Buenos Aires
	AM	亚美尼亚	Asia	29743	2930450	Yerevan
	AW	阿鲁巴	Americas	180	105264	Oranjestad
	AU	澳大利亚	Oceania	7692024	24450561	Canberra
	AT	奥地利	Europe	83871	8735453	Vienna
	AZ	阿塞拜疆	Asia	86600	9827589	Baku
	BS	巴哈马	Americas	13943	395361	Nassau

The **"Honesty"** page – **honesty.html**

- Add date and your name in the provided places to complete the honesty declarations.
- Update the footer of each page with your full name.

Assignment submission

- Compact all your files including all directory structures into a zip file named **assignment4.zip**. Submit the **zip** file to the Blackboard (My.Seneca) before the due date.

Important note

- <mark>Any error(s)</mark> for JavaScript/DOM code showed in (Firefox) web console will result in 20% penalty for the grade of your assignment.
- Using the DOM/Node <mark>innerHTML</mark> property to add images to the DOM or populate HTML tables will result in 40% penalty for the grade of your assignment.
- <mark>NO LATE SUBMISSIONS</mark> for assignments. Late assignment submissions will not be accepted and will receive a grade of zero (0).

Evaluation Rubric
(partial marking is up to the discretion of the instructor)

Criteria	Marks
Creating columns and rows with CreateElement	2
Displaying text in columns without innerHTML	2
Implementing event listener	1
Clearing data before rendering	1