***Лабораторна робота №4***

***Хід роботи:***

***Завдання на лабораторну роботу:***

1. ***Завдання на лабораторну роботу:***

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***Виконання:***

* ***HTML:***

<!DOCTYPE *html*>  
<html *lang*="en">  
<head>  
 <meta *charset*="UTF-8">  
 <title>Task 1</title>  
 <link *rel*="stylesheet" *href*="./styles/css/task\_1.css">  
 <link *rel*="icon" *href*="../../../../img/icons/racoon\_animal\_icon\_123571.ico">  
</head>  
<body>  
<div *class*="wrapper">  
 <div *class*="container">  
 <section *class*="button\_section">  
 <table *class*="button\_section\_\_table">  
 <tr>  
 <td>  
 <label *for*="imgRaccoon1" *class*="table\_\_label\_img">First image:</label>  
 </td>  
 <td>  
 <img *src*="./img/raccoon(1).png" *alt*="raccoon(1)" *class*="table\_\_img" *id*="imgRaccoon1">  
 </td>  
 </tr>  
 <tr>  
 <td *colspan*="2">  
 <div *class*="table\_\_div\_raccoon\_1\_src"></div>  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <label *for*="imgRaccoon2" *class*="table\_\_label\_img">Second image:</label>  
 </td>  
 <td>  
 <img *src*="./img/raccoon(2).png" *alt*="raccoon(2)" *class*="table\_\_img" *id*="imgRaccoon2">  
 </td>  
 </tr>  
 <tr>  
 <td *colspan*="2">  
 <div *class*="table\_\_div\_raccoon\_2\_src"></div>  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <label *for*="imgRaccoon3" *class*="table\_\_label\_img">Third image:</label>  
 </td>  
 <td>  
 <img *src*="./img/raccoon(3).png" *alt*="raccoon(3)" *class*="table\_\_img" *id*="imgRaccoon3">  
 </td>  
 </tr>  
 <tr>  
 <td *colspan*="2">  
 <div *class*="table\_\_div\_raccoon\_3\_src"></div>  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <label *for*="imgRaccoon4" *class*="table\_\_label\_img">Fourth image:</label>  
 </td>  
 <td>  
 <img *src*="./img/raccoon(4).png" *alt*="raccoon(4)" *class*="table\_\_img" *id*="imgRaccoon4">  
 </td>  
 </tr>  
 <tr>  
 <td *colspan*="2">  
 <div *class*="table\_\_div\_raccoon\_4\_src"></div>  
 </td>  
 </tr>  
 </table>  
 </section>  
 </div>  
  
 <script *src*="./js/task\_1.js"></script>  
</div>  
</body>  
</html>

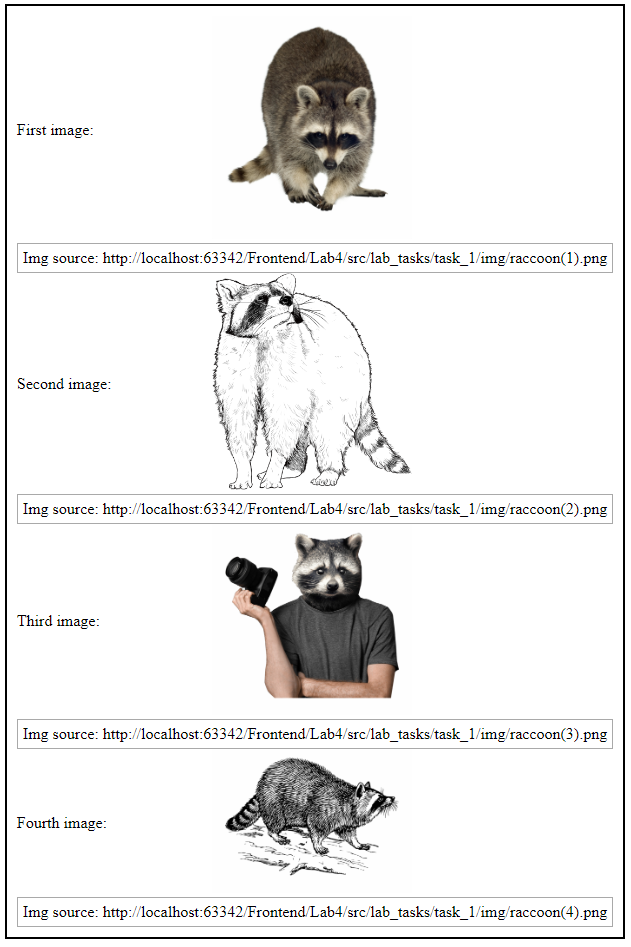
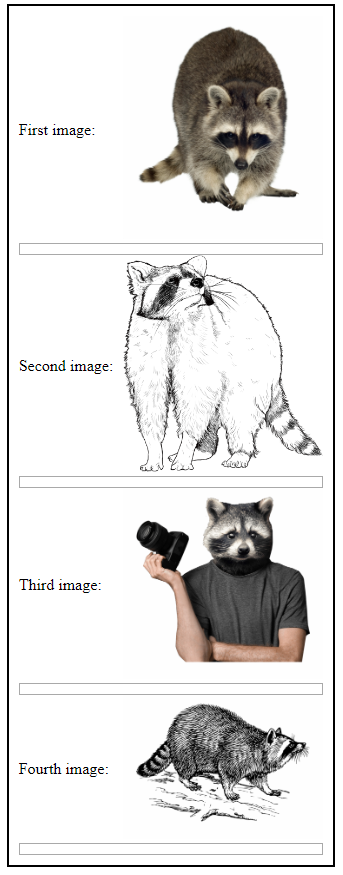
* ***SASS:***

\*  
 margin: 0  
 padding: 0  
 box-sizing: border-box  
  
.*wrapper* width: 100%  
 height: 100vh  
 display: flex  
 align-items: center  
 flex-direction: column  
  
.*button\_section* border: 2px solid black  
 margin: 10px 0  
 padding: 10px  
 max-width: 40vw  
  
.*button\_section\_\_table* border-collapse: collapse  
  
.*table\_\_img* width: 200px  
 margin-left: 10px  
  
.*table\_\_div\_raccoon\_1\_src*, .*table\_\_div\_raccoon\_2\_src*, .*table\_\_div\_raccoon\_3\_src*, .*table\_\_div\_raccoon\_4\_src* border: 1px solid darkgrey  
 padding: 5px

* ***JS:***

'use strict';  
  
*const* raccoonImages = document.querySelectorAll('.table\_\_img');  
*for* (*let* i = 0; i < raccoonImages.length; i++) {  
 raccoonImages[i].addEventListener('click', (event) => {  
 *const* imgIndex = i + 1  
 console.log(imgIndex);  
 *const* outputDiv = document.querySelector(`.table\_\_div\_raccoon\_${imgIndex}\_src`);  
 console.log(event.target.src);  
 console.log(outputDiv);  
 outputDiv.innerHTML = `<p>Img source: ${event.target.src}</p>`;  
 })  
}

***Результат програми:***



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***Виконання:***

* ***HTML:***

<!DOCTYPE *html*>  
<html *lang*="en">  
<head>  
 <meta *charset*="UTF-8">  
 <title>Task 2</title>  
 <link *rel*="stylesheet" *href*="./styles/css/task\_2.css">  
 <link *rel*="icon" *href*="../../../../img/icons/racoon\_animal\_icon\_123571.ico">  
</head>  
<body>  
<div *class*="wrapper">  
 <div *class*="container">  
 <section *class*="button\_section">  
 <table *class*="button\_section\_\_table">  
 <tr>  
 <td>  
 <label *for*="paragraph\_one" *class*="table\_\_label\_paragraph">Paragraph 1:</label>  
 </td>  
 <td>  
 <p *id*="paragraph\_one" *class*="table\_\_paragraph"></p>  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <label *for*="paragraph\_two" *class*="table\_\_label\_paragraph">Paragraph 2:</label>  
 </td>  
 <td>  
 <p *id*="paragraph\_two" *class*="table\_\_paragraph"></p>  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <label *for*="paragraph\_three" *class*="table\_\_label\_paragraph">Paragraph 3:</label>  
 </td>  
 <td>  
 <p *id*="paragraph\_three" *class*="table\_\_paragraph"></p>  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <label *for*="paragraph\_four" *class*="table\_\_label\_paragraph">Paragraph 4:</label>  
 </td>  
 <td>  
 <p *id*="paragraph\_four" *class*="table\_\_paragraph"></p>  
 </td>  
 </tr>  
 </table>  
 </section>  
 </div>  
  
 <script *src*="./js/task\_2.js"></script>  
</div>  
</body>  
</html>

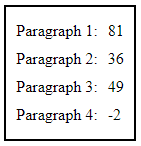
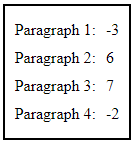
* ***SASS:***

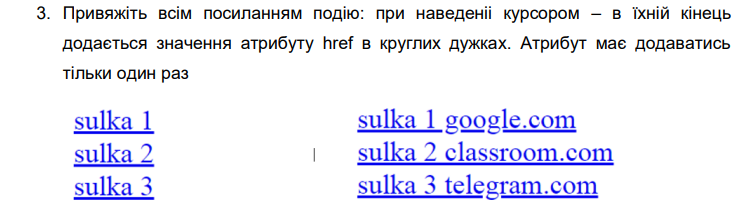
\*  
 margin: 0  
 padding: 0  
 box-sizing: border-box  
  
.*wrapper* width: 100%  
 height: 100vh  
 display: flex  
 align-items: center  
 flex-direction: column  
  
.*button\_section* border: 2px solid black  
 margin: 10px 0  
 padding: 10px  
 max-width: 30vw  
  
.*button\_section\_\_table* border-collapse: collapse  
  
.*table\_\_paragraph* margin: 5px 0 5px 10px  
 cursor: pointer

* ***JS:***

'use strict';  
  
*const getRandomInt*= (*fromNumber*, *toNumber*) => Math.round((Math.random() \* (*toNumber* -  
 *fromNumber*) + *fromNumber*));  
  
*const* paragraphs = document.querySelectorAll('.*table\_\_paragraph*');  
*for* (*let* i = 0; i < paragraphs.length; i++) {  
 *const* generatedNumber = *getRandomInt*(-10, 10);  
 paragraphs[i].innerHTML = `${generatedNumber}`;  
 paragraphs[i].setAttribute('value', generatedNumber.toString())  
 paragraphs[i].addEventListener('click', (*event*) => {  
 *const* number = *parseInt*(*event*.target.getAttribute('value')) \*\* 2;  
 paragraphs[i].setAttribute('value', number.toString())  
 paragraphs[i].innerHTML = `${number}`;  
 });  
}

***Результат програми:***

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***Виконання:***

* ***HTML:***

<!DOCTYPE *html*>  
<html *lang*="en">  
<head>  
 <meta *charset*="UTF-8">  
 <title>Task 3</title>  
 <link *rel*="stylesheet" *href*="./styles/css/task\_3.css">  
 <link *rel*="icon" *href*="../../../../img/icons/racoon\_animal\_icon\_123571.ico">  
</head>  
<body>  
<div *class*="wrapper">  
 <div *class*="container">  
 <section *class*="button\_section">  
 <table *class*="button\_section\_\_table">  
 <tr>  
 <td>  
 <label *for*="aLinkOne" *class*="table\_\_label\_link">First link:</label>  
 </td>  
 <td>  
 <a *id*="aLinkOne" *href*="https://github.com/AndriiBabushko/Frontend" *class*="table\_\_link" *title*="GitHub" *value*="LINK">LINK</a>  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <label *for*="aLinkTwo" *class*="table\_\_label\_link">Second link:</label>  
 </td>  
 <td>  
 <a *id*="aLinkTwo" *href*="https://www.youtube.com/watch?v=ywtqzPVIfx0" *class*="table\_\_link" *title*="Youtube" *value*="LINK">LINK</a>  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <label *for*="aLinkThree" *class*="table\_\_label\_link">Third link:</label>  
 </td>  
 <td>  
 <a *id*="aLinkThree" *href*="https://developer.mozilla.org/en-US/" *class*="table\_\_link" *title*="MDN" *value*="LINK">LINK</a>  
 </td>  
 </tr>  
 </table>  
 </section>  
 </div>  
  
 <script *src*="./js/task\_3.js"></script>  
</div>  
</body>  
</html>

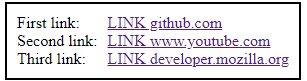
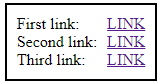
* ***SASS:***

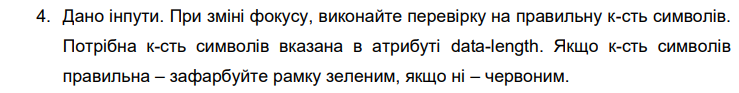
\*  
 margin: 0  
 padding: 0  
 box-sizing: border-box  
  
.*wrapper* width: 100%  
 height: 100vh  
 display: flex  
 align-items: center  
 flex-direction: column  
  
.*button\_section* border: 2px solid black  
 margin: 10px 0  
 padding: 10px  
 max-width: 30vw  
  
.*button\_section\_\_table* border-collapse: collapse  
  
.*table\_\_link* margin: 5px 0 5px 10px

* ***JS:***

'use strict';  
  
*const* links = document.querySelectorAll('.*table\_\_link*');  
*for* (*let* i = 0; i < links.length; i++) {  
 links[i].addEventListener('mouseover', (*event*)=> {  
 *const* target = *event*.target;  
 *const* link = target.getAttribute('href');  
 *const* value = target.getAttribute('value');  
 *const* splitLink = link.split(/\/\/|\//);  
 links[i].innerHTML = `${value} ${splitLink[1]}`;  
 });  
}

***Результат програми:***



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***Виконання:***

* ***HTML:***

<!DOCTYPE *html*>  
<html *lang*="en">  
<head>  
 <meta *charset*="UTF-8">  
 <title>Task 4</title>  
 <link *rel*="stylesheet" *href*="./styles/css/task\_4.css">  
 <link *rel*="icon" *href*="../../../../img/icons/racoon\_animal\_icon\_123571.ico">  
</head>  
<body>  
<div *class*="wrapper">  
 <div *class*="container">  
 <section *class*="button\_section">  
 <table *class*="button\_section\_\_table">  
 <tr>  
 <td>  
 <label *for*="textFirstInput" *class*="table\_\_label\_text">First input:</label>  
 </td>  
 <td>  
 <input *type*="text" *name*="textFirstInput" *id*="textFirstInput" *class*="table\_\_text" *placeholder*="First text" *data-length*="10">  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <label *for*="textSecondInput" *class*="table\_\_label\_text">Second input:</label>  
 </td>  
 <td>  
 <input *type*="text" *name*="textSecondInput" *id*="textSecondInput" *class*="table\_\_text" *placeholder*="Second text input" *data-length*="20">  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <label *for*="textThirdInput" *class*="table\_\_label\_text">Third input:</label>  
 </td>  
 <td>  
 <input *type*="text" *name*="textThirdInput" *id*="textThirdInput" *class*="table\_\_text" *placeholder*="Third" *data-length*="5">  
 </td>  
 </tr>  
 </table>  
 </section>  
 </div>  
  
 <script *src*="./js/task\_4.js"></script>  
</div>  
</body>  
</html>

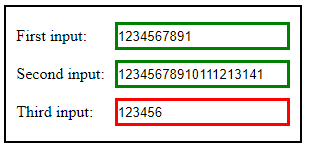
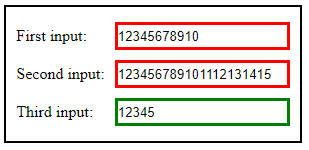
* ***SASS:***

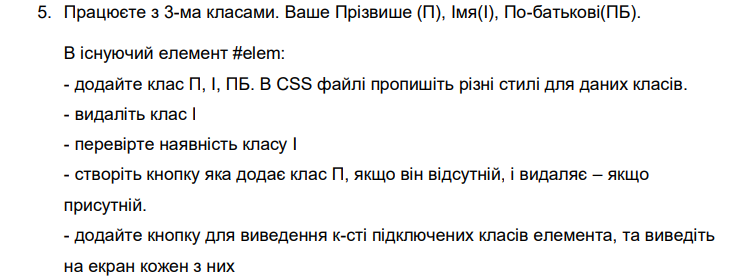
\*  
 margin: 0  
 padding: 0  
 box-sizing: border-box  
  
.*wrapper* width: 100%  
 height: 100vh  
 display: flex  
 align-items: center  
 flex-direction: column  
  
.*button\_section* border: 2px solid black  
 margin: 10px 0  
 padding: 10px  
 max-width: 30vw  
  
.*button\_section\_\_table* border-collapse: collapse  
  
.*table\_\_text* margin: 5px 0 5px 10px  
 height: 28px  
 border-style: solid

* ***JS:***

'use strict';  
  
*const* textInputs = document.querySelectorAll('.*table\_\_text*');  
*for* (*let* i = 0; i < textInputs.length; i++) {  
 textInputs[i].addEventListener('focus', (*event*) => {  
 *const* dataLength = *parseInt*(textInputs[i].dataset.length);  
 *const* textInputValue = textInputs[i].value;  
  
 *if* (textInputValue.length <= dataLength) {  
 textInputs[i].style.borderColor = 'green';  
 textInputs[i].style.borderWidth = '3px';  
 } *else* {  
 textInputs[i].style.borderColor = 'red';  
 textInputs[i].style.borderWidth = '3px';  
 }  
 });  
}

***Результат програми:***



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***Виконання:***

* ***HTML:***

<!DOCTYPE *html*>  
<html *lang*="en">  
<head>  
 <meta *charset*="UTF-8">  
 <title>Task 5</title>  
 <link *rel*="stylesheet" *href*="./styles/css/task\_5.css">  
 <link *rel*="icon" *href*="../../../../img/icons/racoon\_animal\_icon\_123571.ico">  
</head>  
<body>  
<div *class*="wrapper">  
 <div *class*="container">  
 <section *class*="button\_section">  
 <table *class*="button\_section\_\_table">  
 <tr>  
 <td>  
 <label *for*="element" *class*="table\_\_label\_element">First text element:</label>  
 </td>  
 <td>  
 <p *id*="element" *class*="table\_\_p\_elem first\_name last\_name middle\_name">Some text in first element</p>  
 </td>  
 </tr>  
 <tr>  
 <td *colspan*="2">  
 <input *type*="button" *value*="Add/remove first name class" *id*="buttonAddRemoveFirstName" *class*="table\_\_button\_add\_remove\_first\_name">  
 </td>  
 </tr>  
 <tr>  
 <td *colspan*="2">  
 <input *type*="button" *value*="Add/remove last name class" *id*="buttonAddRemoveLastName" *class*="table\_\_button\_add\_remove\_last\_name">  
 </td>  
 </tr>  
 <tr>  
 <td *colspan*="2">  
 <input *type*="button" *value*="Add/remove middle name class" *id*="buttonAddRemoveMiddleName" *class*="table\_\_button\_add\_remove\_middle\_name">  
 </td>  
 </tr>  
 <tr>  
 <td *colspan*="2">  
 <input *type*="button" *value*="Check classes" *id*="buttonCheckClasses" *class*="table\_\_button\_check\_classes">  
 </td>  
 </tr>  
 </table>  
 <div *class*="button\_section\_\_output\_info" *id*="divOutputInfo"></div>  
 </section>  
 </div>  
  
 <script *src*="./js/task\_5.js"></script>  
</div>  
</body>  
</html>

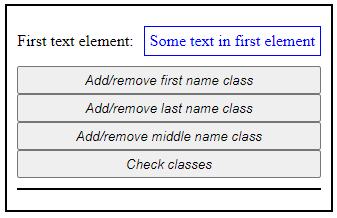
* ***SASS:***

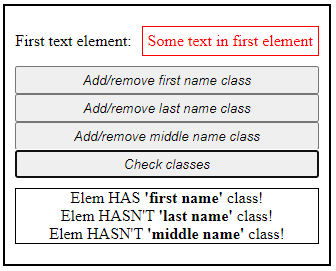
\*  
 margin: 0  
 padding: 0  
 box-sizing: border-box  
  
.*wrapper* width: 100%  
 height: 100vh  
 display: flex  
 align-items: center  
 flex-direction: column  
  
.*button\_section* border: 2px solid black  
 margin: 10px 0  
 padding: 10px  
 max-width: 30vw  
  
.*button\_section\_\_table* border-collapse: collapse  
  
.*table\_\_p\_elem* margin: 10px 0 10px 10px  
 padding: 5px  
  
.*first\_name* border: 1px solid red  
 color: red  
  
.*last\_name* border: 1px solid green  
 color: green  
  
.*middle\_name* border: 1px solid blue  
 color: blue  
  
.*table\_\_button\_add\_remove\_first\_name*, .*table\_\_button\_add\_remove\_last\_name*, .*table\_\_button\_add\_remove\_middle\_name*, .*table\_\_button\_check\_classes* width: 100%  
 height: 28px  
 font-style: italic  
  
.*button\_section\_\_output\_info* border: 1px solid black  
 margin: 10px 0  
 text-align: center

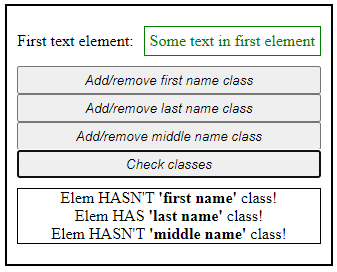
* ***JS:***

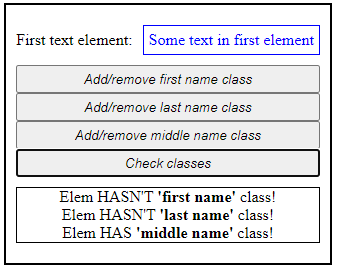
'use strict';  
  
*const* element = document.querySelector('#element');  
*const* divOutputInfo = document.querySelector('#divOutputInfo');  
*const* buttonAddRemoveFirstName = document.querySelector('#buttonAddRemoveFirstName');  
*const* buttonAddRemoveLastName = document.querySelector('#buttonAddRemoveLastName');  
*const* buttonAddRemoveMiddleName = document.querySelector('#buttonAddRemoveMiddleName');  
*const* buttonCheckClasses = document.querySelector('#buttonCheckClasses');  
  
*const checkElementClass* = (*element*, *className*) => {  
 *if* (*element*.classList.contains(*className*)) {  
 console.log(`HAVE '${*className*}' CLASS!!!`);  
 *return true*;  
 }  
 console.log(`DON'T HAVE '${*className*}' CLASS!!!`);  
 *return false*;  
};  
  
buttonAddRemoveFirstName.addEventListener('click', () => {  
 *if* (*checkElementClass*(element, 'first\_name')) {  
 element.classList.remove('first\_name');  
 } *else* {  
 element.classList.add('first\_name');  
 }  
});  
  
buttonAddRemoveLastName.addEventListener('click', () => {  
 *if* (*checkElementClass*(element, 'last\_name')) {  
 element.classList.remove('last\_name');  
 } *else* {  
 element.classList.add('last\_name');  
 }  
});  
  
buttonAddRemoveMiddleName.addEventListener('click', () => {  
 *if* (*checkElementClass*(element, 'middle\_name')) {  
 element.classList.remove('middle\_name');  
 } *else* {  
 element.classList.add('middle\_name');  
 }  
});  
  
buttonCheckClasses.addEventListener('click', () => {  
 divOutputInfo.innerHTML = '';  
 *if* (element.classList.contains('first\_name'))  
 divOutputInfo.innerHTML += `<p>Elem HAS <strong>'first name'</strong> class!</p>`;  
 *else* divOutputInfo.innerHTML += `<p>Elem HASN'T <strong>'first name'</strong> class!</p>`;  
 *if* (element.classList.contains('last\_name'))  
 divOutputInfo.innerHTML += `<p>Elem HAS <strong>'last name'</strong> class!</p>`;  
 *else* divOutputInfo.innerHTML += `<p>Elem HASN'T <strong>'last name'</strong> class!</p>`;  
 *if* (element.classList.contains('middle\_name'))  
 divOutputInfo.innerHTML += `<p>Elem HAS <strong>'middle name'</strong> class!</p>`;  
 *else* divOutputInfo.innerHTML += `<p>Elem HASN'T <strong>'middle name'</strong> class!</p>`;  
});

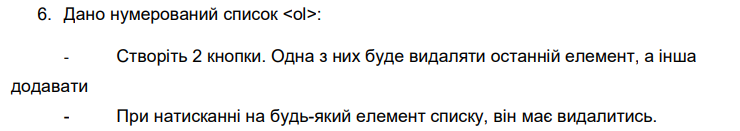
***Результат програми:***

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***Виконання:***

* ***HTML:***

<!DOCTYPE *html*>  
<html *lang*="en">  
<head>  
 <meta *charset*="UTF-8">  
 <title>Task 6</title>  
 <link *rel*="stylesheet" *href*="./styles/css/task\_6.css">  
 <link *rel*="icon" *href*="../../../../img/icons/racoon\_animal\_icon\_123571.ico">  
</head>  
<body>  
<div *class*="wrapper">  
 <div *class*="container">  
 <section *class*="button\_section">  
 <table *class*="button\_section\_\_table">  
 <tr>  
 <td>  
 <label *for*="olList" *class*="table\_\_label\_ol\_list" *id*="labelOlList">Ol elements list:</label>  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <ol *class*="table\_\_ol\_list" *id*="olList">  
 <li *class*="ol\_list\_\_li\_element">1</li>  
 <li *class*="ol\_list\_\_li\_element">2</li>  
 <li *class*="ol\_list\_\_li\_element">3</li>  
 <li *class*="ol\_list\_\_li\_element">4</li>  
 <li *class*="ol\_list\_\_li\_element">5</li>  
 </ol>  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <input *type*="button" *value*="Add element to ol list" *id*="buttonAddElemList" *class*="table\_\_button\_add\_elem\_list">  
 </td>  
 </tr>  
 <tr>  
 <td>  
 <input *type*="button" *value*="Remove element from ol list" *id*="buttonRemoveElemList" *class*="table\_\_button\_remove\_elem\_list">  
 </td>  
 </tr>  
 </table>  
 </section>  
 </div>  
  
 <script *src*="./js/task\_6.js"></script>  
</div>  
</body>  
</html>

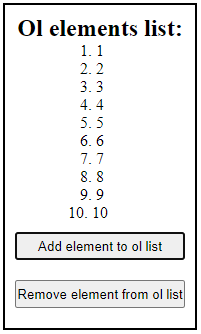
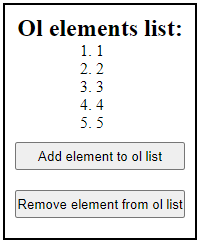
* ***SASS:***

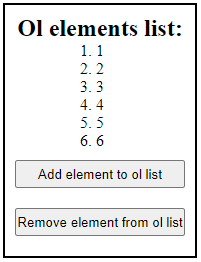
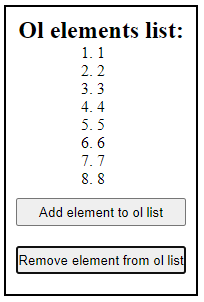
\*  
 margin: 0  
 padding: 0  
 box-sizing: border-box  
  
.*wrapper* width: 100%  
 height: 100vh  
 display: flex  
 align-items: center  
 flex-direction: column  
  
.*button\_section* border: 2px solid black  
 margin: 10px 0  
 padding: 10px  
 text-align: center  
  
.*button\_section\_\_table* border-collapse: collapse  
  
.*table\_\_label\_ol\_list* font-size: 24px  
 font-weight: bold  
  
.*table\_\_ol\_list* display: flex  
 flex-direction: column  
 align-items: center  
  
.*ol\_list\_\_li\_element* cursor: pointer  
  
.*table\_\_button\_add\_elem\_list*, .*table\_\_button\_remove\_elem\_list* margin: 10px 0  
 width: 100%  
 height: 28px

* ***JS:***

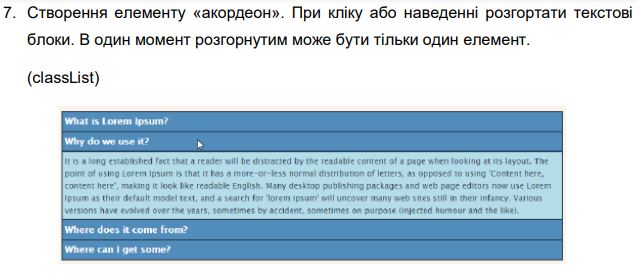
'use strict';  
  
*function removeItemFromArray*(*array*, *item*) {  
 *const* itemIndex = *array*.indexOf(*item*);  
  
 *if* (itemIndex > -1)  
 *array*.splice(itemIndex, 1);  
  
 *return array*;  
}  
  
*function addEventListenersToList*(*nodeList*, *elemsList*) {  
 *for* (*let* i = 0; i < *nodeList*.length; i++) {  
 *nodeList*[i].addEventListener('click', (*event*) => {  
 *const* target = *event*.target;  
 elemsList = removeItemFromArray(elemsList, target.textContent);  
 target.remove();  
 })  
 }  
}  
  
*const* buttonAddElemList = document.querySelector('#buttonAddElemList');  
*const* buttonRemoveElemList = document.querySelector('#buttonRemoveElemList');  
  
*const* olList = document.querySelector('#olList');  
*let* olListElements = document.querySelectorAll('.ol\_list\_\_li\_element');  
  
*let* elemsList = []  
*for* (*let* i = 0; i < olListElements.length; i++) {  
 elemsList.push(olListElements[i].textContent);  
}  
  
buttonAddElemList.addEventListener('click', () => {  
 *const* element = document.createElement('li');  
 element.innerHTML = `${elemsList.length + 1}`;  
 element.classList.add('ol\_list\_\_li\_element');  
  
 elemsList.push((elemsList.length + 1).toString());  
 olList.appendChild(element);  
  
 olListElements = document.querySelectorAll('.ol\_list\_\_li\_element');  
 addEventListenersToList(olListElements, elemsList);  
});  
  
buttonRemoveElemList.addEventListener('click', () => {  
 olListElements[elemsList.length - 1].remove()  
 elemsList.pop();  
});

***Результат програми:***

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1. ***Домашнє завдання:***

******

***Виконання:***

* ***HTML:***
* ***SASS:***
* ***JS:***

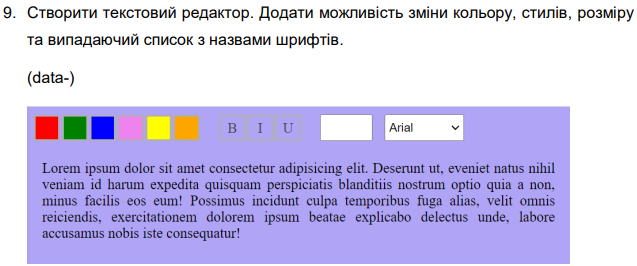
***Результат програми:***

******

***Виконання:***

* ***HTML:***
* ***SASS:***
* ***JS:***

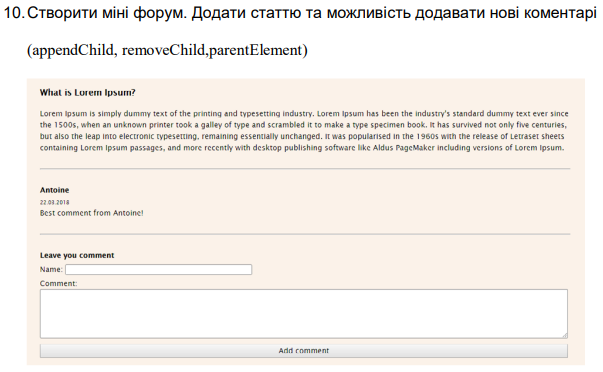
***Результат програми:***

******

***Виконання:***

* ***HTML:***
* ***SASS:***
* ***JS:***

***Результат програми:***

******

***Виконання:***

* ***HTML:***
* ***SASS:***
* ***JS:***

***Результат програми:***

***Репозиторій лабораторної роботи:***

* https://github.com/AndriiBabushko/Frontend

***Висновок:*** під час виконання лабораторної роботи було отримано навички обробки подій в мові JavaScript.