Bahira University,

Karachi Campus



LAB EXPERIMENT NO.

05

LIST OF TASKS

|  |  |
| --- | --- |
| TASK NO. | OBJECTIVE |
| 1 | Using the Shopping List files from the previous videos update the shopping list app to do the following:   1. If you click on the list item, it toggles the .done  class on and off. 2. Add buttons next to each list item to delete the item when clicked on its corresponding delete button. 3. BONUS: When adding a new list item, it automatically adds the delete button next to it (*hint: be sure to check if new items are clickable too!*) |
| 2 | Write a JavaScript program to calculate the volume of a sphere. |
| 3 | Create a webpage that ask user to perform any of the given operations.   1. Generate table. 2. Generate number sequence. 3. Calculate power. 4. Generate even / odd no. sequence. |
| 4 | Create a document with multiple tabs with background color. Upon hover background color of the document is changed accordingly. |

Submitted On:

**Task 1:** Using the Shopping List files from the previous videos update the shopping list app to do the following:

1. If you click on the list item, it toggles the .done class on and off.
2. Add buttons next to each list item to delete the item when clicked on its corresponding delete button.
3. BONUS: When adding a new list item, it automatically adds the delete button next to it (*hint: be sure to check if new items are clickable too!*)

**Solution:**

Index.html:

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <link rel="stylesheet" href="/CSS/style.css">

    <title>Lab 05 | DOM Manipulation</title>

</head>

<body>

    <!-- Task 01 -->

    <div class="container" id="box1">

        <h3><span class="task">Task 1</span>: Using the Shopping List files from the previous videos update the shopping list app to do the given tasks.</h3>

        <div id="task1">

            <div id="myDIV" class="header">

                <h2>My To Do List</h2>

                <input type="text" id="myInput" placeholder="Title...">

                <span onclick="newElement()" class="addBtn">Add</span>

            </div>

            <ul id="myUL" style="list-style-type: none;">

                <li>Hit the gym</li>

                <li>Pay bills</li>

                <li>Meet George</li>

                <li class="checked">Buy eggs</li>

                <li>Organize office</li>

            </ul>

        </div>

    </div>

Script.js:

var myNodelist = document.getElementsByTagName("LI");

var i;

for (i = 0; i < myNodelist.length; i++) {

  var span = document.createElement("SPAN");

  var txt = document.createTextNode("\u00D7");

  span.className = "close";

  span.appendChild(txt);

  myNodelist[i].appendChild(span);

}

var close = document.getElementsByClassName("close");

var i;

for (i = 0; i < close.length; i++) {

  close[i].onclick = function () {

    var div = this.parentElement;

    div.style.display = "none";

  }

}

var list = document.querySelector('ul');

list.addEventListener('click', function (ev) {

  if (ev.target.tagName === 'LI') {

    ev.target.classList.toggle('checked');

  }

}, false);

function newElement() {

  var li = document.createElement("li");

  var inputValue = document.getElementById("myInput").value;

  var t = document.createTextNode(inputValue);

  li.appendChild(t);

  if (inputValue === '') {

    alert("You must write something!");

  }

  else {

    document.getElementById("myUL").appendChild(li);

  }

  document.getElementById("myInput").value = "";

  var span = document.createElement("SPAN");

  var txt = document.createTextNode("\u00D7");

  span.className = "close";

  span.appendChild(txt);

  li.appendChild(span);

  for (i = 0; i < close.length; i++) {

    close[i].onclick = function () {

      var div = this.parentElement;

      div.style.display = "none";

    }

  }

}

A picture containing background pattern

Description automatically generated**Output:**

**Task 2:** Write a JavaScript program to calculate the volume of a sphere.

**Solution:**

Index.html:

<!-- Task 02 -->

    <div class="container" id="box2">

        <h3><span class="task">Task 2</span>: Write a JavaScript program to calculate the volume of a sphere.</h3>

        <div id="task2">

            <h4>- Input Radius value & get the Volume of a Sphere</h4>

            <form action="#" method="post" id="MyForm">

                <div id="radius-div">

                    <label for="radius">Radius:</label>

                    <input type="number" id="radius" name="rad" required>

                </div>

                <div id="volume-div">

                    <label for="volume">Volume:</label>

                    <input type="number" id="volume" name="vol" disabled>

                </div>

                <div class="btn">

                    <input type="submit" value="Calculate" id="submit">

                </div>

            </form>

        </div>

    </div>

Script.js:

function volume\_sphere() {

  var volume;

  var radius = document.getElementById('radius').value;

  radius = Math.abs(radius);

  volume = (4 / 3) \* Math.PI \* Math.pow(radius, 3);

  volume = volume.toFixed(3);

  document.getElementById('volume').value = volume;

  return false;

}

window.onload = document.getElementById('MyForm').onsubmit = volume\_sphere;

**Output:**

Graphical user interface, application, website

Description automatically generated

**Task 3:** Create a webpage that ask user to perform any of the given operations.

1. Generate table.
2. Generate number sequence.
3. Calculate power.
4. Generate even / odd no. sequence.

**Solution:**

Index.html:

<!-- Task 03 -->

    <div class="container" id="box3">

        <h3><span class="task">Task 3</span>: Create a webpage that ask user to perform any of the given operations.</h3>

        <div id="task3">

            <h4>- Select any one option:</h4>

            <div class="btn">

                <input type="submit" value="Generate Table" id="table" class="submit-btn">

            </div>

            <div class="btn">

                <input type="submit" value="Calculate Power" id="power" class="submit-btn">

            </div>

            <div class="btn">

                <input type="submit" value="Generate Sequence" id="sequence" class="submit-btn">

            </div>

            <div class="btn">

                <input type="submit" value="Generate Odd No. / Even No." id="evenOdd" class="submit-btn">

            </div>

        </div>

    </div>

Script.js:

function generateTable() {

  var table = '';

  var number = parseInt(prompt('Enter a Number to Generate Table:'));

  let range = parseInt(prompt('Enter Range of Table:'));

  for (let i = 1; i <= range; i++) {

    const final = i \* number;

    table += `${number} x ${("" + i).slice(-2)} = ${("" + final).slice(-2)}` + '\n';

  }

  alert(table);

}

function calculatePower() {

  var power = '';

  var base = parseInt(prompt('Enter the Value of Base:'));

  var exponent = parseInt(prompt('Enter the Value of Exponent:'));

  let final = Math.pow(base, exponent);

  power += `${base} ^ ${(exponent)} = ${(final)}`;

  alert(power);

}

function generateSequence() {

  let sequence = '{ ';

  var limit = parseInt(prompt('Enter Limit of Sequence:'));

  for (let i = 0; i <= limit; i++) {

    if (i == limit) {

      sequence += `${(i)} `;

    }

    else {

      sequence += `${(i)} , `;

    }

  }

  sequence += '}'

  alert(sequence);

}

function generateEvenOdd() {

  let sequence;

  let opt = prompt('Enter "O" for Odd or "E" for Even Sequence:');

  let range = parseInt(prompt('Enter Range of Sequence:'));

  if (opt.toLowerCase() === 'o') {

    sequence = '{ '

    for (let i = 1; i <= range; i += 2) {

      if (i == range || i == range - 1) {

        sequence += `${(i)} `;

      }

      else {

        sequence += `${(i)} , `;

      }

    }

    sequence += '}'

  }

  else if (opt.toLowerCase() === 'e') {

    sequence = '{ '

    for (let i = 0; i <= range; i += 2) {

      if (i == range || i == range - 1) {

        sequence += `${(i)} `;

      }

      else {

        sequence += `${(i)} , `;

      }

    }

    sequence += '}'

  }

  else {

    sequence = 'Invalid Input'

  }

  alert(sequence);

}

document.getElementById('table').onclick = generateTable;

document.getElementById('power').onclick = calculatePower;

document.getElementById('sequence').onclick = generateSequence;

document.getElementById('evenOdd').onclick = generateEvenOdd;

**Output:**

Graphical user interface, text, application

Description automatically generated

Graphical user interface, application

Description automatically generated

Graphical user interface, application

Description automatically generated

A picture containing graphical user interface

Description automatically generated

**Task 4:** Create a document with multiple tabs with background color. Upon hover background color of the document is changed accordingly.

**Solution:**

Index.html:

<!-- Task 04 -->

    <div class="container" id="box4">

        <h3><span class="task">Task 4</span>: Create a document with multiple tabs with background color. Upon hover background color of the document is changed accordingly.</h3>

        <div id="task4">

            <div class="tab tab-r" onmouseover="red()" onmouseleave="blank()"><p>R</p></div>

            <div class="tab tab-o" onmouseover="orange()" onmouseleave="blank()"><p>O</p></div>

            <div class="tab tab-y" onmouseover="yellow()" onmouseleave="blank()"><p>Y</p></div>

            <div class="tab tab-g" onmouseover="green()" onmouseleave="blank()"><p>G</p></div>

            <div class="tab tab-b" onmouseover="blue()" onmouseleave="blank()"><p>B</p></div>

            <div class="tab tab-i" onmouseover="indigo()" onmouseleave="blank()"><p>I</p></div>

            <div class="tab tab-v" onmouseover="violet()" onmouseleave="blank()"><p>V</p></div>

        </div>

    </div>

    <script src="/JS/script.js"></script>

</body>

</html>

Script.js:

function red(){ document.body.style.background = "rgb(255, 102, 99)"; }

function orange(){ document.body.style.background = "rgb(254, 177, 68)"; }

function yellow(){ document.body.style.background = "rgb(253, 253, 151)"; }

function green(){ document.body.style.background = "rgb(158, 224, 158)"; }

function blue(){ document.body.style.background = "rgb(128, 205, 235)"; }

function indigo(){ document.body.style.background = "rgb(204, 153, 201)"; }

function violet(){ document.body.style.background = "rgb(253, 196, 253)"; }

function blank(){ document.body.style.background = "white"; }

**Output:**

Graphical user interface, application

Description automatically generated

Style.css:

@import url('https://fonts.googleapis.com/css2?family=Raleway&display=swap');

@import url('https://fonts.googleapis.com/css2?family=Metrophobic&display=swap');

\* {

    margin: 0;

    padding: 0;

    box-sizing: border-box;

}

h3{

    font-family: 'Metrophobic', sans-serif;

    font-size: 17px;

    margin: 10px 10px 42px 10px;

    font-weight: normal;

}

.container{

    margin: 50px auto;

    width: 86%;

    padding: 20px;

    border: 1px solid #c0c0c0;

    border-radius: 5px;

}

#box1{

    margin-top: 60px;

}

.task{

    font-size: 19px;

    text-decoration: underline;

    font-weight: bold;

}

#task1{

    margin: auto;

    width: 90%;

    margin-bottom: 20px;

}

h2{

    font-family: 'Metrophobic', sans-serif;

    font-size: 22px;

    font-weight: 600;

    position: relative;

    top: -5px;

    margin-bottom: 10px;

}

ul {

    margin: 0;

    padding: 0;

}

ul li {

    cursor: pointer;

    position: relative;

    padding: 12px 8px 12px 40px;

    background: #eee;

    font-size: 18px;

    transition: 0.2s;

    -webkit-user-select: none;

    -moz-user-select: none;

    -ms-user-select: none;

    user-select: none;

    font-family: 'Raleway', sans-serif;

    font-size: 16px;

}

ul li:nth-child(odd) {

    background: #f9f9f9;

}

ul li:hover {

    background: #ddd;

}

ul li.checked {

    background: #7ed6df;

    color: #fff;

    text-decoration: line-through;

}

ul li.checked::before {

    content: '';

    position: absolute;

    border-color: #fff;

    border-style: solid;

    border-width: 0 2px 2px 0;

    top: 10px;

    left: 16px;

    transform: rotate(45deg);

    height: 15px;

    width: 7px;

}

.close {

    position: absolute;

    right: 0;

    top: 0;

    padding: 12px 16px 12px 16px;

}

.close:hover {

    background-color: #54a0ff;

    color: white;

}

.header {

    background-color: #3498db;

    padding: 30px 40px;

    color: white;

    text-align: center;

    border-top-left-radius: 7px;

    border-top-right-radius: 7px;

}

.header:after {

    content: "";

    display: table;

    clear: both;

}

#myInput {

    margin: 0;

    margin-left: 25px;

    border: none;

    border-radius: 0;

    width: 75%;

    padding: 10px;

    float: left;

    font-size: 15px;

    font-family: 'Raleway', sans-serif;

}

.addBtn {

    padding: 10px;

    width: 20%;

    background: #d9d9d9;

    color: #555;

    float: left;

    text-align: center;

    font-size: 16px;

    cursor: pointer;

    transition: 0.3s;

    border-radius: 0;

    font-size: 15px;

    font-family: 'Raleway', sans-serif;

}

.addBtn:hover {

    background-color: #bbb;

}

#task2{

    padding: 0px 20px;

    display: inline-block;

    margin-left: 16px;

    margin-bottom: 20px;

}

h4{

    margin-top: -5px;

    margin-bottom: 16px;

    font-family: 'Raleway', sans-serif;

    font-size: 16px;

    font-weight: 500;

}

label{

    font-family: 'Raleway', sans-serif;

    font-size: 15px;

    margin-right: 10px;

}

#volume, #radius{

    width: 150px;

    padding-left: 5px;

}

#radius-div{

    margin-bottom: 5px;

}

#radius{

    margin-bottom: 5px;

    border: 1px solid #b1b0b0;

}

#volume{

    position: relative;

    left: -6px;

}

#submit{

    margin-top: 17px;

    margin-left: 3px;

    padding: 4px 4px;

    font-family: 'Metrophobic', sans-serif;

    border: 1px solid #b1b0b0;

    border-radius: 4px;

    width: 210px;

    background-color: #54a0ff;

    color: #fff;

}

#submit:hover{

    background-color: #4895f3;

}

#task3{

    padding: 0px 20px;

    display: inline-block;

    margin-left: 16px;

    margin-bottom: 20px;

}

.submit-btn{

    margin-top: 8px;

    margin-left: 5px;

    padding: 4px 4px;

    font-family: 'Metrophobic', sans-serif;

    border: 1px solid #b1b0b0;

    border-radius: 4px;

    width: 220px;

    background-color: #54a0ff;

    color: #fff;

}

.submit-btn:hover{

    background-color: #4093f8;

}

#table{

    margin-top: 4px;

}

#task4{

    padding: 0px 20px;

    display: flex;

    margin-left: 30px;

    margin-bottom: 20px;

    border: 1px solid #b1b0b0;

    width: 400px;

    height: 120px;

    justify-content: center;

    align-items: center;

}

#box4{

    margin-bottom: 65px;

}

p{

    font-family: 'Raleway', sans-serif;

    font-size: 14px;

}

.tab{

    border: 1px solid #b1b0b0;

    border-radius: 4px;

    padding: 10px;

    margin: 5px;

}

.tab-r{

    background-color: #8B0000;

    color: #fff;

}

.tab-o{

    background-color: orange;

}

.tab-y{

    background-color: yellow;

}

.tab-g{

    background-color: rgb(3, 169, 3);

    color: white;

}

.tab-b{

    background-color: rgb(51, 51, 241);

    color: #fff;

}

.tab-i{

    background-color: indigo;

    color: #fff;

    padding: 10px 14px;

}

.tab-v{

    background-color: violet;

}