1. Try Basic HTML Tags, Table Tags, List Tags, Image Tags, Forms

index1.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="style1.css">
    <title>Basic HTML Tags, Table Tags, List Tags, Image Tags, Forms</
title>
</head>
<body>
    <h1>This is Heading 1 (h1)</h1>
    <h2>This is Heading 2 (h2)</h2>
    <p>Lorem ipsum dolor, sit amet consectetur
        <strong>Lorem, ipsum dolor sit amet consectetur adipisicing elit.
Cupiditate, ullam. (strong tag)</strong>
        adipisicing elit. Maxime inventore voluptas repudiandae
perferendis
        <em>Lorem ipsum dolor sit amet. (emphasis tag)</em>
        facilis architecto at eum provident unde error?
    </p>
    <h3>This is Heading 3 (h3)</h3>
    <ul>
        <li>Unordered List Item One</li>
        <li>Unordered List Item Two</li>
        <li>Unordered List Item Three</li>
    </ul>
    <h4>This is Heading 4 (h4)</h4>
    <ol>
        <li>Ordered List Item One</li>
        <li>Ordered List Item Two</li>
        <li>Ordered List Item Three</li>
    </ol>
    <p>Lorem ipsum dolor sit amet consectetur adipisicing elit.
Cupiditate, voluptatem. (Line Break)</p>
    <br>
    <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Odio,
ea.</p>
    <hr>
    <h5>this is an image(h5)</h5>
    <img src="profile.jpg" alt="image" >
    <br>
    <a href="http://www.nsit.ac.in/" target="_blank">NSUT</a>
    <table>
        <tr>
            <th>College</th>
            <th>Branch</th>
```

```
        </tr>
        <tr>
            <td>NSUT</td>
            <td>CSAI</td>
        </tr>
        <tr>
            <td>NSUT</td>
            <td>CSDS</td>
        </tr>
        <tr>
            <td>DTU</td>
            <td>COE</td>
        </tr>

    </table>
    <h3>Forms (h3)</h3>
    <form action="#">
        <div>
            <label for="name">Enter your name</label>
            <input type="text" name="name" id="name">
        </div>
        <div>
            <label for="age">Enter your age</label>
            <input type="number" name="age" id="age">
        </div>
        <div>
            <label for="DOB">Enter your date of birth</label>
            <input type="date" name="DOB" id="DOB">
        </div>
        <div>
            <label for="Gender">Gender</label>
            Male <input type="radio" name="gender" id="gender">
            Female <input type="radio" name="gender" id="gender">
        </div>
        <div>
            <label for="reg">Registered in some course</label>
            <input type="checkbox" name="reg" id="reg">
        </div>
        <div>
            <label for="Exam">Location </label>
            <select name="Exam" id="Exam">
                <option value="a" selected>New Delhi</option>
                <option value="b">Mumbai</option>
                <option value="c">Kolkata</option>
            </select>
        </div>
        <div>
            <input type="submit" value="Submit">
            <input type="reset" value="Reset">
        </div>
    </form>
</body>
</html>
```

style1.css

```
table,td,th{
    border: 2px solid black;
    border-collapse: collapse;
}

td,th{
    padding: 8px;
}

img {
    width: 300px;
}
```

Result

This is Heading 1 (h1)

This is Heading 2 (h2)

Lorem ipsum dolor, sit amet consectetur **Lorem, ipsum dolor sit amet consectetur adipisicing elit. Cupiditate, ullam. (strong tag)** adipisicing elit. Maxime inventore voluptas repudiandae perferendis *Lorem ipsum dolor sit amet. (emphasis tag)* facilis architecto at eum provident unde error?

This is Heading 3 (h3)

- Unordered List Item One
- Unordered List Item Two
- Unordered List Item Three

This is Heading 4 (h4)

1. Ordered List Item One
2. Ordered List Item Two
3. Ordered List Item Three

Lorem ipsum dolor sit amet consectetur adipisicing elit. Cupiditate, voluptatem. (Line Break)

Lorem ipsum dolor sit amet consectetur adipisicing elit. Odio, ea.

---

this is an image(h5)

this is an image(h5)

NSUT

College	Branch
NSUT	CSAI
NSUT	CSDS
DTU	COE

Forms (h3)

Enter your name
Enter your age
Enter your date of birth dd/mm/yyyy
Gender Male Female
Registered in some course
Location New Delhi
Submit Reset

2. Implement forms using HTML,FRAMES,CSS.

index2.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="style2.css">
    <title>Forms</title>
</head>

<body>
    <div class="backdrop"></div>
    <div class="modal-container">
        <div class="modal" id="loginModal">
            <h1 class="modal-title">Log in to your account</h1>
            <form action="" method="POST" class="form">
                <div class="input-container">
                    <label for="loginUsername" class="label-name">Email</
label>
                    <input id="loginUsername" type="text"
placeholder="Email or Username" name="loginUsername" autocomplete="off"
required>
                </div>
                <div class="input-container">
                    <label for="password" class="label-name">Password</
label>
                    <input id="password" type="password"
placeholder="Password" name="loginPassword" required>
                </div>
                <button type="submit" class="button">Log In</button>
                <p class="link-options">Or continue with</p>
                <img src="google.png" class="login-icon" alt="Google
login">
            </form>
            <a href="" class="register-link">No account? Sign up</a>
        </div>
    </div>
</body>

</html>
```

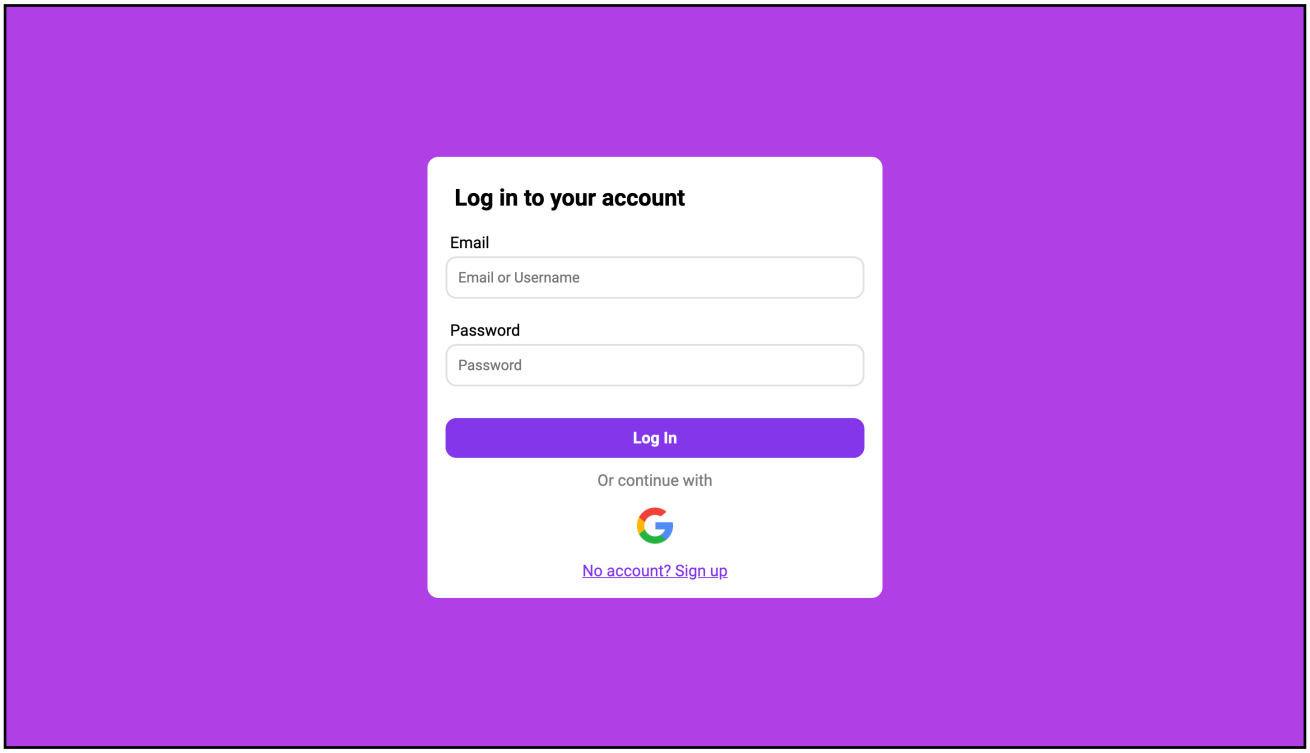
style2.css

```
@import url('https://fonts.googleapis.com/css2?
family=Roboto:wght@300;400;500;700&display=swap');

* {
    box-sizing: border-box;
    margin: 0;
    font-family: 'Roboto', sans-serif;
}

.backdrop {
    background-color: rgba(255, 255, 255, 0.1);
    /* display: none; */
    height: 100vh;
    position: fixed;
    width: 100vw;
    backdrop-filter: blur(5px);
    background: rgba(160, 21, 225, 0.8)
}

.modal-container {
    position: fixed;
    align-items: center;
    display: flex;
    height: 100vh;
    width: 100vw;
    justify-content: center;
}

.modal {
    background-color: white;
    border-radius: 12px;
    display: flex;
    font-size: 1.1rem;
    flex-direction: column;
    justify-content: center;
    min-width: 320px;
    padding: 20px;
    width : 35%;
}

.modal-title{
    font-size: 1.6rem;
    padding: 10px;
}

.form {
    display: flex;
    flex-direction: column;
}

.input-container {
```

```
    display: flex;
    flex-direction: column;
    margin: 10px 0;
}

.label-name {
    padding: 5px;
}

.input-container input {
    border: 2px solid #E5E5E5;
    border-radius: 12px;
    font-size: 1rem;
    padding: 12px;
}

.input-container input:focus-visible {
    border: 1.5px solid #3a86ff;
    outline: none;
}

.button {
    background-color: #8338EC;
    border-radius: 12px;
    border: none;
    color: white;
    font-weight: bold;
    font-size: 1.1rem;
    margin-top: 25px;
    padding: 12px;
    width: 100%;
}

.button:hover{
    cursor: pointer;
}

.button:focus-visible {
    outline: none;
}

.register-link {
    color: #8338EC;
    text-align: center;
    width: 100%;
}

.link-options {
    color: grey;
    padding-top: 15px;
    text-align: center;
}
```

```
.login-icon {
    margin: 20px auto;
    width : 40px;
}
```

Result



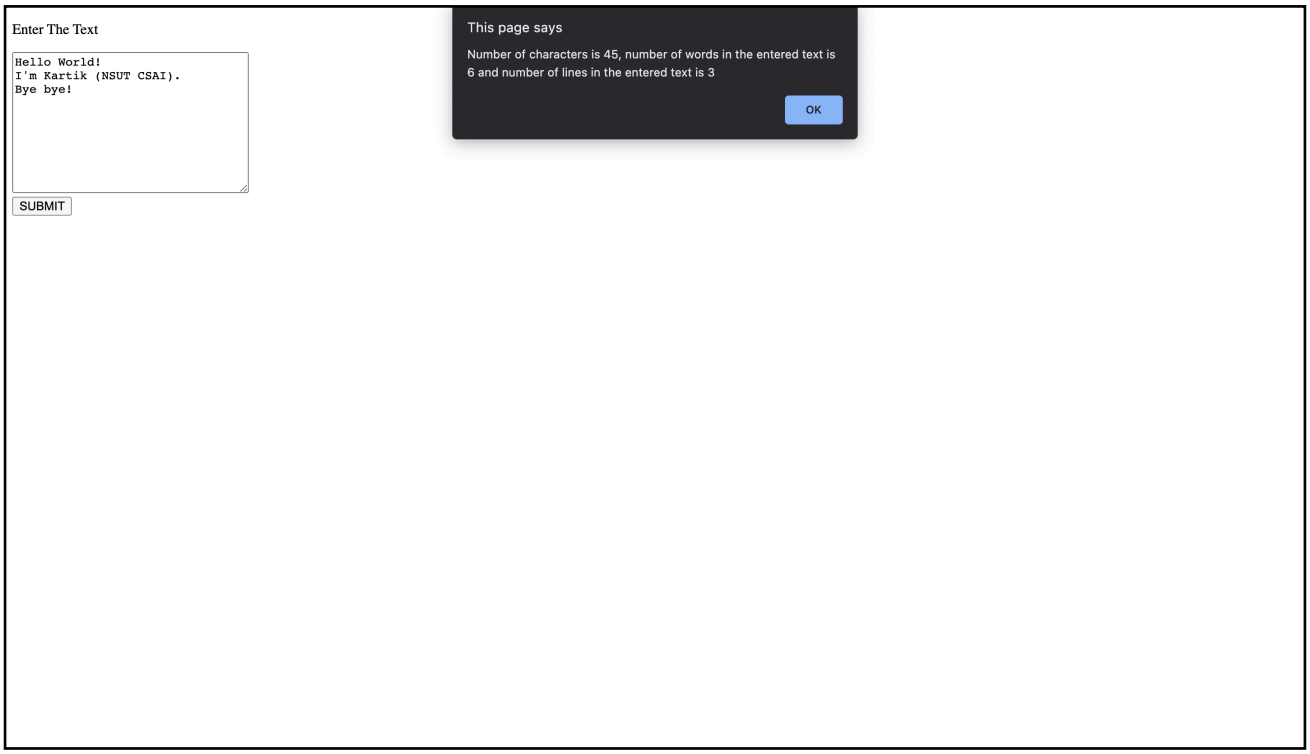
3. Write an HTML page that has one input, which can take multi-line text and a submit button. Once the user clicks the submit button ,it should show the number of characters ,lines and words in the text entered using an alert message. Words are separated with white space and lines are separated with new line character.

index3.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">
```

```
    <title>Counter</title>
</head>
<body>
    <div class="mainAr">
    <p class="mn">Enter The Text</p>
        <textarea name="text" id="text" cols="30" rows="10"
placeholder="Type Here.."></textarea>
        <br>
        <button class="btn">SUBMIT</button>
    </div>
    <script>
        function eval(){
            const txt=document.querySelector('#text').value;
            const arr=txt.split(" ");
            const arr2=txt.split("\n");
            alert("Number of characters is " + txt.length + ", number of
words in the entered text is “+ arr.length+" and number of lines in the
entered text is “+ arr2.length);
        }
        const btn = document.querySelector('.btn');
        btn.addEventListener("click",eval);
    </script>
</body>
</html>
```

Result



4. Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient

index4.html

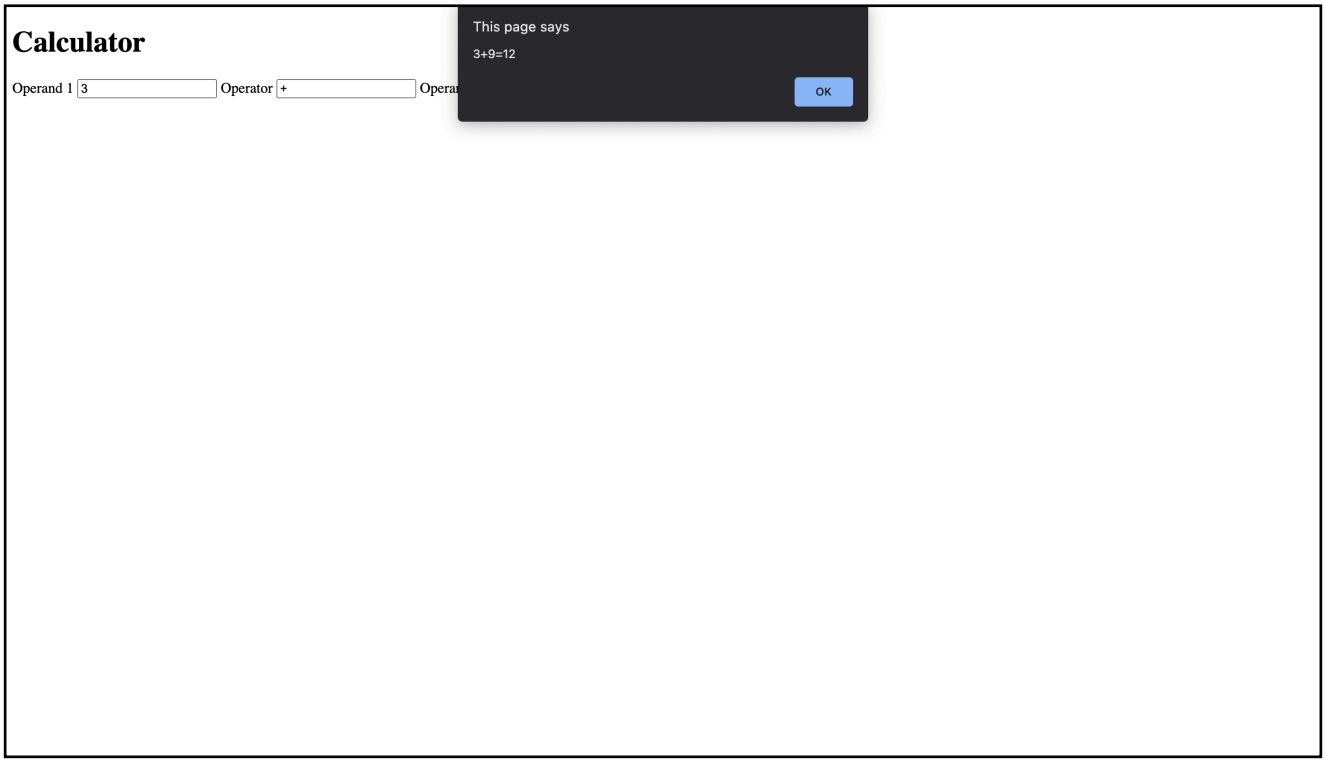
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Calculator</title>
</head>
<body>
    <h1 class="heading">Calculator</h1>
        <span class="head1">Operand 1</span>
        <input type="number" name="op1" id="op1">

        <span class="head2">Operator</span>
        <input type="text" name="oprtr" id="optr">

        <span class="head3">Operand 2</span>
        <input type="number" name="op2" id="op2">

        <button id="btn">Calculate</button>
    <script src="index4.js"></script>
</body>
</html>
```

index4.js

```
function calculate(){
    let op1=document.querySelector('#op1').value;
    let oprtr=document.querySelector('#optr').value;
    let op2=document.querySelector('#op2').value;
    if(op1=="" || op2=="" || oprtr=="") {
        alert("Please fill options correctly");
    }
    let str = op1 + oprtr + op2 + "=";
    op1 = parseInt(op1);
    op2 = parseInt(op2);
    if(oprtr == '+'){
        str = str + (op1 + op2);
        alert(str);
    } else if(oprtr == '-'){
      str = str + (op1 - op2);
      alert(str);
    }
    else if(oprtr == '*'){
```

```
      str = str + (op1 * op2);
      alert(str);
    }
    else if(oprtr == '/'){
      str = str + (op1 / op2);
      alert(str);
    } else {
        alert("Please fill options correctly");
    }
}

const btn = document.getElementById(‘btn');

btn.addEventListener('click', calculate);
```

Result



5. Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.

index5.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="style5.css">
    <title>Squares and Cubes</title>
</head>
<body>
    <h1>Squares and Cubes of numbers from 0 to 10</h1>
    <table class="number-table">
        <tr id="numbers">

        </tr>
        <tr id="squares">

        </tr>
        <tr id="cubes">

        </tr>
    </table>
    <button class="btn" id="calculateBtn">Calculate</button>
    <script src="index5.js"></script>
</body>
</html>
```

style5.css

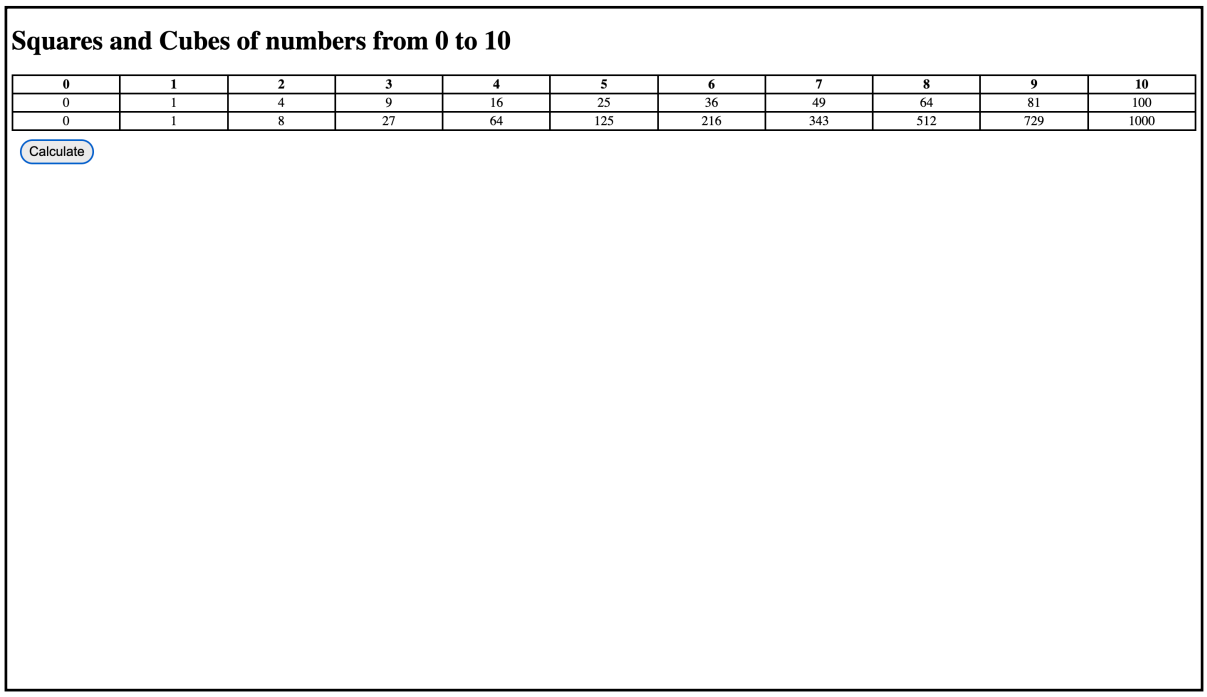
```
.number-table {
    border-collapse: collapse;
    width: 100%;
    border: 2px solid rgb(0, 0, 0);
    text-align: center;
}

th, td {
    border: 2px solid rgb(0, 0, 0);
    width: 50px;
}

.btn {
    font-size: 1rem;
```

```
    padding: 5px 10px;
    margin: 10px;
    border-radius: 15px;
    border: 1px solid rgb(0, 0, 0);
}
```

index5.js

```
function func() {
    const numbers = document.getElementById('numbers');
    const squares = document.getElementById('squares');
    const cubes = document.getElementById('cubes');
    numbers.innerHTML = "";
    squares.innerHTML = "";
    cubes.innerHTML = "";
    for(let i=0;i<=10;i++){
        const numberItem = i;
        const squareItem = i*i;
        const cubeItem = Math.pow(i,3);
        numbers.innerHTML += `<th>${numberItem}</th>`;
        squares.innerHTML += `<td>${squareItem}</td>`;
        cubes.innerHTML += `<td>${cubeItem}</td>`;
    }
}
const calculateBtn = document.getElementById('calculateBtn');
calculateBtn.addEventListener('click', func);
```

Result



6. Write a JavaScript code that displays text “TEXT-GROWING” with increasing font size in the interval of 100ms in RED COLOR, when the font size reaches 50pt it displays “TEXT-SHRINKING” in BLUE color. Then the font size decreases to 5pt.

index6.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="style6.css">
    <title>Text Growing & Shrinking</title>
</head>
    <h1 class="heading">Text Growing and Shrinking</h1>
    <button id="btnStart" class="btn-start">Start</button>
    <p class="text" id="text">Text-Growing</p>
<script src="index6.js"></script>
<body>

</body>
</html>
```

style6.css

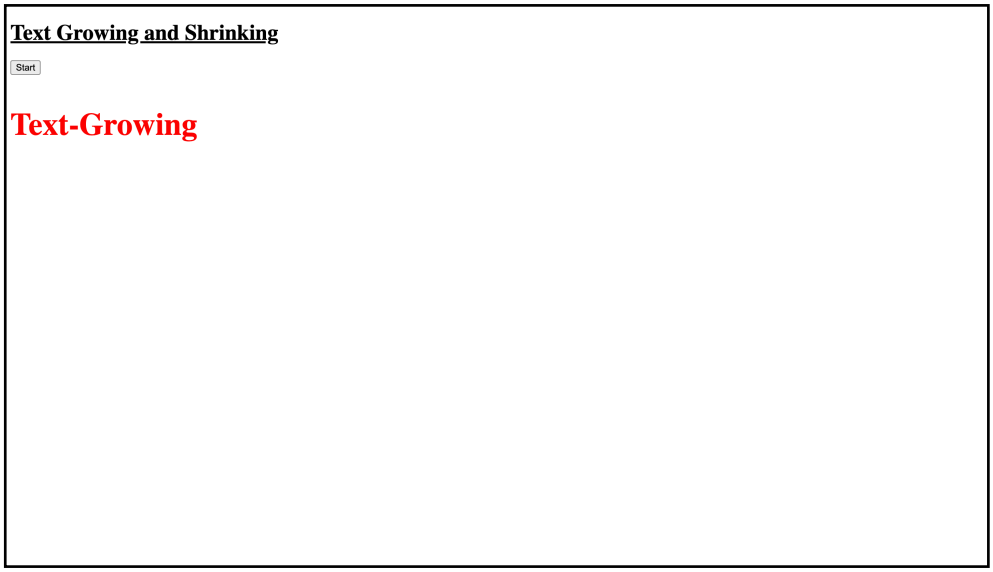
```
.heading {
    text-decoration: underline;
}

.text {
    font-size: 5pt;
    font-weight: bold;
}
```

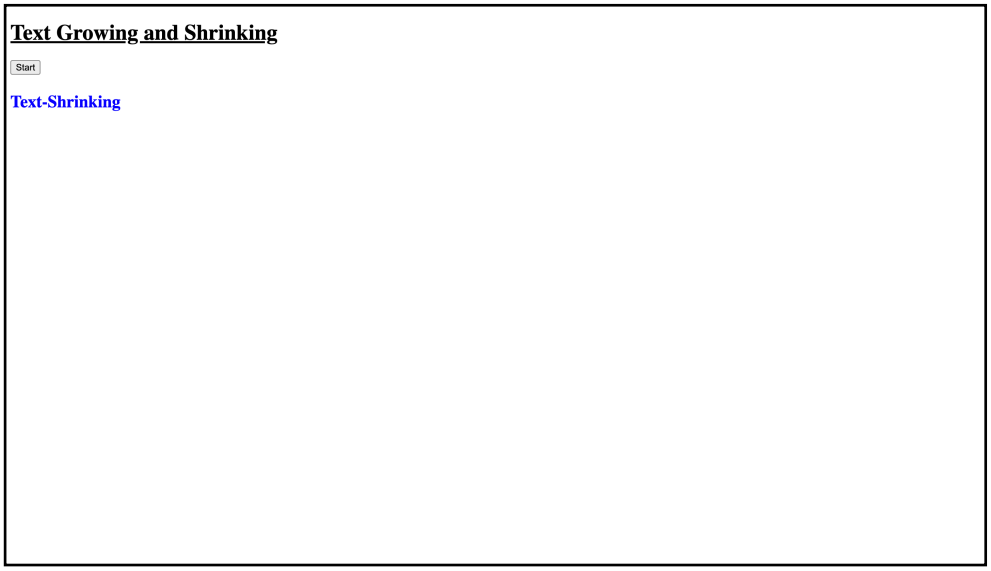
index6.js

```
const btnStart = document.getElementById('btnStart');
const text = document.getElementById('text');
btnStart.addEventListener('click', () => {
    let val = 1;
    let displayText = 'Text-Growing';
    let color = 'red';
    const interval = setInterval(() => {
        const currSize = getComputedStyle(text).fontSize;
        // 1 px = 0.75 pt
        if(parseInt(currSize) * 0.75 >= 50) {
```

```
            val = -1;
            color = 'blue';
            displayText = 'Text-Shrinking';
        } else if(parseInt(currSize) * 0.75 <= 5 && val === -1) {
            color = 'red';
            displayText = 'Text-Growing'
            clearInterval(interval);
        }
        text.style.fontSize = `${parseInt(currSize) + val}px`;
        text.style.color = color;
        text.innerText = displayText;
    }, 100);
});
```

Result





7. Develop and demonstrate a HTML5 file that includes JavaScript script that uses functions for the following problems:
a. Parameter: A string
Output: The position in the string of the left-most vowel
b. Parameter: A number
Output: The number with its digits in the reverse order

index7.html

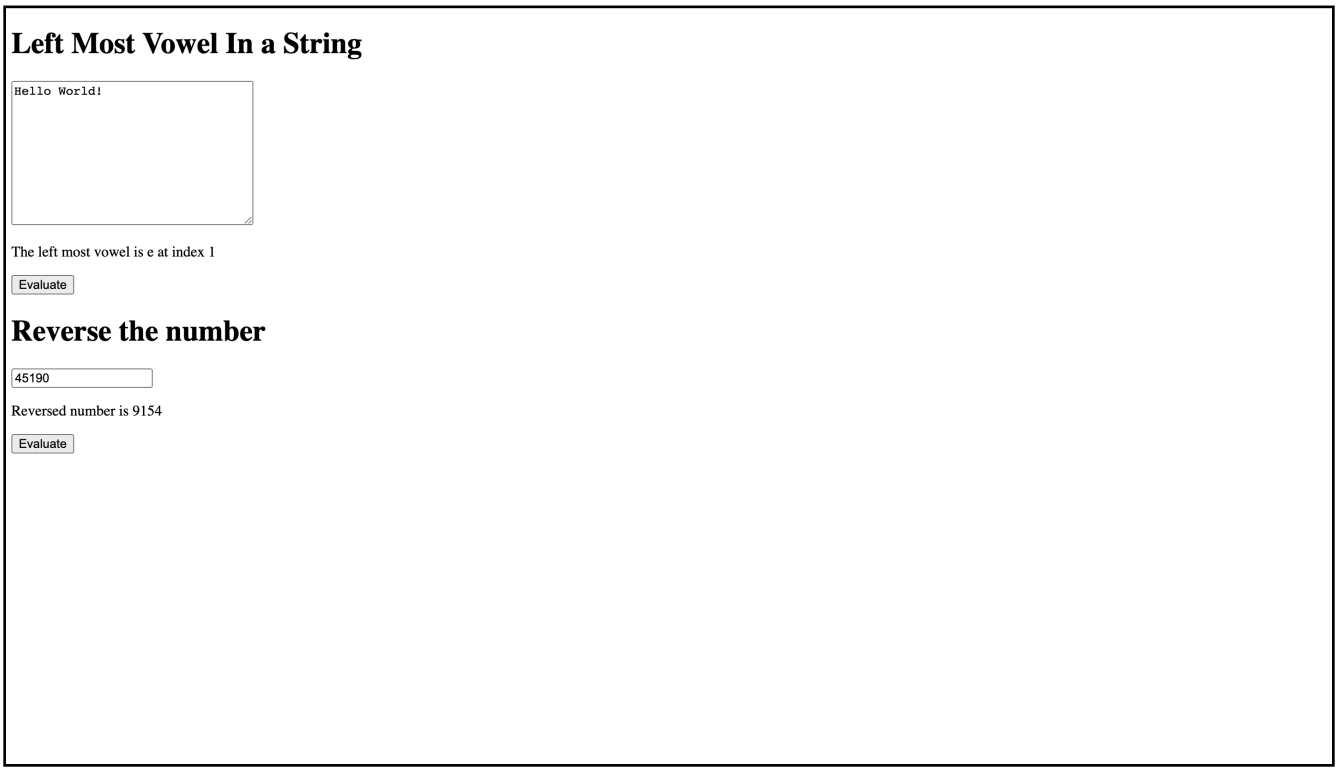
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>HTML and JS</title>
</head>
<body>
    <h1>Left Most Vowel In a String</h1>
    <textarea name="text" id="text" cols="30" rows="10" placeholder="Type
a string here.."></textarea>
    <p id="stringAns"></p>
    <button id="stringBtn">Evaluate</button>

    <h1>Reverse the number</h1>
    <input type="number" name="num" id="num">
    <p id="numAns"></p>
    <button id="numBtn">Evaluate</button>
    <script src="index7.js"></script>
</body>
</html>
```

index7.js

```
function leftMostVowel() {
    const str = document.getElementById('text').value;
    const stringAns = document.getElementById('stringAns');
    const vowelArr = ['a', 'e', 'i', 'o', 'u'];
    let res = Infinity;
    for(let i = 0; i < vowelArr.length; i++) {
        if(str.indexOf(vowelArr[i]) != -1 && str.indexOf(vowelArr[i]) <
res) {
            res = str.indexOf(vowelArr[i]);
        }
    }
    if(res === Infinity) {
        stringAns.innerHTML = 'No Vowel Found';
    } else {
```

```
        stringAns.innerHTML = `The left most vowel is ${str[res]} at
index ${res}`;
    }
}

function reverse() {
    let num = parseInt(document.getElementById('num').value);
    const numAns = document.getElementById('numAns');
    let res = 0;
    while(num > 0) {
        res = res * 10 + num % 10;
        num = Math.floor(num / 10);
    }
    numAns.innerText = `Reversed number is ${res}`;
}

const stringBtn = document.getElementById('stringBtn');
const numBtn = document.getElementById('numBtn');
stringBtn.addEventListener('click', leftMostVowel);
numBtn.addEventListener('click', reverse);
```

Result



8. Write an HTML page with Javascript that takes a number from one text field in the range 0-999 and display it in other text field in words. If the number is out of range ,it should show “out of range” and if it is not a number ,it should show “not a number” message in the result box.

index8.html

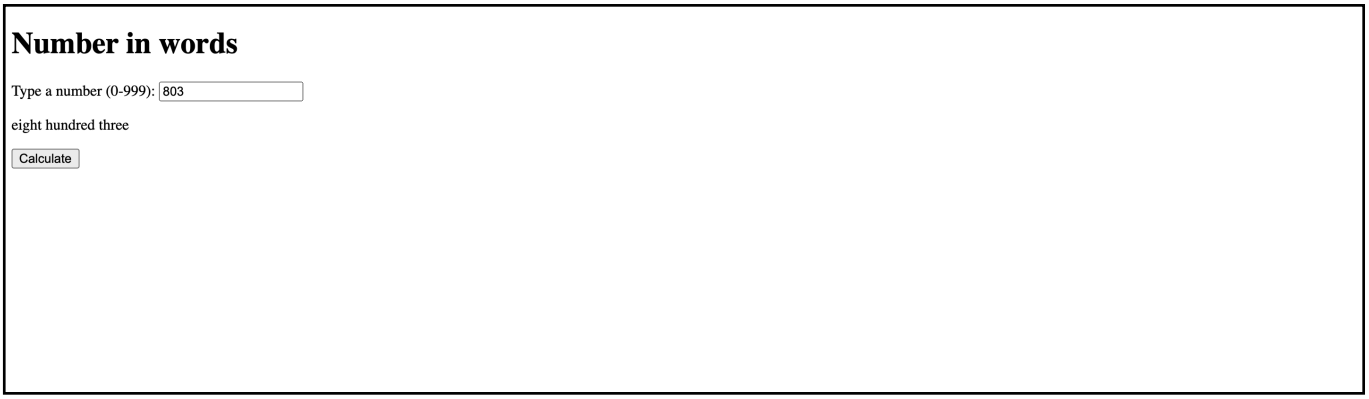
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Number in words</title>
</head>
<body>
    <h1>Number in words</h1>
    <label for="num">Type a number (0-999): </label>
    <input type="text" name="num" id="num">
    <p id="ans"></p>
    <button id="btn">Calculate</button>
    <script src="index8.js"></script>
</body>

</html>
```

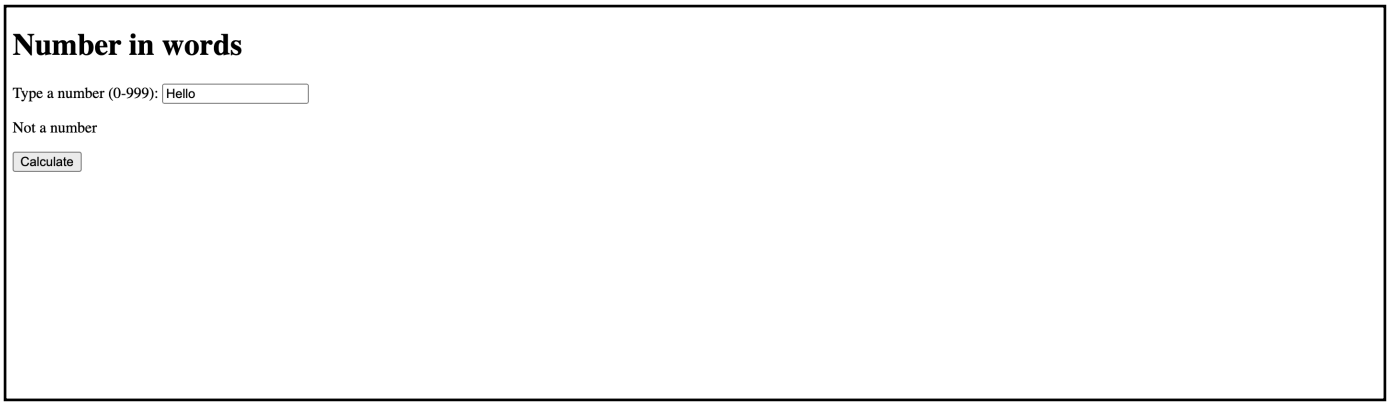
index8.js

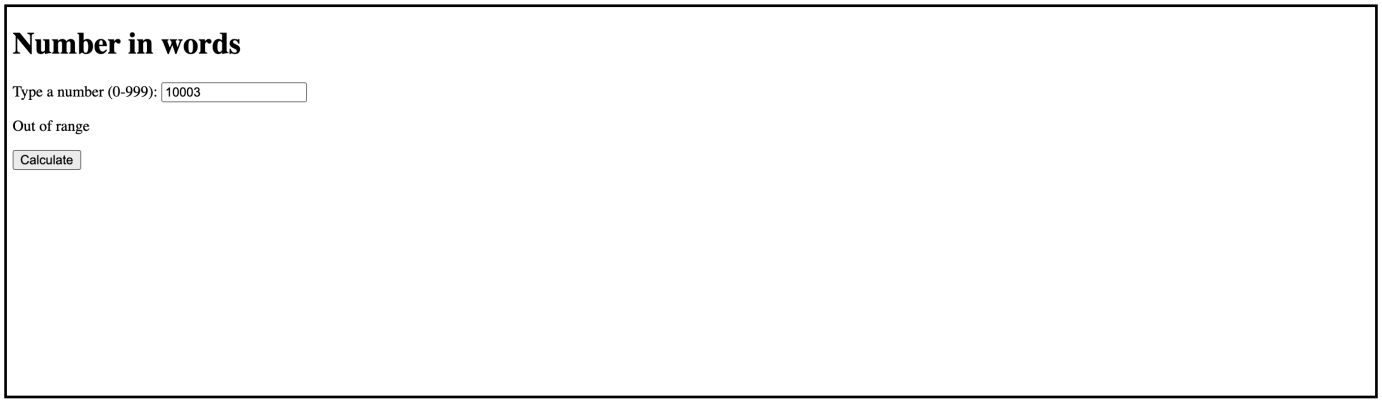
```
const btn = document.getElementById('btn');
btn.addEventListener('click', calculate);

function checkValidNumber(num) {
    for(let i = 0; i < num.length; i++) {
        if(num[i] < '0' || num[i] > '9') {
            return false;
        }
    }
    return true;
}

function checkInRange(num) {
    if(parseInt(num) < 0 || parseInt(num) > 999) {
        return false;
    }
    return true;
}

function calculate() {
    let num = document.getElementById('num').value;
```

```
    const ans = document.getElementById('ans');
    if(num == '') {
        ans.innerText = 'Please enter a number';
        return;
    }
    if(!checkValidNumber(num)) {
        ans.innerText = 'Not a number';
        return;
    }
    if(!checkInRange(num)) {
        ans.innerText = 'Out of range';
        return;
    }
    const single = ['', 'one', 'two', 'three', 'four', 'five', 'six',
'seven', 'eight', 'nine'];
    const double = ['', 'ten', 'twenty', 'thirty', 'forty', 'fifty',
'sixty', 'seventy', 'eighty', 'ninety'];
    const triple = ['', 'hundred'];
    const trivial = ['ten', 'eleven', 'twelve', 'thirteen', 'fourteen',
'fifteen', 'sixteen', 'seventeen', 'eighteen', 'nineteen'];
    let res = '';
    let i = 0;
    num = String(parseInt(num));
    if(num.length === 1) {
        if(parseInt(num) === 0) {
            res = 'zero';
        } else {
            res = single[parseInt(num)];
        }
    } else if(num.length === 2) {
        if(parseInt(num[0]) === 1) {
            res = trivial[parseInt(num[1])];
        } else {
            res = double[parseInt(num[0])] + ' ' +
single[parseInt(num[1])];
        }
    } else {
        res = single[parseInt(num[0])] + ' ' + triple[1] + ' ';
        if(parseInt(num[1]) === 1) {
            res += trivial[parseInt(num[2])];
        } else {
            if(parseInt(num[1]) === 0) {
                res += single[parseInt(num[2])];
            } else {
                res += double[parseInt(num[1])] + ' ' +
single[parseInt(num[2])];
            }
        }
    }
    ans.innerText = res;
}
```

Result


Number in words
Type a number (0-999): 803
eight hundred three
Calculate


Number in words
Type a number (0-999): Hello
Not a number
Calculate


Number in words
Type a number (0-999): 10003
Out of range
Calculate