95-481/95-881

Web Application Development

AI Lab Report

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**Lab:** 4

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**AI System**: chatGPT

# **Iteration #1**

## **Request**

make the html page responsive.

<!DOCTYPE html>

<html>

<head>

<title>Trees Saved Calculator</title>

</head>

<body>

<h1>Trees Saved by Using eBooks</h1>

<p>Please enter only numeric values in the fields below.</p>

<form id="calculator">

<label for="pages">Number of Pages in the Book:</label>

<input type="text" id="pages" name="pages" placeholder="Enter number of pages" oninput="validateNumericInput(this)" required><br><br>

<label for="copies">Number of Printed Copies Avoided:</label>

<input type="text" id="copies" name="copies" placeholder="Enter number of copies" oninput="validateNumericInput(this)" required><br><br>

<input type="button" value="Calculate Trees Saved" onclick="calculateTrees()">

</form>

<p id="result"></p>

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

</body>

</html>

function calculateTrees() {

var pagesPerBook = document.getElementById('pages').value;

var numberOfCopies = document.getElementById('copies').value;

// Validate that inputs are numeric

if (!isNumeric(pagesPerBook) || !isNumeric(numberOfCopies)) {

document.getElementById('result').innerHTML = 'Please enter valid numbers.';

return;

}

var pagesPerTree = 8333; // Rough estimate

var totalPagesSaved = pagesPerBook \* numberOfCopies;

var treesSaved = totalPagesSaved / pagesPerTree;

document.getElementById('result').innerHTML = 'Trees Saved: ' + treesSaved.toFixed(2);

}

function isNumeric(n) {

return !isNaN(parseFloat(n)) && isFinite(n);

}

function validateNumericInput(input) {

input.value = input.value.replace(/[^0-9]/g, '');

}

Before you start, are there any questions you need answered to help solve this problem?

## **Result**

To make the provided HTML page responsive, we need to ensure that it displays well on devices of various sizes, from desktops to tablets and smartphones. This involves using CSS media queries to adapt the layout, font sizes, and other elements based on the screen size. Here's a basic approach to make your page responsive:

Add a viewport meta tag to the <head> section to ensure your page uses the device's width and scales correctly.

Use CSS Media Queries to adapt the layout for different screen sizes.

Adjust form input and button sizes to be more accessible on smaller screens.

Here's how you can modify your HTML and add some CSS to achieve responsiveness:

<!DOCTYPE html>

<html>

<head>

<title>Trees Saved Calculator</title>

<meta name="viewport" content="width=device-width, initial-scale=1">

<style>

body {

font-family: Arial, sans-serif;

padding: 0 10px;

}

form {

margin: 0 auto;

max-width: 600px;

}

input[type="text"], input[type="button"] {

width: 100%;

padding: 10px;

margin: 6px 0;

box-sizing: border-box; /\* Ensures padding doesn't increase the width \*/

}

@media (max-width: 768px) {

h1 {

font-size: 24px;

}

p {

font-size: 16px;

}

}

</style>

</head>

<body>

<h1>Trees Saved by Using eBooks</h1>

<p>Please enter only numeric values in the fields below.</p>

<form id="calculator">

<label for="pages">Number of Pages in the Book:</label>

<input type="text" id="pages" name="pages" placeholder="Enter number of pages" oninput="validateNumericInput(this)" required><br><br>

<label for="copies">Number of Printed Copies Avoided:</label>

<input type="text" id="copies" name="copies" placeholder="Enter number of copies" oninput="validateNumericInput(this)" required><br><br>

<input type="button" value="Calculate Trees Saved" onclick="calculateTrees()">

</form>

<p id="result"></p>

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

</body>

</html>

# **Iteration #2**

## **Issue**

it is not responsive

## **Request**

generate responsive html such as adapting window sizes

## **Result**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Trees Saved Calculator</title>

<style>

/\* Base styles \*/

body {

font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;

margin: 0;

padding: 0 20px;

display: flex;

flex-direction: column;

align-items: center;

}

form {

max-width: 500px;

width: 100%;

}

label, input, button {

display: block;

width: 100%;

margin-top: 10px;

}

input, button {

padding: 10px;

margin-bottom: 20px;

}

button {

cursor: pointer;

background-color: #4CAF50;

color: white;

border: none;

border-radius: 5px;

}

button:hover {

background-color: #45a049;

}

/\* Responsive styles \*/

@media (max-width: 768px) {

body {

padding: 0 10px;

}

h1 {

font-size: 24px;

}

p {

font-size: 14px;

}

}

@media (max-width: 480px) {

h1 {

font-size: 20px;

}

form {

max-width: 100%;

}

}

</style>

</head>

<body>

<h1>Trees Saved by Using eBooks</h1>

<p>Please enter only numeric values in the fields below.</p>

<form id="calculator">

<label for="pages">Number of Pages in the Book:</label>

<input type="text" id="pages" name="pages" placeholder="Enter number of pages" oninput="validateNumericInput(this)" required>

<label for="copies">Number of Printed Copies Avoided:</label>

<input type="text" id="copies" name="copies" placeholder="Enter number of copies" oninput="validateNumericInput(this)" required>

<button type="button" onclick="calculateTrees()">Calculate Trees Saved</button>

</form>

<p id="result"></p>

<script>

function calculateTrees() {

var pagesPerBook = document.getElementById('pages').value;

var numberOfCopies = document.getElementById('copies').value;

// Validate that inputs are numeric

if (!isNumeric(pagesPerBook) || !isNumeric(numberOfCopies)) {

document.getElementById('result').innerHTML = 'Please enter valid numbers.';

return;

}

var pagesPerTree = 8333; // Rough estimate

var totalPagesSaved = pagesPerBook \* numberOfCopies;

var treesSaved = totalPagesSaved / pagesPerTree;

document.getElementById('result').innerHTML = 'Trees Saved: ' + treesSaved.toFixed(2);

}

function isNumeric(n) {

return !isNaN(parseFloat(n)) && isFinite(n);

}

function validateNumericInput(input) {

input.value = input.value.replace(/[^0-9]/g, '');

}

</script>

</body>

</html>

# **Iteration #3**

Issue:the size won't shrink when window is smallest

Request:the size won't shrink when window is smallest

Result:

If the size of your content isn't shrinking appropriately when the window is at its smallest, it might be due to elements that have a fixed width or other styles that prevent them from scaling down. The input fields and button in your form, while set to 100% width, might not be the issue. The issue could stem from padding, borders, or minimum width settings that are not accounted for in the responsive design.

To ensure that your content scales down properly on very small screens, you might need to adjust the CSS to handle these situations better. This can include setting min-width properties to ensure elements do not shrink beyond a readable size, or adjusting padding and margins in your media queries.

Here's an updated version of the CSS with additional considerations for extremely small screens, ensuring that the content scales down properly:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Trees Saved Calculator</title>

<style>

body {

font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;

margin: 0;

padding: 0 20px;

display: flex;

flex-direction: column;

align-items: center;

}

form {

max-width: 500px;

width: 100%;

box-sizing: border-box; /\* Ensures padding is included in the width \*/

}

label, input, button {

display: block;

width: 100%;

box-sizing: border-box; /\* Ensures padding doesn't add to the width \*/

}

input, button {

padding: 10px;

margin-bottom: 20px;

border: 1px solid #ccc; /\* Adds a border to inputs for better visibility \*/

}

button {

cursor: pointer;

background-color: #4CAF50;

color: white;

border: none;

border-radius: 5px;

}

button:hover {

background-color: #45a049;

}

@media (max-width: 768px) {

body {

padding: 0 10px;

}

h1 {

font-size: 24px;

}

p {

font-size: 14px;

}

}

@media (max-width: 480px) {

h1 {

font-size: 20px;

}

form {

padding: 0;

}

input, button {

padding: 8px;

}

}

/\* Additional media query for very small screens \*/

@media (max-width: 320px) {

body, input, button, label {

font-size: 12px;

}

input, button {

padding: 6px;

}

}

</style>

</head>

<body>

<!-- Your HTML content -->

</body>

</html>

# **Iteration #4**

Issue:the code is max-width, it should be min-width

Request:the code is max-width, it should be min-width

Result:

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Trees Saved Calculator</title>

<style>

/\* Base styles for smaller (mobile) devices \*/

body {

font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;

margin: 0;

padding: 0 10px;

display: flex;

flex-direction: column;

align-items: center;

}

form {

width: 100%;

box-sizing: border-box;

}

label, input, button {

display: block;

width: 100%;

box-sizing: border-box;

}

input, button {

padding: 8px;

margin-bottom: 20px;

border: 1px solid #ccc;

}

button {

cursor: pointer;

background-color: #4CAF50;

color: white;

border: none;

border-radius: 5px;

}

button:hover {

background-color: #45a049;

}

/\* Adjustments for larger screens \*/

@media (min-width: 481px) {

body {

padding: 0 20px;

}

h1 {

font-size: 24px;

}

p {

font-size: 16px;

}

}

@media (min-width: 769px) {

form {

max-width: 500px; /\* Limit form width on larger screens \*/

}

input, button {

padding: 10px;

}

h1 {

font-size: 28px;

}

}

</style>

</head>

<body>

<h1>Trees Saved by Using eBooks</h1>

<p>Please enter only numeric values in the fields below.</p>

<form id="calculator">

<label for="pages">Number of Pages in the Book:</label>

<input type="text" id="pages" name="pages" placeholder="Enter number of pages" oninput="validateNumericInput(this)" required>

<label for="copies">Number of Printed Copies Avoided:</label>

<input type="text" id="copies" name="copies" placeholder="Enter number of copies" oninput="validateNumericInput(this)" required>

<button type="button" onclick="calculateTrees()">Calculate Trees Saved</button>

</form>

<p id="result"></p>

<script>

// JavaScript functions here

</script>

</body>

</html>

***Remember that each person needs to submit their own lab report for individual grading, even though it can be identical to your lab partners. Each person should submit their own unique lessons learned to the discussion board for grading.***