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**Aim: Develop and demonstrate a HTML file that includes JavaScript for the following problems:**

**a. Input: A starting and ending number**

**b. Output: find all the prime numbers between starting and ending number.**

**Code:**

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <title>Prime Numbers Finder</title>

<style>

    body {

      font-family: Arial, sans-serif;

      margin: 40px;

      background-color: #eef2f3;

    }

    .container {

      background-color: #fff;

      padding: 30px;

      border-radius: 10px;

      max-width: 500px;

      margin: auto;

      box-shadow: 0 0 10px rgba(0,0,0,0.1);

    }

    h2 {

      text-align: center;

      margin-bottom: 20px;

    }

    .input-group {

      margin-bottom: 20px;

    }

    label {

      display: block;

      margin-bottom: 8px;

      font-weight: bold;

    }

    input[type="number"] {

      width: 100%;

      padding: 10px;

      border-radius: 5px;

      border: 1px solid #ccc;

    }

    button {

      width: 100%;

      padding: 10px;

      background-color: #007bff;

      color: white;

      border: none;

      border-radius: 5px;

      margin-top: 10px;

      font-size: 16px;

      cursor: pointer;

    }

    button:hover {

      background-color: #0056b3;

    }

    .result {

      margin-top: 20px;

      font-size: 18px;

      text-align: center;

      color: #333;

      word-wrap: break-word;

    }

  </style>

</head>

<body>

<div class="container">

  <h2>Find Prime Numbers</h2>

  <div class="input-group">

    <label for="startNumber">Enter Starting Number:</label>

    <input type="number" id="startNumber">

  </div>

  <div class="input-group">

    <label for="endNumber">Enter Ending Number:</label>

    <input type="number" id="endNumber">

  </div>

  <button onclick="findPrimes()">Find Primes</button>

  <div class="result" id="output"></div>

</div>

<script>

// Function to check if a number is prime

function isPrime(n) {

  if (n <= 1) return false;

  if (n === 2) return true;

  if (n % 2 === 0) return false;

  for (let i = 3; i <= Math.sqrt(n); i += 2) {

    if (n % i === 0) return false;

  }

  return true;

}

// Function to find prime numbers between two numbers

function findPrimes() {

  let start = parseInt(document.getElementById('startNumber').value);

  let end = parseInt(document.getElementById('endNumber').value);

  let primes = [];

  if (isNaN(start) || isNaN(end)) {

    document.getElementById('output').innerText = "Please enter valid numbers!";

    return;

  }

  if (start > end) {

    document.getElementById('output').innerText = "Starting number must be less than or equal to ending number!";

    return;

  }

  for (let i = start; i <= end; i++) {

    if (isPrime(i)) {

      primes.push(i);

    }

  }

  if (primes.length > 0) {

    document.getElementById('output').innerText = `Prime numbers between ${start} and ${end}:\n${primes.join(", ")}`;

  } else {

    document.getElementById('output').innerText = `No prime numbers found between ${start} and ${end}.`;

  }

}

</script>

</body>

</html>

**OUTPUT:**



