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Roll No : 271 **Practical : 06**

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.

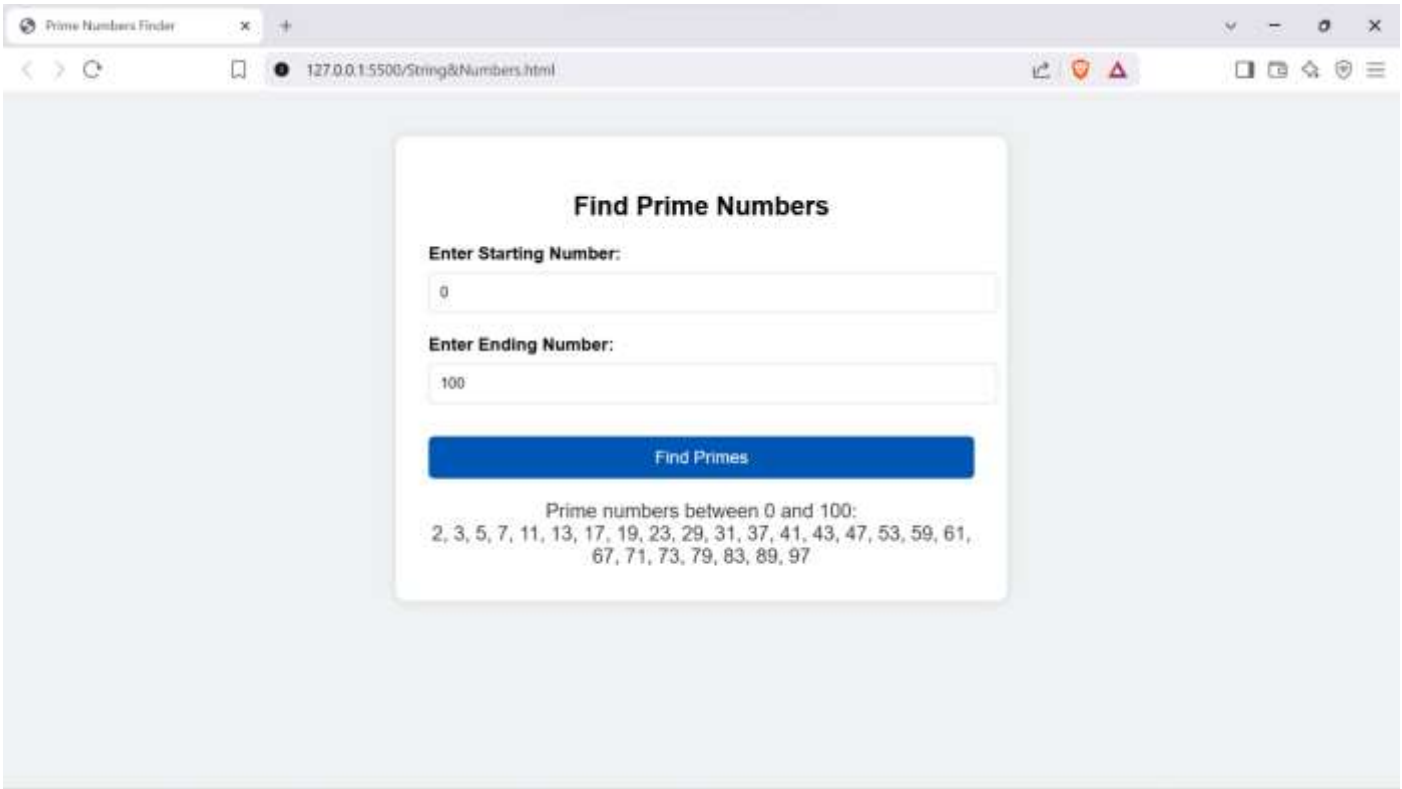
Code:

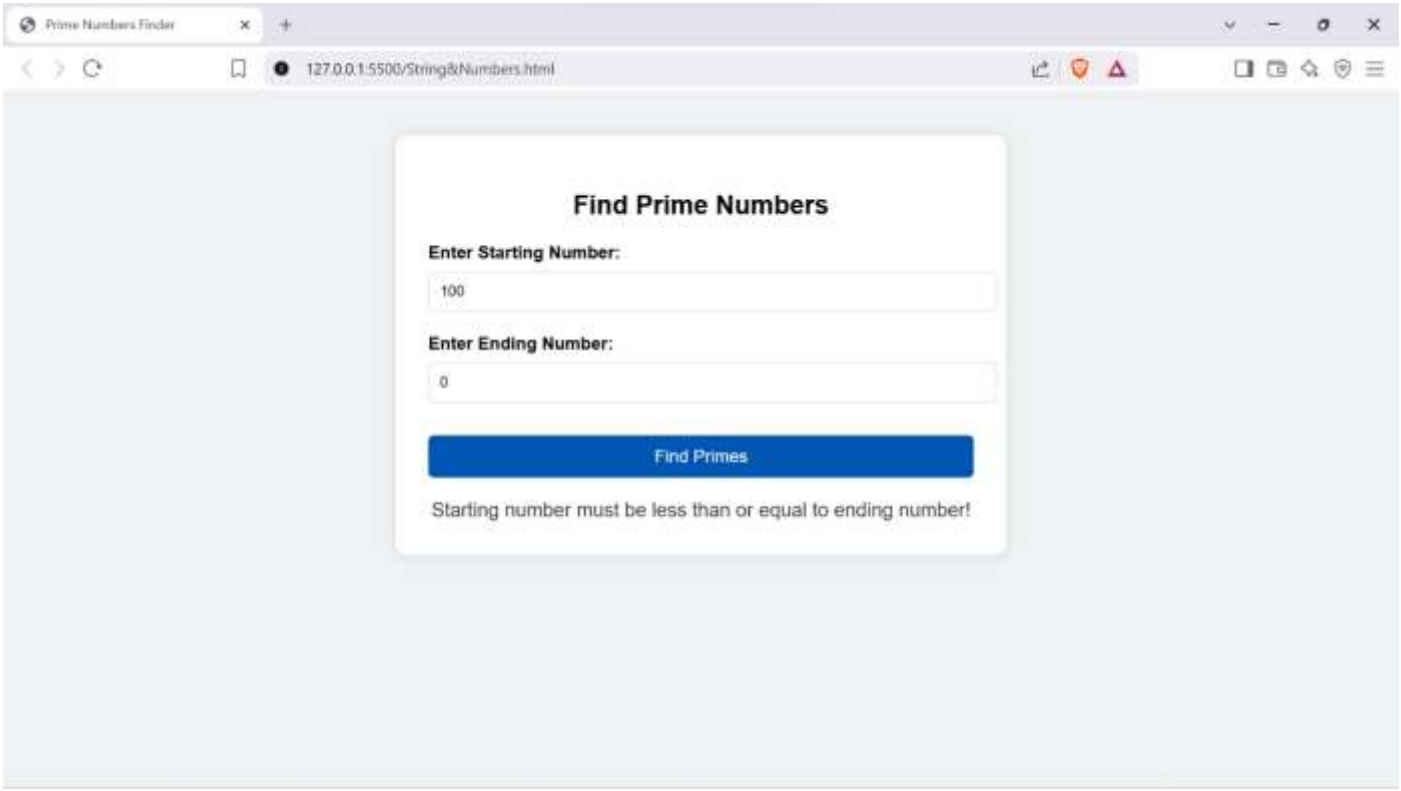
```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Prime Numbers Finder</title>

<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>
```

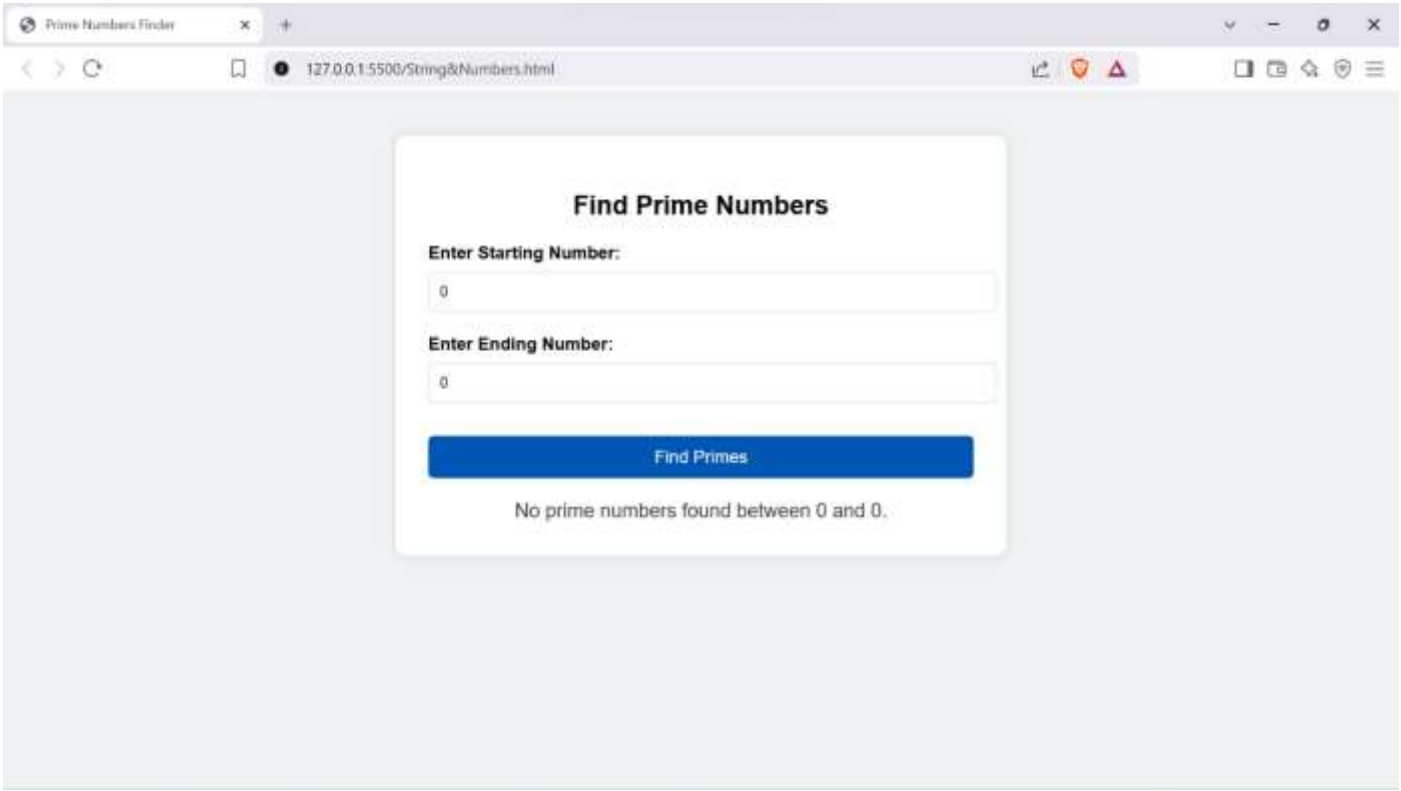
```
  <div class="input-group">
    <label for="startNumber">Enter Starting Number:</label>
    <input type="number" id="startNumber">
  </div>

  <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:




Prime Numbers Finder
127.0.0.1:5500/String&Numbers.html
Find Prime Numbers
Enter Starting Number:
100
Enter Ending Number:
0
Find Primes
Starting number must be less than or equal to ending number!


Prime Numbers Finder
127.0.0.1:5500/String&Numbers.html
Find Prime Numbers
Enter Starting Number:
0
Enter Ending Number:
0
Find Primes
No prime numbers found between 0 and 0.