

HTML

```
<!DOCTYPE html>
<html>
<head>
  <title>Prime Numbers</title>
  <link rel="stylesheet" type="text/css" href="prime.css">
</head>
<body>

  <div class="listContainer">
    <label for="Start">Enter a number below </label>
    <input type="number" id="number" placeholder="          Enter a number">
    <button onclick="listNums()">START</button>
  </div>

  <div class="listContainer">
    <label for="primeList">Prime Number List</label>
    <div id="primeList" class="list"></div>
    <div id="primeSum"></div>
    <button onclick="calcSum('prime')">SUM</button>

  </div>

  <div class="listContainer">
    <label for="nonPrimeList">Non-Prime Number List</label>
    <div id="nonPrimeList" class="list"></div>
    <div id="nonPrimeSum"></div>
    <button onclick="calcSum('nonPrime')">SUM</button>
  </div>

  <script src="prime.js"></script>
</body>
</html>
```

CSS

```
body {
  display: flex;
  justify-content: space-evenly;
}

.listContainer {
  display: flex;
  flex-direction: column;
  align-items: center;
}

.list {
  width: 200px;
  border: 1px solid black;
  padding: 10px;
  margin: 10px;
}

button {
  margin-top: 10px;
}

label {
  font-weight: bold;
  margin-top: 10px;
  margin-bottom: 10px;
}
```

JS

```
// Joel Miller
// June 19, 2023
// CPSC 3750
// Program Exam #1
// Grade Level A

let primes = [];
let nonPrimes = [];

function checkIfPrime(num) {
    for (let i = 2; i < num; i++) {
        if (num % i === 0) {
            return false;
        }
    }
    return num > 1;
}

let previousNum = 0; // Track the previously entered number

function listNums() {
    let num = Number(document.getElementById('number').value);

    // Check if the current number is the same as the previous number
    if (num === previousNum) {
        return; // Exit the function without clearing the lists
    }

    previousNum = num; // Update the previous number

    primes = [];
    nonPrimes = [];

    for (let i = 1; i <= num; i++) {
        if (isPrime(i)) {
            primes.push(i);
        } else {
            nonPrimes.push(i);
        }
    }
}
```

```

    }

    document.getElementById('primeList').innerHTML = primes.join(', ');
    document.getElementById('nonPrimeList').innerHTML = nonPrimes.join(', ');

    document.getElementById('primeSum').innerHTML = ''; // Clear prime sum
    document.getElementById('nonPrimeSum').innerHTML = ''; // Clear non-prime
sum
}

function calcSum(list) {
    let sum = 0;
    if (list === 'prime') {
        sum = primes.reduce((a, b) => a + b, 0);
        document.getElementById('primeSum').innerHTML = `Sum of prime
numbers: ${sum}`; // Update prime sum
    } else {
        sum = nonPrimes.reduce((a, b) => a + b, 0);
        document.getElementById('nonPrimeSum').innerHTML = `Sum of non-prime
numbers: ${sum}`; // Update non-prime sum
    }
}

// Change list colors every 5 seconds
setInterval(() => {
    let colorGenerator = '#' +
Math.floor(Math.random()*16777215).toString(16);
    document.getElementById('primeList').style.color = colorGenerator;

    colorGenerator = '#' + Math.floor(Math.random()*16777215).toString(16);
    document.getElementById('nonPrimeList').style.color = colorGenerator;
}, 5000);

```