

## FACTORIAL:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Factorial Calculator</title>
  <script>
    function calculateFactorial() {
      let number = document.getElementById('numberInput').value;
      number = parseInt(number);

      if (isNaN(number) || number < 0) {
        alert("Please enter a non-negative integer");
        return;
      }

      let factorial = 1;
      for (let i = 2; i <= number; i++) {
        factorial *= i;
      }

      document.getElementById('result').innerText = `Factorial of ${number} is ${factorial}`;
    }
  </script>
</head>
<body>
  <h1>Factorial Calculator</h1>
  <input type="number" id="numberInput" placeholder="Enter a number">
  <button onclick="calculateFactorial()">Calculate Factorial</button>
  <p id="result"></p>
</body>
</html>
```

## FIBONACCI

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Fibonacci Calculator</title>
  <script>
    function calculateFibonacci() {
      let n = document.getElementById('numberInput').value;
      n = parseInt(n);

      if (isNaN(n) || n < 0) {
        alert("Please enter a non-negative integer");
      }
    }
  </script>
</head>
<body>
  <h1>Fibonacci Calculator</h1>
  <input type="number" id="numberInput" placeholder="Enter a number">
  <button onclick="calculateFibonacci()">Calculate Fibonacci</button>
  <p id="result"></p>
</body>
</html>
```

```

        return;
    }

    let a = 0, b = 1, fib = 0;
    for (let i = 2; i <= n; i++) {
        fib = a + b;
        a = b;
        b = fib;
    }

    fib = n === 0 ? 0 : b;

    document.getElementById('result').innerText = `Fibonacci number at position ${n} is $
{fib}`;
    }
</script>
</head>
<body>
    <h1>Fibonacci Calculator</h1>
    <input type="number" id="numberInput" placeholder="Enter a number">
    <button onclick="calculateFibonacci()">Calculate Fibonacci</button>
    <p id="result"></p>
</body>
</html>

```

## ODD-EVEN

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Odd or Even Checker</title>
    <script>
        function checkOddEven() {
            let number = document.getElementById('numberInput').value;
            number = parseInt(number);

            if (isNaN(number)) {
                alert("Please enter a valid integer");
                return;
            }

            let result = number % 2 === 0 ? "Even" : "Odd";

            document.getElementById('result').innerText = `The number ${number} is ${result}`;
        }
    </script>
</head>
<body>

```

```

<h1>Odd or Even Checker</h1>
<input type="number" id="numberInput" placeholder="Enter a number">
<button onclick="checkOddEven()">Check if Odd or Even</button>
<p id="result"></p>
</body>
</html>

```

## PRIME-NOTPRIME

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Prime Number Checker</title>
  <script>
    function isPrime(n) {
      if (n <= 1) return false;
      if (n <= 3) return true;

      if (n % 2 === 0 || n % 3 === 0) return false;

      for (let i = 5; i * i <= n; i += 6) {
        if (n % i === 0 || n % (i + 2) === 0) return false;
      }

      return true;
    }

    function checkPrime() {
      let number = document.getElementById('numberInput').value;
      number = parseInt(number);

      if (isNaN(number)) {
        alert("Please enter a valid integer");
        return;
      }

      let result = isPrime(number) ? "a prime" : "not a prime";

      document.getElementById('result').innerText = `The number ${number} is ${result}
number.`;
    }
  </script>
</head>
<body>
  <h1>Prime Number Checker</h1>
  <input type="number" id="numberInput" placeholder="Enter a number">
  <button onclick="checkPrime()">Check if Prime</button>
  <p id="result"></p>
</body>

```

</html>

## CALCULATOR

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Basic Arithmetic Operations</title>
  <script>
    function performOperation() {
      let number1 = parseFloat(document.getElementById('number1Input').value);
      let number2 = parseFloat(document.getElementById('number2Input').value);
      let operation = document.getElementById('operation').value;

      if (isNaN(number1) || isNaN(number2)) {
        alert("Please enter valid numbers");
        return;
      }

      let result;
      switch(operation) {
        case '+':
          result = number1 + number2;
          break;
        case '-':
          result = number1 - number2;
          break;
        case '*':
          result = number1 * number2;
          break;
        case '/':
          if (number2 === 0) {
            alert("Division by zero is not allowed");
            return;
          }
          result = number1 / number2;
          break;
        default:
          result = "Invalid operation";
      }

      document.getElementById('result').innerText = `Result: ${result}`;
    }
  </script>
</head>
<body>
  <h1>Basic Arithmetic Calculator</h1>
  <input type="number" id="number1Input" placeholder="Enter first number">
```

```

<input type="number" id="number2Input" placeholder="Enter second number">
<select id="operation">
  <option value="+">Addition (+)</option>
  <option value="-">Subtraction (-)</option>
  <option value="*">Multiplication (*)</option>
  <option value="/">Division (/)</option>
</select>
<button onclick="performOperation()">Calculate</button>
<p id="result"></p>
</body>
</html>

```

## GREATEST

```

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Greatest Number Finder</title>
  <script>
    function findGreatest() {
      let numbers = document.getElementById('numbersInput').value.split(',').map(Number);

      if (numbers.some(isNaN)) {
        alert("Please enter valid numbers separated by commas");
        return;
      }

      let greatest = Math.max(...numbers);

      document.getElementById('result').innerText = `The greatest number is: ${greatest}`;
    }
  </script>
</head>
<body>
  <h1>Greatest Number Finder</h1>
  <input type="text" id="numbersInput" placeholder="Enter numbers separated by commas">
  <button onclick="findGreatest()">Find Greatest Number</button>
  <p id="result"></p>
</body>
</html>

```

## CONFIRM-PROMPT-ALERT

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Form Input Popups</title>
  <script>
    function showAlert() {
      let name = document.getElementById('nameInput').value;
      alert(`Hello, ${name}!`);
    }

    function showPrompt() {
      let age = document.getElementById('ageInput').value;
      let response = prompt(`Is your age ${age}?`, "Yes or No");
      alert(`You responded: ${response}`);
    }

    function showConfirm() {
      let city = document.getElementById('cityInput').value;
      let confirmResponse = confirm(`Are you from ${city}?`);
      alert(`Your confirmation: ${confirmResponse ? 'Yes' : 'No'}`);
    }
  </script>
</head>
<body>
  <h1>Form with Popups</h1>
  <form onsubmit="event.preventDefault();">
    <div>
      <label for="nameInput">Name:</label>
      <input type="text" id="nameInput" name="name">
    </div>
    <div>
      <label for="ageInput">Age:</label>
      <input type="number" id="ageInput" name="age">
    </div>
    <div>
      <label for="cityInput">City:</label>
      <input type="text" id="cityInput" name="city">
    </div>
    <button type="button" onclick="showAlert()">Show Alert</button>
    <button type="button" onclick="showPrompt()">Show Prompt</button>
    <button type="button" onclick="showConfirm()">Show Confirm</button>
  </form>
</body>
</html>
```