

JavaScript Index

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JAVA SCRIPT PROGRAMS

- Using JavaScript, design a web page to accept a number from the user and print its factorial .

Code:

```
<!DOCTYPE html>
<html>
<head>
<title>Factorial Calculator</title>
</head>
<body>
<h4>Name: Pranay Sandeep Monde.</h4>
<h5>Factorial Calculator</h5>
<form>
<label for="number">Enter a number:</label>
<input type="number" id="number" name="number">
<button type="button" onclick="calculateFactorial()">Calculate</button>
</form>
<p id="result"></p>
<script>
function calculateFactorial() {
var number = document.getElementById("number").value;
var result = 1;
for (var i = 1; i<= number; i++) {
result *= i;
}
document.getElementById("result").innerHTML = "The factorial of " + number + " is: " +
result;
}
</script>
</body>
</html>
```

Output:

Name: Pranay Sandeep Monde.

Factorial Calculator

Enter a number:

The factorial of 20 is: 2432902008176640000

- Using JavaScript, design a web page that prints Fibonacci series/any given series .

Code:

```
<!DOCTYPE html>

<html>

<head>

<title>Fibonacci Series</title>

</head>

<body>

<h4>Name: Pranay Sandeep Monde.</h4>

<h5>Fibonacci Series</h5>

<form>

<label for="terms">Enter the number of terms:</label>

<input type="number" id="terms" name="terms">

<button type="button" onclick="generateFibonacci()">Generate</button>

</form>

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

<script>

function generateFibonacci() {

var terms = document.getElementById("terms").value;

var result = [];

result[0] = 0;

result[1] = 1;

for (var i = 2; i < terms; i++) {

result[i] = result[i - 1] + result[i - 2];

}

document.getElementById("result").innerHTML = "The first " + terms + " Fibonacci numbers are: " + result.join(', ');

}
```

```
}  
</script>  
</body>  
</html>
```

Output:

Name: Pranay Sandeep Monde.

Fibonacci Series

Enter the number of terms:

The first 12 Fibonacci numbers are: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89

- Write a JavaScript program to display all the prime numbers between 1 and 100 .

Code:

```
<!DOCTYPE html>
<html>
<head>
<title>Prime Numbers</title>
</head>
<body>
<h4>Name: Pranay Sandeep Monde.</h4>
<h5>Prime Numbers</h5>
<button onclick="displayPrimes()">Display Prime Numbers</button>
<p id="result"></p>
<script>
function isPrime(number) {
  if (number <= 1) {
    return false;
  }
  for (var i = 2; i<= Math.sqrt(number); i++) {
    if (number % i === 0) {
      return false;
    }
  }
  return true;
}
function displayPrimes() {
  var primes = [];
  for (var i = 1; i<= 100; i++) {
    if (isPrime(i)) {
      primes.push(i);
    }
  }
  document.getElementById("result").innerHTML = "Prime numbers between 1 and 100
are: " + primes.join(', ');
}
</script>
</body>
</html>
```

Output:

Name: Pranay Sandeep Monde.

Prime Numbers

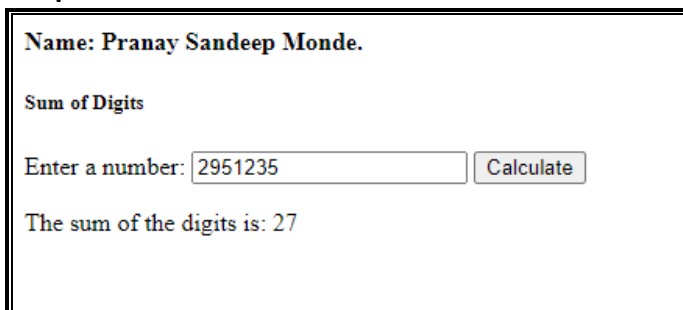
Display Prime Numbers

Prime numbers between 1 and 100 are: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97

- Write a JavaScript program to accept a number from the user and display the sum of its digits .

Code:

```
<!DOCTYPE html>
<html>
<head>
<title>Sum of Digits</title>
</head>
<body>
<h4>Name: Pranay Sandeep Monde.</h4>
<h5>Sum of Digits</h5>
<form>
<label for="number">Enter a number:</label>
<input type="number" id="number" name="number">
<button type="button" onclick="calculateSum()">Calculate</button>
</form>
<p id="result"></p>
<script>
function calculateSum() {
var number = document.getElementById("number").value;
var sum = 0;
while (number > 0) {
sum += number % 10;
number = Math.floor(number / 10);
}
document.getElementById("result").innerHTML = "The sum of the digits is: " + sum;
}
</script>
</body>
</html>
```

Output:

Name: Pranay Sandeep Monde.

Sum of Digits

Enter a number:

The sum of the digits is: 27

- Write a program in JavaScript to accept a sentence from the user and display the number of words in it. (Do not use split () function) .

Code:

```
<!DOCTYPE html>
<html>
<head>
<title>Word Count</title>
</head>
<body>
<h4>Name: Pranay Sandeep Monde.</h4>
<h5>Word Count</h5>
<form>
<label for="sentence">Enter a sentence:</label>
<input type="text" id="sentence" name="sentence">
<button type="button" onclick="calculateWords()">Calculate</button>
</form>
<p id="result"></p>
<script>
function calculateWords() {
var sentence = document.getElementById("sentence").value;
var count = 0;
var isWord = false;
for (var i = 0; i<sentence.length; i++) {
if (sentence[i] !== ' ' && sentence[i] !== '\t' && sentence[i] !== '\n') {
if (!isWord) {
isWord = true;
count++;
}
} else {
isWord = false;
}
}
document.getElementById("result").innerHTML = "The number of words in the sentence
is: " + count;
}
</script>
</body>
</html>
```

Output:

Name: Pranay Sandeep Monde.

Word Count

Enter a sentence:

The number of words in the sentence is: 6

- Write a JavaScript program to design simple calculator ?

Code:

```
<!DOCTYPE html>
<html>
<head>
<title>Simple Calculator</title>
</head>
<body>
<h4>Name: Pranay Sandeep Monde.</h4>
<h5>Simple Calculator</h5>
<form name="calculator">
<input type="text" name="display" id="display" disabled><br>
<button type="button" onclick="addToDisplay('1')">1</button>
<button type="button" onclick="addToDisplay('2')">2</button>
<button type="button" onclick="addToDisplay('3')">3</button>
<button type="button" onclick="addToDisplay('+')">+</button><br>
<button type="button" onclick="addToDisplay('4')">4</button>
<button type="button" onclick="addToDisplay('5')">5</button>
<button type="button" onclick="addToDisplay('6')">6</button>
<button type="button" onclick="addToDisplay('-')">-</button><br>
<button type="button" onclick="addToDisplay('7')">7</button>
<button type="button" onclick="addToDisplay('8')">8</button>
<button type="button" onclick="addToDisplay('9')">9</button>
<button type="button" onclick="addToDisplay('*')">*</button><br>
<button type="button" onclick="addToDisplay('0')">0</button>
<button type="button" onclick="clearDisplay()">C</button>
<button type="button" onclick="calculateResult()">=</button>
<button type="button" onclick="addToDisplay('/')">/</button>
</form>
<script>
function addToDisplay(value) {
document.calculator.display.value += value;
}
function clearDisplay() {
document.calculator.display.value = "";
}
function calculateResult() {
try {
document.calculator.display.value = eval(document.calculator.display.value);
} catch(err) {
```

```
document.calculator.display.value = 'Error';  
}  
}  
</script>  
</body>  
</html>
```

Output:

Name: Pranay Sandeep Monde.

Simple Calculator

30+20+12

1	2	3	+
4	5	6	-
7	8	9	*
0	C	=	/

Name: Pranay Sandeep Monde.

Simple Calculator

62

1	2	3	+
4	5	6	-
7	8	9	*
0	C	=	/

- Design a form and validate all the controls placed on the form using JavaScript.

Code:

```
<!DOCTYPE html>
<html>
<head>
  <title>Form Validation</title>
  <script>
    function validateForm() {
      var name = document.getElementById('name').value;
      var email = document.getElementById('email').value;
      var zipcode = document.getElementById('zipcode').value;
      var country = document.getElementById('country').value;
      if (name === "") {
        alert("Please enter your name.");
        return false;
      }
      if (email === "") {
        alert("Please enter your email.");
        return false;
      }
      if (zipcode === "") {
        alert("Please enter your zipcode.");
        return false;
      }
      if (country === "") {
        alert("Please select your country.");
        return false;
      }
      return true;
    }
  </script>
</head>
<body>
  <h4>Name: Pranay Sandeep Monde.</h4>
  <h5> Form Validation </h5>
  <h5>Registration Form</h5>
  <form onsubmit="return validateForm()">
    <label for="name">Name:</label>
    <input type="text" id="name" name="name" required><br><br>
```

```
<label for="email">Email:</label>
<input type="email" id="email" name="email" required><br><br>
<label for="zipcode">Zipcode:</label>
<input type="text" id="zipcode" name="zipcode" required><br><br>
<label for="country">Country:</label>
<select id="country" name="country" required>
<option value="">Select Country</option>
<option value="USA">USA</option>
<option value="Canada">Canada</option>
<option value="UK">UK</option>
<!-- Add more country options as needed -->
</select><br><br>
<input type="submit" value="Submit">
</form>
</body>
</html>
```

Output:

Name: Pranay Sandeep Monde.

Form Validation

Registration Form

Name:

Email:

Zipcode:

Country:


Name: Pranay Sandeep Monde.

Form Validation

Registration Form

Name:

Email:

Zipcode:  Please fill out this field.

Country: