**# Task 1: Alphabetical Order**

function alphabeticalOrder(str) {

return str.split('').sort().join('');

}

console.log(alphabeticalOrder('hello')); // 'ehllo'

**# Task 2: Vowel Count**

function countVowels(str) {

let count = 0;

for (let i = 0; i < str.length; i++) {

if ('aeiou'.includes(str[i].toLowerCase())) {

count++; } }

return count;

}

console.log(countVowels('hello')); // 2

**# Task 3: Capitalize First Letter**

function capitalizeFirstLetter(str) {

return str.split(' ').map(word => word.charAt(0).toUpperCase() + word.slice(1)).join(' ');

}

console.log(capitalizeFirstLetter('hello world')); // 'Hello World'

**# Task 4: Current Date**

function getCurrentDate() {

return new Date().toLocaleDateString();

}

console.log(getCurrentDate()); // '12/15/2024

**# Task 5: Multiplication and Division**

function calculate(num1, num2) {

return { multiplication: num1 \* num2,

division: num1 / num2

};}

console.log(calculate(10, 2)); // { multiplication: 20, division: 5 }

**# Task 6: Larger Number**

function largerNumber(num1, num2) {

return Math.max(num1, num2);}

console.log(largerNumber(10, 20)); // 20

**# Task 7: Join Array Elements**

function joinArrayElements(arr) {

return arr.join(' ');}

console.log(joinArrayElements(['apple', 'banana', 'cherry'])); // 'apple banana cherry'

**# Task 8: Sort Array**

function sortArray(arr) {

return arr.sort((a, b) => a - b);}

console.log(sortArray([4, 2, 7, 1, 3])); // [1, 2, 3, 4, 7]

**# Task 9: Odd or Even**

function checkOddOrEven() {

for (let i = 0; i <= 15; i++) {

if (i % 2 === 0) {

console.log(`${i} is even`);

} else { console.log(`${i} is odd`); } } }

checkOddOrEven();

**# Task 10: Largest of Five Numbers**

function largestOfFive(num1, num2, num3, num4, num5) {

return Math.max(num1, num2, num3, num4, num5); }

console.log(largestOfFive(10, 20, 30, 40, 50)); // 50

**# Task 11: Remove Characters**

function removeCharacters(str, num) {

return str.substring(num); }

console.log(removeCharacters('hello', 2)); // 'llo'

**# Task 12: Capitalize First Letter of Each Word**

function capitalizeFirstLetter(str) {

return str.split(' ').map(word => word.charAt(0).toUpperCase() + word.slice(1)).join(' '); }

console.log(capitalizeFirstLetter('hello world')); // 'Hello World'

**# Task 13: Student Data Table**

<table>

<tr> <th>Student ID</th>

<th>Name</th>

<th>Age</th>

<th>Grade</th> </tr>

<tr> <td>12345</td>

<td>John Doe</td>

<td>20</td>

<td>A</td> </tr></table>

**# Task 14: Student Registration and Log-in Form**

<form>

<label for="username">Username:</label>

<input type="text" id="username" name="username"><br><br>

<label for="password">Password:</label>

<input type="password" id="password" name="password"><br><br>

<input type="submit" value="Register">

</form>

<form>

<label for="username">Username:</label>

<input type="text" id="username" name="username"><br><br>

<label for="password">Password:</label>

<input type="password" id="password" name="password"><br><br>

<input type="submit" value="Log-in"></form>

**# Task 15: Webpage with External Style Sheet**

<!-- index.html -->

<!DOCTYPE html>

<html>

<head>

<link rel="stylesheet" type="text/css" href="style.css">

</head>

<body>

<h1>Hello World!</h1>

</body>

</html>

/\* style.css \*/

body { background-color: #f2f2f2;}

h1 { color: #00698f;}

**# Task 16: Webpage with Frame**

<!-- index.html -->

<!DOCTYPE html>

<html>

<head>

<title>Frames</title>

</head>

<frameset rows="50%, 50%">

<frame src="frame1.html" name="frame1">

<frame src="frame2.html" name="frame2">

</frameset>

</html>

<!-- frame1.html -->

<!DOCTYPE html>

<html>

<head>

<title>Frame 1</title>

</head>

<body>

<h1>This is Frame 1</h1>

</body>

</html>

<!-- frame2.html -->

<!DOCTYPE html>

<html>

<head>

<title>Frame 2</title>

</head>

<body>

<h1>This is Frame 2</h1>

</body>

**# Task 17: Current Date and Time**

function getCurrentDateTime() {

let now = new Date();

let year = now.getFullYear();

let month = now.getMonth() + 1;

let day = now.getDate();

let hour = now.getHours();

let minute = now.getMinutes();

let second = now.getSeconds();

return `${year}-${month}-${day} ${hour}:${minute}:${second}`;

}

console.log(getCurrentDateTime());

**# Task 18: Popup Boxes**

function showMessage() {

alert('Hello, World!');

}

function askQuestion() {

let answer = confirm('Do you want to continue?');

if (answer) {

console.log('User confirmed');

} else {

console.log('User cancelled');

}

}

function promptUser() {

let name = prompt('What is your name?');

console.log(`Hello, ${name}!`);

}

**# Task 19: Rearrange Array Values**

function rearrangeArray(arr) {

return arr.sort((a, b) => a - b);

}

console.log(rearrangeArray([41, 87, 69, 28, 75, 64, 89, 4, 21, 33, 71]));

**# Task 20: Reverse String**

function reverseString(str) {

return str.split('').reverse().join('');

}

console.log(reverseString('Nothing is impossible'));

**# Task 21: Count Numbers Divisible by 5**

function countDivisibleBy5(arr) {

return arr.filter(num => num % 5 === 0).length;

}

console.log(countDivisibleBy5([44, 45, 66, 78, 75, 80, 25, 90]));

**# Task 22: Maximum Number in Array**

function findMaximumNumber(arr) {

return Math.max(...arr);

}

console.log(findMaximumNumber([87, 56, 83, 67, 55, 89, 32, 75]));

**# Task 23: Count Vowels in String**

function countVowels(str) {

let count = 0;

for (let i = 0; i < str.length; i++) {

if ('aeiou'.includes(str[i].toLowerCase())) {

count++;

}

}

return count;

}

console.log(countVowels('Nothing is Impossible in this world'));

**# Task 24: Reverse String**

function reverseString(str) {

return str.split('').reverse().join('');

}

console.log(reverseString('India Is Great'));

**# Task 25: Count Character Occurrences**

function countCharacterOccurrences(str) {

let charCount = {};

for (let i = 0; i < str.length; i++) {

let char = str[i];

if (charCount[char]) {

charCount[char]++;

} else {

charCount[char] = 1; } }

return charCount; }

console.log(countCharacterOccurrences('Hello, World!'));

**# Task 26: Sort Array**

function sortArray(arr) {

return arr.sort((a, b) => a - b);

}

console.log(sortArray([4, 2, 7, 1, 3]));

**# Task 27: Factorial of Number**

function factorial(n) {

if (n === 0) {

return 1;

} else {

return n \* factorial(n - 1);

}

}

console.log(factorial(5)); // 120

**# Task 28: Reverse Array**

function reverseArray(arr) {

return arr.slice().reverse();

}

console.log(reverseArray([1, 4, 3, 2, 6, 5])); // [5, 6, 2, 3, 4, 1]

**# Task 29: Count Vowels in String**

function countVowels(str) {

let count = 0;

for (let i = 0; i < str.length; i++) {

if ('aeiou'.includes(str[i].toLowerCase())) {

count++; } }

return count;

}

console.log(countVowels('Nothing is Impossible in this world')); // 13

**# Task 30: Move Negative Numbers to Beginning**

function moveNegativeNumbers(arr) {

let negative = [];

let positive = [];

for (let i = 0; i < arr.length; i++) {

if (arr[i] < 0) {

negative.push(arr[i]);

} else {

positive.push(arr[i]);

}

}

return negative.concat(positive);

}

console.log(moveNegativeNumbers([-1, 2, -3, 4, -5])); // [-1, -3, -5, 2, 4]

**# Task 31: Replace Multiple Spaces with Single Space**

function replaceMultipleSpaces(str) {

return str.replace(/\s+/g, ' '); }

console.log(replaceMultipleSpaces('Hello World!')); // 'Hello World!'

**# Task 32: Remove Character from String**

function removeCharacter(str, char) {

return str.replace(new RegExp(char, 'g'), ''); }

console.log(removeCharacter('Hello, World!', 'l')); // 'Heo, Word!'

**Task 33: Factorial of Number using Recursive Function**

function factorial(n) {

if (n === 0) {

return 1;

} else { return n \* factorial(n - 1); } }

console.log(factorial(5)); // 120

**# Task 34: Cube of Number using Function**

function cube(n) {

return n \* n \* n;

}

console.log(cube(5)); // 125

**# Task 35: Armstrong Number of 3 Digits**

function isArmstrong(num) {

let str = num.toString();

let sum = 0;

for (let i = 0; i < str.length; i++) {

sum += Math.pow(parseInt(str[i]), str.length);

}

return sum === num;

}

console.log(isArmstrong(371)); // true

**# Task 36: Most Frequent Item in Array**

function mostFrequentItem(arr) {

let frequency = {};

for (let i = 0; i < arr.length; i++) {

let item = arr[i];

if (frequency[item]) {

frequency[item]++;

} else { frequency[item] = 1; } }

let maxFrequency = Math.max(...Object.values(frequency));

let mostFrequentItems = Object.keys(frequency).filter(item => frequency[item] === maxFrequency);

return mostFrequentItems; }

console.log(mostFrequentItem([1, 2, 2, 3, 3, 3, 4, 4, 4, 4])); // ['4']