1. Write a JavaScript function that generates all combinations of a string. Example 'dog'

Expected Output: d,o,do,g,dg,og,dog

Solution -:

stringComb = str => {

var arr =[];

var str = str.split("");

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

arr.push(str[i]);

for(var j=i+1; j<str.length; j++){

str[i] = str[i]+str[j];

arr.push(str[i]);

}

}

console.log("arr is", arr);

}

stringComb("dog")

1. Write a JavaScript function that returns a passed string with letters in alphabetical order.

Example string: 'webmaster'

Expected Output: 'abeemrstw'

sortAlphabets = str =>{

var arr = str.split("");

arr.sort();

console.log(arr.join(""));

console.log(...arr);

}

sortAlphabets("Atul");

1. Write a JavaScript function that accepts a string as a parameter and converts the first letter of each word of the string in upper case.

Example string: 'the quick brown fox'

Expected Output: 'The Quick Brown Fox '

capitalizeFirstLetter = (str) => {

var arr = str.split(" ");

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

arr[i] = arr[i].charAt(0).toUpperCase()+ arr[i].substring(1, arr[i].length);

}

console.log(arr.join(" "));

console.log(...arr);

}

capitalizeFirstLetter("this is my india")

1. Write a JavaScript function that accepts a string as a parameter and counts the number of vowels within the string.

countVowels = (str) => {

const arr = 'aeiouAEIOU';

var count = 0;

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

if(arr.indexOf(str[i])!==-1){

count++;

}

}

console.log("number of vowels are", count);

}

countVowels("find vowels here");

countVowelsRegex = (string) => {

let match = string.match(/[aeiou]/ig);

return match.length;

}

console.log(countVowelsRegex("The quick brown fox"));

1. Write a JavaScript function to convert an amount to coins.

Sample function : amountTocoins(46, [25, 10, 5, 2, 1])

Here 46 is the amount. and 25, 10, 5, 2, 1 are coins.

Output : 25, 10, 10, 1

function amountToCoins(num, arr) {

var coins = [];

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

while (num >= arr[i]) {

coins.push(arr[i]);

num = num - arr[i];

}

}

console.log ("coins", coins);

}

amountToCoins(46, [25, 10, 5, 2,1])

**OR**

computeCoins = (amount, coins) =>{

coins.sort(function(a,b){

return b-a;

});

var order = [];

calcCoins(amount, coins, order);

console.log("coins will be", order);

}

calcCoins =(amount, coins, order) =>{

if(amount>=coins[0]){

amount = amount- coins[0];

order.push(coins[0]);

if(coins.length>0){

calcCoins(amount, coins, order);

}

}

else{

coins.shift();

if(coins.length>0){

calcCoins(amount, coins, order);

}

}

}

1. Write a JavaScript function to extract unique characters from a string.

Example string : "thequickbrownfoxjumpsoverthelazydog"

Expected Output : "thequickbrownfxjmpsvlazydg"

uniqueCharacters = (str) =>{

var uniqueChar = (str.charAt(0));

for(let i=1; i<str.length; i++){

if(uniqueChar.indexOf(str.charAt(i))==-1){

uniqueChar = uniqueChar + str.charAt(i);

}

}

console.log(uniqueChar);

}

uniqueCharacters("ThisisAtul");

**OR**

reduceString = (str) =>{

var arr = str.split("");

var res = arr.reduce(function (newStr, arrNew=[]){

if(newStr.indexOf(arrNew)==-1){

newStr = newStr + arrNew;

}

return newStr ;

}, "");

console.log("res", res);

}

reduceString("thisismyindia")

1. Write a JavaScript function to get the number of occurrences of each letter in specified string.

findNumberOfCharacters = (str) =>{

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

let count = 0;

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

if(str.charAt(i)==str.charAt(j)){

count = count+1;

}

}

console.log("The count for", str[i], "is", count);

}

}

**OR**

function numOccurences(string) {

// iterate over each letter of the string

for (let letter of string){

let arr = string.split(letter).length -1

console.log("this letter " + letter + " has " + arr + " occurences")

}

}

numOccurences('thist foo bar')

Bubble Sort

bubbleSort = (arr) =>{

var swap;

var arr = arr;

var temp , n = arr.length -1;

do{

swap = false;

for(var i=0; i<n; i++){

if(arr[i]<arr[i+1]){

temp = arr[i];

arr[i] = arr[i+1];

arr[i+1]= temp;

swap = true;

}

}

n--;

}while(swap)

return arr;

}

console.log(bubbleSort([6,4,0, 3,2,1]))