

//Make a function that accepts one string and return it reversed.

```
var Text=prompt("Enter Your Text");
function reverse (text){
var reverse="";
for(var i=text.length-1;i>=0;i--){
reverse=reverse+text[i];
}
return reverse;
}
console.log(reverse(Text));
```

//Function that accepts two string and check if they are equal or not (not case sensitive).

```
var Text1=prompt("Enter text 1: ")
var Text2=prompt("Enter text 2: ")
function check(text1,text2){
    if(text1.toUpperCase()==text2.toUpperCase())
        return true;
    else
        return false
}
console.log(`This Text is equal ? ${check(Text1,Text2)}`)
```

//Function that takes a string and check if this string is all uppercase or not.

```
var text=prompt('Enter Your Text : ');
function upper (Text){
    if(Text==Text.toUpperCase())
    {
        return true;
    }
    else
```

```

    {
        return false;
    }
}
console.log(`This Text is upper ? ${upper(text)}`)

```

*//Function that takes a string and two positions as numbers and return the
//part of the string between these two positions. (Make two different
//solutions).*

//Solution1

```

    var text=prompt('Enter Your Text : ');
    var index=Number(prompt("Enter First Of Sub : "))
    var number=Number(prompt("Enter Number Of Cutting : "))
function cut (Text,FirstCut,NumberOfCut){
    return Text.substring(FirstCut,NumberOfCut+FirstCut)
}
console.log(cut(text,index,number))

```

//Solution2

```

    var text=prompt('Enter Your Text : ');
    var index=Number(prompt("Enter First Of Sub : "))
    var number=Number(prompt("Enter Number Of Cutting : "))
function cut (Text,FirstCut,NumberOfCut){
    var sub="";
    for(var i=FirstCut;i<NumberOfCut+FirstCut;i++){
        sub=sub+Text[i];
    }
    return sub;
}
console.log(cut(text,index,number))

```

*//Make a function that accepts 3 names as a parameter first one is firstName
second is middleName and third LastName.*

```

    var first=prompt('Enter Your First Name : ');
    var second=prompt('Enter Your Second Name : ');

```

```

var third=prompt('Enter Your Third Name : ');
function concat(_first,_second,_third){
    var FullName="";
    FullName=FullName.concat(_first," ",_second," ",_third)
    return FullName;
}
console.log(concat(first,second,third));

```

//Function that accepts a string and then checks if it is palindrome or not.

```

var text =prompt("Enter Your Text : ")
function palindrome (Text){
    var flag;
    //عندي حالتين وهي ان عدد العناصر يكون فردي وكذا في عنصر فالمركز
    if(Text.length%2!=0){
        for(var i=0;i<=(Text.length-1)/2-1;i++){
            if(Text[(Text.length+1)/2+i]==Text[(Text.length-1)/2-i-1]){
                flag=true;
            }
            else{
                flag=false;
            }
        }
    }
    //او زوجي وكذا معنديش مركز
    else{
        for(var i=0;i<=(Text.length/2)-1;i++){
            if(Text[Text.length/2+i]==Text[Text.length/2-i-1])
            {
                flag=true
            }
            else{
                flag=false;
                break;
            }
        }
    }
    return flag;
}

```

```
}  
console.log(palindrome(text));
```

//Function that accepts a string and remove the extra spaces at the start and the end of this string.

```
var text=prompt("Enter Your Text : ");  
function space(Text){  
    return Text.trim();  
}  
console.log(space(text));
```

*//In specific location all URLs start with (ww.) and ends with (.eraa).
//Make a function that accepts a URL and check if it's from this location or not.*

```
var Text=prompt("Enter Your Text : ");  
function ww(text){  
    if(text[0]=='w'&&text[1]=='w'){  
        return true;  
    }  
    else{  
        return false;  
    }  
}  
console.log(ww(Text));
```

//Function that takes a string and remove the 'o' letter from it (Capital and small)

```
var Text=prompt("Enter Your Text : ");
function Cut0(text){
    return text.split("o").join("").split("0").join("")
}
console.log(Cut0(Text))
```

//Function that accepts three strings. Check if the second and the third strings are a substring of the first one.

```
var Text1=prompt("Enter Your Text1 : ");
var Text2=prompt("Enter Your Text2 : ");
var Text3=prompt("Enter Your Text3 : ");
function check(_Text1,_Text2,_Text3){
    if(_Text1.includes(_Text2)){
        if(_Text1.includes(_Text3)){
            return true;
        }
        else{
            return false;
        }
    }
    else{
        return false;
    }
}
console.log(check(Text1,Text2,Text3))
```

```
//=====
=====
```

//Loops

//Create a function that takes two number as input and return true if one of them is 15 or their summation is 15

```
var num1=Number(prompt("Enter The First Number : "))
var num2=Number(prompt("Enter The Second Number : "))
function sum(x,y){
    if(x+y==15||x==15||y==15){
        return true;
    }
    else{
        return false;
    }
}
console.log(sum(num1,num2));
```

*//Function to check if the given number is a perfect square or not.
// (Search for what is perfect square is.)*

```
var num=Number(prompt("Enter Your Number : "))
function PerfectSquare(n){
    if(n>0){
        if(Math.sqrt(n)%1===0){
            return true
        }
        else{
            return false;
        }
    }
    else{
        return false;
    }
}
console.log(PerfectSquare(num));
```

//You have five variables x1, x2, x3, x4, x5 their values are initially (1, 2, 3,

//4, 5). One of these variables is replaced with 0. You need to make a
//function that takes these five variables and checks which of them is
//replaced.

```
var arr=[1,2,3,4,5];
function check(array){
    for(var i=0;i<array.length;i++){
        arr[i]=Number(prompt(`Enter The Element Number ${i+1} : `));
        if(array[i]==0){
            return 0;
        }
        else{
            return "Not Founded ?"
        }
    }
}
console.log(check(arr));
```

//Given a Letter. If the Letter is Lowercase print this Letter after converting
it
//to uppercase. And if the Letter is uppercase print this Letter after
//converting it to Lowercase.

```
var char=prompt("Enter Your Number : ");
function Convert(ch){
    //هنا استخدمت ال (ASCII Table)
    //وهي ان كل حرف من دول ليه كود خاص بيه وبتميزهم عن بعض
    if(ch.charCodeAt()>=97&&ch.charCodeAt()<=122){
        return ch.toUpperCase();
    }
    else if(ch.charCodeAt()>=65&&ch.charCodeAt()<=90){
        return ch.toLowerCase();
    }
    else{
        return "Not Char !!!";
    }
}
console.log(Convert(char));
```

```
//Create function that takes two numbers as input to calculate the sum of  
//odd numbers greater than the first numbers and less than the second  
//number.
```

```
var start=Number(prompt("Enter The Start Number :"))  
var end=Number(prompt("Enter The End Number :"))
```

```
// solution 1
```

```
function SumOfOdd(x,y){  
    var sum=0;  
    if(x<y){  
        if(x%2==0){  
            x=x+1;  
            for(var i=x;i<=y;i++){  
                sum+=i;  
                i++;  
            }  
        }  
        else{  
            for(var i=x;i<=y;i++){  
                sum+=i;  
                i++;  
            }  
        }  
    }  
    else if(x>y){  
        if(y%2==0){  
            y=y+1;  
            for(var i=y;i<=x;i++){  
                sum+=i;  
                i++;  
            }  
        }  
        else{  
            for(var i=y;i<=x;i++){  
                sum+=i;  
                i++;  
            }  
        }  
    }  
}
```



```

    }
}
else{
    if(x%2!=0){
        sum=x;
    }
}
return sum;
}
console.log(SumOfOdd(start,end))

```

// solution 2

```

function SumOfOdd(x,y){
    var sum=0;
    //ممكن يكون x>y
    //y>x
    //x=y
    if(x<y){
        for(var i=x;i<=y;i++){
            if(i%2!=0){
                sum+=i;
            }
        }
    }
    else if(x>y){
        for(var i=y;i<=x;i++){
            if(i%2!=0){
                sum+=i;
            }
        }
    }
    else{
        if(x%2!=0){
            sum= x;
        }
        else{
            return "No Range";
        }
    }
    return sum;
}
console.log(SumOfOdd(start,end))

```

```
//Function that takes a number n and then takes n numbers from the user
//(using prompt) and if the numbers that the user will enter contains 4 or 7
//then log to the console "It's your lucky day" otherwise log "It's not your
//lucky day".
```

```
var n=Number(prompt("Enter Number Of Numbers : "))
function FiveOrSeven(N){
    var arr=[];
    for(var i=0;i<N;i++){
        arr[i]=Number(prompt(`Enter The Element Number ${i+1} : `))
    }
    for(var i=0;i<arr.length;i++){
        if(arr[i]==4||arr[i]==7){
            return "It's your lucky day"
        }
        else{
            return "It's not your lucky day"
        }
    }
}
console.log(FiveOrSeven(n));
```

```
//Function that takes number N and then print all the divisors of this
//number. (You can search for what is the divisors is).
```

```
var num=Number(prompt("Enter The Number : "))
function divisors(x){
    for(var i=1;i<=x;i++){
        if(x%i==0){
            console.log(i);
        }
    }
}
```

```
}  
divisors(num)
```

```
//Given number N you have to print all prime number between 1 and n  
//(Prime numbers are the number that are inly divisible by 1 and it self)
```

```
function isPrime(n)  
{  
    if(n == 1 || n == 0) return false;  
    for(var i = 2; i < n; i++)  
    {  
        if(n % i == 0) return false;  
    }  
    return true;  
}  
var num=Number(prompt("Enter The Number : "))  
for(var i = 1; i <= num; i++)  
{  
    if(isPrime(i)) {  
        console.log( i );  
    }  
}
```

```
//Function that takes a number n and then takes n numbers from the user  
//(using prompt) and count the sum of these numbers, how many odd  
//numbers, how many even numbers.
```

```
var n=Number(prompt("Enter Number Of Numbers : "));  
var arr=[];  
for(var i=0;i<n;i++){  
    arr[i]=Number(prompt(`Enter The Element Number ${i+1} : `))  
}  
function SumOddEven(array){
```

```

var odd=0;
var even=0;
var sum=0;
for(var i=0;i<array.length;i++){
    sum+=array[i];
    if(array[i]%2==0){
        even++;
    }
    else{
        odd++;
    }
}

```

```

}
return `Sum Of These Numbers = ${sum} , Number Of Odd Numbers = ${odd} ,
Number Of Even Numbers = ${even}`;
}
console.log(SumOddEven(arr));

```

//Function takes number n, Log to console n lines that describe PUM game.

```

var num=Number(prompt("Enter Number : "));
function PUM(x){
    var arr=[];
    var count=1;
    // هنا فور بتعدي ع عدد الصفوف الي عندي وكل صف بيتكون من اراي
    for(var i=1;i<=x;i++){
        // هنا فور بتعدي ع كل عنصر فالاراي بتختبره
        for(var j=0;j<4;j++){
            if(count%4==0){
                arr[j]="PUM"
                count++;
            }
            else{
                arr[j]=count;
                count++;
            }
        }
    }
    console.log(arr);
}

```

```
    }  
  }  
  PUM(num)
```

```
//Create function that takes two numbers that have to determine if the  
//product of these two numbers will be positive or negative or zero.
```

```
var num1=Number(prompt("Enter Number1 : "))  
var num2=Number(prompt("Enter Number2 : "))  
function Product(x,y){  
  if(x*y<0){  
    return "Negative";  
  }  
  else if(x*y>0){  
    return "Positive";  
  }  
  else{  
    return "Zero";  
  }  
}  
console.log(Product(num1,num2));
```

```
//Create a function finalGrade(), which calculates the final grade of a  
//student depending on two parameters: a grade for the exam and the  
//number of completed projects.
```

```
var grade=Number(prompt("Enter Your Grade : "));  
var projects=Number(prompt("Please Enter The Number Of Projects : "));  
function calc(gra,pro){  
  if(gra>=0&&gra<=100&&pro>=0){  
    if(gra>=90&&pro>10){  
      return "The Degree =100"  
    }  
    else if(gra>=75&&pro>=5){
```

```

        return "The Degree = 90"
    }
    else if(gra>=50&&pro>=2){
        return "The Degree = 75"
    }
    else{
        return "The Degree = 0"
    }
}
}
console.log(calc(grade,projects));

```

```

//=====
=====
//=====
=====

```

```

//Arrays

```

```

//Create a program that takes an array count how many positive numbers,
//negative numbers, even numbers and odd numbers (By same order as
//written) (0 is not counted as positive or negative but it's counted as an
//even number).

```

```

var leng=Number(prompt("Enter Number Of Element : "))
var arr=[]
var positive=0;
var Negative=0;
var odd=0;
var even=0;
for(var i=0;i<leng;i++){
    arr[i]=Number(prompt(`Enter Element Number ${i+1} : `))
    if(arr[i]%2==0||arr[i]==0){
        even++;
    }
    else{

```

```

        odd++;
    }
    if(arr[i]>0){
        positive++;
    }
    else if(arr[i]<0){
        Negative++;
    }
}
console.log(`Even = ${even}`)
console.log(`Odd = ${odd}`)
console.log(`Positive = ${positive}`)
console.log(`Negative = ${Negative}`)

```

//Create a function that take array as an input this array may contains
//numbers or strings return the array contains only integers.

```

var leng=Number(prompt("Enter Number Of Element : "))
var arr=[];
for(var i=0;i<leng;i++){
    arr[i]=Number(prompt(`Enter The Element Number ${i+1} : `))
}
function intiger(array){
    var int=[]
    for(var i=0;i<array.length;i++){
        // هنا في اكثر من طريقه طبعاً بس اعتمدت ان باقي قسمه اي عدد ع واحد بيدي نفس
        //NaN وباقي قسمه اي نص ع 1 هيدي
        if(array[i]/1==array[i]){
            int.push(array[i])
        }
    }
    return int;
}
console.log(intiger(arr))

```

```
//Implement slice() function. Function that takes an array and perform the  
//same thing that .slice() do.
```

```
var leng=Number(prompt("Enter Number Of Element : "))  
var arr=[];  
for(var i=0;i<leng;i++){  
    arr[i]=Number(prompt(`Enter The Element Number ${i+1} : `))  
}  
var x=Number(prompt("Enter The index That You Want To Slice From It : "))  
function slice(array,n){  
    var arra=[];  
    for(var i=n;i<array.length;i++){  
        arra.push(array[i]);  
    }  
    return arra;  
}  
console.log(slice(arr,x))
```

```
//Create a function that takes an array of arrays with numbers. Return a  
//new single array with the largest numbers of each.
```

```
var NumOfArrays=Number(prompt("Enter The Number Of Arrays : "))  
var arr=[];  
var length;  
for(var i=0;i<NumOfArrays;i++){  
    //هنا عرفت اراي تشيل قيم عناصر كل اراي من الي جوا  
    var array=[]  
    //طلب منه طول كل اراي من الي جوا  
    length=Number(prompt(`Enter Length of array number ${i+1} : `))  
    for(var j=0;j<length;j++){  
        array[j]=Number(prompt(`Enter Element Number ${j+1} of array number  
${i+1} : `))  
    }  
    //بملا الاراي الكبيره بالاراي الصغيره  
    arr.push(array);  
}
```



```

عرفت العنصر الي هقارن بيه كل عنصر من عناصر الاري الصغيره الي جوه
var bigg;
اري تشيل القيم الكبيره في كل اري منهم
var big=[];
for(var i=0;i<arr.length;i++){
    // هنا بخلي الاري ب صفر مع بدايه كل اري من الي جوا عشان متفضلش محتفظه بالقيمه
    بتاعتها القديمه
    bigg=0;
    for(var j=0;j<arr[i].length;j++){
        if(arr[i][j]>bigg){
            bigg=arr[i][j];
        }
    }
    big.push(bigg);
}
console.log(big);
// Two Dimention array في حل افضل بال
بس ده في فكر وكتابه اكثر ودا الي محتاجه في اي لغه جديده

```

```

//Given a string S. Print the origin string if it's not too long otherwise, print
//special abbreviation.

```

```

var text=prompt("Enter the text : ")
if(text.length<=10){
    console.log(text)
}
else{
    console.log(text[0]+(text.length-2)+text[text.length-1])
}

```

```

//Function takes a string consisting of 4 characters determine if S consists of
//exactly two kinds of characters. Check if the string has exactly two
//different characters in which each of them appear two times in the string.

```

```

var Text=prompt("Enter the text that contain from 4 chars : ")
function char(text){
    var flag=false;
var flag2=false;
    for(var i=0;i<4;i++){
        if(text[i]==text[i+1]){
            flag2=true
        }
    }
    if(text[0]==text[1]||text[0]==text[2]||text[0]==text[3]){
        if(text[1]==text[2]||text[1]==text[3]){
            flag=true;
        }
        else if(text[2]==text[3]){
            flag=true;
        }
    }
    if(flag==true&&flag2==true){
        return true;
    }
    else{
        return false;
    }
}
console.log(char(Text));

```

*//You will be given the final shape of an X O game you need to define which
 //of the players win (x or o).*

```

var arr=[]
for(var i=0;i<3;i++){
    var array=[]
    for(var j=0;j<3;j++){
        array[j]=Number(prompt(`Enter Element Number ${j+1} of array number
    ${i+1} : `))
    }
}

```

```

    arr.push(array);
}
console.log(arr);
var count1;
var count2;
// جيت لحد هنا وعطلت الصراحه
for(var i=0;i<3;i++){
    count1=0;
    count2=0;
    for(var j=0;j<3;j++){
        if(arr[i][j]=='X'){
            count1++;
        }
        else{
            count2++;
        }
    }
}

```

*//Create a function that takes an array and a character that returns the first
//and the last index of this character.*

```

var text=prompt("Enter the text : ");
var char=prompt("Enter the char : ");
function index(word,ch){
    var first;
    var second;
    first= word.indexOf(ch)
    second=word.lastIndexOf(ch);
    return `From ${first} to ${second}`;
}
console.log(index(text,char));

```

//Function gets an array and a number check if this number can be

//obtained by adding some consecutive elements in this array.

```
var leng=Number(prompt("Enter the length : "))
var arr=[];
var number=Number(prompt("Enter The number that is sum"))
for(var i=0;i<leng;i++){
    arr[i]=Number(prompt(`Enter the element number ${i+1}`))
}
function Sum(array,x){
for(var i=0;i<array.length;i++){
    var arra=[];
    var sum=0;
    for(var j=i;j<array.length;j++){
        sum+=arr[j];
        if(sum>x){
            break;
        }
        else if(sum==x){
            arra.push(array[j]);
            return arra;
        }
        else{
            arra.push(array[j]);
            continue;
        }
    }
}
}
console.log(Sum(arr,number))
```