How to remove and update array items

```
const arr1 = ['FIRST','Laurence','Svekis',100,false];
const arr2 = ['SECOND',2332,true,'Hello','Svekis',400,false];

const arr3 = arr1.concat(arr1,arr2);
const arr4 = arr1;
arr2.push(arr1);
console.log(arr2);
console.log(arr3);
Array.prototype.push.apply(arr1,arr2);
console.log(arr1);

arr2.push('NEW ITEM');
```

```
arr1.push('Arr 1 New');

//delete arr1[12];
//delete arr2[7];

//arr1.length = 0;

arr1.splice(12,1,'REMOVED','SECOND');
arr2.splice(3);

console.log(arr1);
console.log(arr2);
console.log(arr3);
console.log(arr4);
```

Comparing Data Type and automatic conversion of Data Types

```
let a = [10];
let b = 10;
let c = "10";

if(a == b) console.log(`${a} == ${b}`);
if(a == c) console.log(`${a} == ${c}`);

if(a === b) console.log(`${a} === ${b}`);
```

```
if(a === c) console.log(`${a} === ${c}`);

if(a != b) console.log(`${a} != ${b}`);
if(a != c) console.log(`${a} != ${c}`);

if(a !== b) console.log(`${a} !== ${b}`);
if(a !== c) console.log(`${a} !== ${c}`);



let d = [];
let e = 0;
let f = false;
let g = '';
let h = null;
let i = undefined;
let j = NaN;



console.clear();
if(d == e) console.log(`D ${d} == ${e}`);
if(e == f) console.log(`E ${e} == ${f}`);
if(f == g) console.log(`F ${f} == ${g}`);
if(g == h) console.log(`G ${g} == ${h}`);
if(h == i) console.log(`H ${h} == ${i}`);
if(i == j) console.log(`I ${i} == ${j}`);
if(j == d) console.log(`J ${j} == ${d}`);

if(g == d) console.log(`GD ${g} == ${d}`);
```

```
if(f == h) console.log(`FH ${f} == ${h}`);
if(f == i) console.log(`FI ${f} == ${i}`);
if(f == j) console.log(`FJ ${f} == ${j}`);

console.clear();
if(!d) console.log(`D Yes ${d}`);
if(!e) console.log(`E Yes ${e}`);
if(!f) console.log(`F Yes ${f}`);
if(!g) console.log(`G Yes ${g}`);
if(!h) console.log(`H Yes ${h}`);
if(!i) console.log(`I Yes ${i}`);
if(!j) console.log(`J Yes ${j}`);




if(d === e) console.log(`D ${d} === ${e}`);
if(e === f) console.log(`E ${e} === ${f}`);
if(f === g) console.log(`F ${f} === ${g}`);
if(g === h) console.log(`G ${g} === ${h}`);
if(h === i) console.log(`H ${h} === ${i}`);
if(i === j) console.log(`I ${i} === ${j}`);
if(j === d) console.log(`J ${j} === ${d}`);
```

Object Construction with JavaScript

```
function FullName(firstName,lastName){
   this.firstName = firstName;
   this.lastName = lastName;
   this.full = `${firstName} ${lastName}`;
}

const person1 = new FullName("Laurence","Svekis");
console.log(person1.full);

const person2 = new FullName("John","Svekis");
console.log(person2.full);

const person3 = new FullName("Mike","Smith");
console.log(person3.full);

let val = `${person1.firstName} ${person1.lastName}`;
console.log(val);
```

JavaScript Immediately invoked functions coding examples

```
(function(){
   console.log('ready');
})();

(()=>{
   console.log('ready arrow');
})();
```

```
((a=1,b=2,c=3)=>{
   console.log(a,b,c);
   const val = a * b * c;
   console.log(val);
})(5,6,7);
```

Random Numbers and Random Array items

```
const arr = [];
const arr1 = [];

for(let i=0;i<10;i++){
   const val = ran(0,1000);
   arr.push(val.toString());
}

for(let i=0;i<20;i++){
   const ind = Math.floor(Math.random()*arr.length);
   const val = arr[ind];
   console.log(ind,val);
}

function ran(min,max){
   return Math.floor(Math.random()*(max-min+1))+min;
}

for(let i=1;arr1.push(i++)<50;);
```

```
console.log(arr1);


const arr2 = arr.sort();
const arr3 = arr.reverse();
arr.sort(()=>{
   return Math.random() - 0.5;
});
console.log(arr[0]);
arr.sort(()=>{
   return Math.random() - 0.5;
});
console.log(arr[0]);
```

String Whitespace Cleaner and Remover

```
String.prototype.cleaner = function(){
   return this.replace(/\s+/g,' ').trim();
}


const myStr1 = "  Hello    World   ";
console.log(myStr1.cleaner());


let val = myStr1;
val = trimMyString(val);
console.log(val);
document.querySelector('.output').textContent = val;
```

```
function trimMyString(str){
   let val = str.replace(/\s+/g,' ').trim();
   //val = str.trimLeft();
   //val = str.trimRight();
   return val;
}
```

JavaScript Logical Conditions

```
let val = 5;
val = 6;

if(val == 5) {fun1(1);}
if(val == 5) fun1(2);
val == 5 && fun1(3);

val == 5 || fun1(4);
if(val != 5) fun1(5);

fun1();
let val2;
val2 = val2 || 100;
console.log(val2);

function fun1(v=1){
   v = v || 1;
   console.log(`Hello ${v}`);
}
```

Array Map Examples

```
const arr1 = [1,5,7,8,23,342,2,3,4];

const arr2 = arr1.map((val,ind,arr)=>{
   console.log(val,ind,arr);
   return val * val;
})

const arr3 = arr1.map(val => val*val);
const arr4 = arr1.map(callbackFun);

function callbackFun(val){
   return val * val;
}

console.log(arr1);
console.log(arr2);
console.log(arr3);
console.log(arr4);
```

Array Method Includes

```
const arr = ["Svekis","Laurence",1000,20,300,true,323,"Svekis"];
const arr1 = arr.map(String);
console.log(arr1);

const myInput = document.querySelector('input');
const btn = document.querySelector('button');
const output = document.querySelector('.output');
```

```
btn.addEventListener('click',(e)=>{
   const val = myInput.value;
   const result = arr1.includes(val);
   let message;
   if(result){
       message= `${result} is found in the array content`;
   }else{
       message = `${result} is NOT found`;
   }
   output.textContent = message;
   console.log(result);
})

let val = arr.includes("Svekis");
console.log(val);

val = arr.includes("Svekis",-1);
console.log(val);
```

JavaScript Serialization and deserialization

```
const output = document.querySelector('.output');
const arr1 = ["Svekis","Laurence",1000,true];
const obj1 = {
   first : "Laurence",
   last : "Svekis",
   id : 1000,
   num : 55,
   mes : "Hello",
   boo : false
```

```
};

output.textContent = arr1;
output.textContent = obj1;

console.log(arr1);
console.log(obj1);

let val = JSON.stringify(obj1)
val = JSON.stringify(arr1);
console.log(val);
output.textContent = val;
output.textContent += arr1;
console.clear();
val = JSON.stringify(obj1,rep);

function rep(key,value){
   console.log(key,value);
   if( typeof value === 'number'){
       return undefined;
   }
   return value;
}
output.textContent = val;

val = JSON.stringify(obj1,['num','first']);
output.textContent = val;

val = JSON.stringify(obj1,null);
output.textContent = val;
console.log(val);
```

```
val = JSON.stringify(obj1,null,' ');
output.textContent += val;
console.log(val);

const str1 = JSON.stringify(obj1,['num','first']);
const str2 = JSON.stringify(arr1);
console.clear();
console.log(str1);
console.log(str2);

const ob1 = JSON.parse(str1);
const ob2 = JSON.parse(str2);
console.clear();
console.log(ob1);
console.log(ob2);
```

JavaScript Stringify LocalStorage

```
<!DOCTYPE html>
<html>
   <head>
       <title>JavaScript Course</title>
   </head>
   <body>
       <input type="text">
       <button>Check</button>
       <div class="output">Output</div>
       <script src="code6.js"></script>
   </body>
</html>
```

```
const str1 = "Laurence Svekis";
const myObj = {
   first : "Laurence",
   last : "Svekis",
   id : 100
};

const myInput = document.querySelector('input');
const btn = document.querySelector('button');
const output = document.querySelector('.output');
document.addEventListener('DOMContentLoaded',init);
btn.addEventListener('click',btnClicker);

function btnClicker(){
   const val = myInput.value;
   if(val.length > 0){
       let user = JSON.parse(localStorage.getItem('user'));
       user.first = val;
       console.log(user);
       localStorage.setItem('user',JSON.stringify(user));
   }
}

function init(){
   console.log('ready');
   output.innerHTML = '';
   let val = localStorage.getItem('user');
   let user = JSON.parse(val);
   if(!user.first){
       let storeObj = JSON.stringify(myObj);
       localStorage.setItem('user',storeObj);
```

```
    }else{
        output.textContent = `${user.first} ${user.last}`;
    }
    console.log(val);
}
```

JavaScript Every Method

```
const arr1 = [1,4,54,23,5,7,34,66,1000];
const arr2 = ["Svekis","a","World","He"];
const arr3 = ["Svekis","Laurence","Cat","Hello","a","World"];
let val = arr1.every((ele)=>{
    console.log(ele);
    return ele < 10;
})

val = arr1.every(callBackFun);

function callBackFun(ele,ind,arr){
    console.log(`${ele} ${ind}`);
    return ele < 1000;
}

console.log(val);

console.log(arr1.every(x => x < 10000));
console.log(arr1.every(x => x < 1000));
console.clear();
val = arr2.every((ele)=>{
    console.log(ele);
    return ele.length < 15;
```

```
})
console.log(val);



console.clear();
val = arr2.every((ele)=>{
   console.log(ele);
   return arr3.includes(ele);
})
console.log(val);
```

JavaScript Adding Numbers Array

```
const arr1 = [32,43,556,2,3,4,4345];

let total = 0;
for(let i=0;i<arr1.length;i++){
   console.log(arr1[i],total);
   total += arr1[i];
}
console.log(total);
/*
total = 0;
for(let i in arr1){
   console.log(arr1[i],total);
   total += arr1[i];
}
console.log(total);
*/

total = 0;
```

```
for(let i=0,len=arr1.length;i<len;i++){
   console.log(arr1[i],total);
   total += arr1[i];
}
console.log(total);
```