**Concept e questions**

1. What is the difference between Let, const, and var?
   1. Let is a changeable variable.
   2. Const is a non-changeable variable.
   3. Var is an older version of setting variables. global
2. What is Hoisting in JavaScript?
   1. Hoisting is a default behavior for JS that moves all variable & functions declarations to the top.
3. How can the style of an element be modified dynamically using JavaScript?
   1. Element.getby “class or id etc” .style
4. What is the difference between querySelector and querySelectorAll
   1. Selector gets first by “name”
   2. selectorAll gets all by “name”
5. What is the difference between innerText and innerHTML
   1. innerText = enters plain text to element
   2. innerHTML= enters HMTL to element i.e. div
6. What does slice method do?
   1. Returns a new array with only desired section
7. What is callback,
   1. Calling a function within a function as parameter
   2. Can be asynchronous
8. What is promise?
   1. Asynchronous way to get data
   2. An easier & more readable to do asynchronous function calls
   3. .then()

**Programing Questions**

1. Write a JavaScript program that uses regular expression to check if the password is strong or weak. Strong password should have
   1. a minimum 8 characters and maximum 15 characters.
      1. ^[a-zA-Z]{8,15}$
   2. at least one symbol
      1. ^(?=.\*[@$!%\*?&])[A-Za-z@$!%\*?&]{8,15}$
   3. at least one Capital letter (uppercase)
      1. ^(?=.\*[A-Z]) (?=.\*[@$!%\*?&])[A-Za-z@$!%\*?&]{8,15}$
   4. at least one digit
      1. ^(?=.\*\d)(?=.\*[A-Z]) (?=.\*[@$!%\*?&])[A-Za-z\d@$!%\*?&]{8,15}$
   5. at least one small letter (lowercase)
      1. ^(?=.\*\d)(?=.\*[A-Z])(?=.\*[a-z])(?=.\*[@$!%\*?&])[A-Za-z\d@$!%\*?&]{8,15}$
   6. also, the same string pattern (minimum of two-character length) should not be repeated.
      1. ^(?!.\*([A-Za-z0-9])\1{2})(?=.\*\d)(?=.\*[A-Z])(?=.\*[a-z])(?=.\*[@$!%\*?&])[A-Za-z\d@$!%\*?&]{8,15}$
2. Write a program that sorts an array of 5 people by their age. Each person is an object which has an id, name, date of birth.

function getAge(dob) {

let year = Number(dob.substr(0, 4));

let month = Number(dob.substr(4, 2)) - 1;

let day = Number(dob.substr(6, 2));

let today = new Date();

let age = today.getFullYear() - year;

if (today.getMonth() < month || (today.getMonth() == month && today.getDate() < day)) {

age--;

}

return age;

};

function sortByAge(arr) {

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

};

let James = { id: 1, name: "James", DoB: '19961126' };

let Mark = { id: 2, name: "Mark", DoB: '19990521' };

let Julia = { id: 3, name: "Julia", DoB: '19981203' };

let arr = [Julia, James, Mark ];

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

let age = getAge(arr[i].DoB);

arr[i].age = age;

};

sortByAge(arr);

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

console.log(arr[i]);

};

This sorts the age Low to High.

1. Write a program that has a list of products and filter those starting with a specific letter.

function startWith(arr, char) {

let filteredList = arr.filter((i) => i.startsWith(char));

return filteredList;

}