4- define sql injection?

It's when a request is sent with unexpected sql queries that compromise data stored in the database. It happens usually when data sent from forms isn't validated.

5- what's the difference between HTTP and HTTPS ?

Both are Hyper Text Transfer Protocols, but HTTPS is more secure as it encrypts data sent from the form so it's a way to prevent sql injection.

9- what's the difference between == and === ?

== : comparison operator to check whether a value is equal to the other, not including data type.

=== : comparison operator to check whether a value is equal to another including the identical datatype.

10- what's the difference between prefix and postfix?

Prefix : it's when the operators are put before the variable , ex : --x, +=x,…

In this case for --x, the substraction happens first the the output is the x after the operation.

Postfix : it's when the operators are put after the variable , ex : x++ , x=+, x+=…

In this case for x++ , the output is x before addition , but the actual x in memory increased by 1.

11- illustrate how array works?

An array is a group of data of the same type. Each one in this group is identified by their respective index number.

Array Index starts from 0. Thus the last item in the array has index = array.length – 1

When adding an item to the array it takes place in the last . but when removed it's the first to get out. (stack)

12- what's the method used to convert number to string ,and string to number?

To convert number to string, the method is .toString() ,

To convert string to number, .parseInt() is used .

13- what's the difference between pop, push , shift, and unshift ?

Pop and push :are used to add or remove an item from array from the end, last index.

Shift and unshift : are used to add or remove an item from array from the start , index 0 .

15- What's JS DOM?

DOM stands for "document object model", and it refers to the interactions between html elements and js codes.

This happens in 3 steps :

a- Selecting the element whether using getElement or querySelector .
b- Defining event , using addEventListener ,and an event can be anything that happens to elements in document, such as click ,hover, change, etc…
c- Action , is the result performed for the event, which is the function in the second parameter of addEventListener.

16- what's the difference between HTMLCollection and Nodelist?

HTMLCollection : is a result of getting multiple elements with shared classname or tagname.

Nodelist : is a result of getting elements using querySelectorAll or getting by name in case of radio/check inputs.

.getElementById() gets by id

.getElementsByClassName() gets by class

.getElementByName() gets by name

.getElementByTagName() gets by tag

.querySelector() gets using css queries (. , # , tagname) for one specific element or in case of wanting to get specific child of a parent.

.querySelectorAll() gets using css queries (. , # , tagname) for group of elements.

18- What's Primitive and Nonprimitive types?

Primitive types in any programming language is the normal data types :

String – Boolean – number – null – undefined.

Nonprimitive types are the ones processed and derivate from the primitive ones :

Array – object – function – regularExpressions – dates..

19- What's the difference between querySelector and querySelectorAll?

.querySelector() gets using css queries (. , # , tagname) for one specific element or in case of wanting to get specific child of a parent.

.querySelectorAll() gets using css queries (. , # , tagname) for group of elements.

21- what's ES?

ES is a developed version of javascript released by ECMA that had major updates to fix problems ,but it caused a new problem where old projects couldn't adapt with the new one thus stopped working.

22-What's software updates?

They are modified versions of the original software program . they are usually released to fix present issues with the previous versions , or add new features that assist customers using the software , increasing their economic value.

23- What's the difference between sloppy mode and strict mode?

Sloppy mode : is a mode that sticks to the past versions of javascript where specific problems weren't solved, where other projects were still working. It doesn't restrict usage of some reserved words , or duplicate parameters passed to functions , or the scope in which variables are assigned.

Strict mode : By applying strict mode on the code, the new version of JS where the issues are fixed thus restriction of using reserved words , better defining for variables in scopes , and prevention of reassigning vars of the same name , or passing the same parameter to the function. "use strict mode"

24- what's the difference between var, let , and const?

Var:

Scope : Function scope only

Hoisting:Hoisted to the top of the scope leaving number behind.

Reassign-ability: Can be assigned.

Let:

Scope:Block scope all in all.

Hoisting: Hoisted to the top of the scope, but not initialized.

Reassign-ability: Can be reassigned but unlike var can't be redeclared.

Const:

Scope:Block scope all in all.

Hoisting: Hoisted to the top of the scope, but not initialized.

Reassign-ability: Can't be reassigned at all.

29- what's the difference between strongly typed and loosely typed?

Strongly typed : is defining the variable value with a definite data type which can't change such as when using Number() .

Loosely typed is : defining the variable without a specific data type which enters any function and that can cause errors when said function is in need for array but got string , or calculating number with a string getting a NaN .

30- what's the difference between synchronous and asynchronous ?

Synchronous : is doing tasks in order line by line, none precedes the other even if it takes shorter time to be executed. That happens in block scope by default.

Asynchronous : is doing tasks regardless of order in file , but depends on the time needed to execute. What finishes first.