Day 1 Revisit

HTML

* Hyper Text Markup Language
* Tim-Berners Lee (Created HTML & WWW)
* HTML is case and space in sensitive (Not case sensitive and not space sensitive)
* HTML is user friendly language (No Errors, No Exceptions)
* HTML is tag based language
* HTML tags are pre-defined
* HTML document is a Single Rooted one (One Root tag and multiple child tags)
* HTML is the back bone of Internet
* HTML is used to create web pages and Web Sites
* Web Page is a Single HTML document
* Web Site is a combination of multiple web pages connected together.
* HTML is rendered by the browser
* HTML can be created using any text editor
* HTML document will have .html or .htm extension
* Browser is a tool which reads the HTML tags and generate output for it.
* Formatting Tags, Heading Tags, Audio & Video Tags, Table Tags, Form tags, Input tags, Header, Footer tags, Anchor Tag, Image Tag etc.,
* HTML element is the combination of HTML tags with content.
* Tags optionally have attributes.
* The latest version of HTML is html 5.
* HTML 5 introduced so many new tags (audio, video & geo-location), and new input types
* End user can interact with the web page using events.
* Keyboard Events, Mouse Events, Page Events, Form Events etc.,
* HTML document is usually divided into two sections (Head & Body)
* Self-closing tags (Special tags with no closing tag – br, hr, input etc.,)
* Block level elements (Occupy the entire view port – Ex: <div>, <form>, <table>)
* Inline Element (Occupy the content space only – Ex: <span> )
* HTML Comment <!-- - -> (Multi line comment)

CSS – Cascading Style Sheet

* Styling language of the web.
* It improves look and feel of the web page
* Three ways of adding css (1. Inline 2. Internal 3. External)
* Inline CSS is added using style attribute (directly added in the html tags) – difficult to manage
* Internal CSS is added using style tag (directly added in the html page) – difficult to manage.
* External CSS will be linked with html using <link> tag. This is the recommended method. – Easy to manage and able to apply to many html pages.
* External CSS file will have .css extension
* CSS file will have a selector and set of key, value pairs to modify the style of selected html elements
* CSS selectors helps to select either single or multiple html elements and apply to style to them.
* Types of Selectors [ 1. ID selector (#) 2. Class Selector (.) 3. Tag selector (tag name) 4. Universal / Global Selector (\*) ]
* ID selector is useful to select a single element. (Usually each element needs to have unique id) – Suitable for selecting any particular element only
* Class selector is useful to select multiple html elements at a single time.
* Same class selector can be applied to different html elements & tags.
* Grouping multiple selectors also possible in CSS
* Syntax : <selector> { property 1 : value 1; ….. property n: value n}
* In CSS both property and values are pre-defined
* While specifying the value for property we need to specify the units also without space.
* In CSS to ignore a line the following commenting symbol is used /\* …. \*/ (Single or multiple line)
* Types of Color values (1. Color Name 2. Hexa Decimal Value [#00FFAB] 3. Using rgb function [rgb(25,78,121)])
* BOX model [ Content, Padding, Border, Margin ]

JavaScript - It’s the programming language of the web (page/site)

* JavaScript is a case sensitive programming language
* It’s no way connected with JAVA programming language
* Many syntax of java script is little similar to JAVA programming language
* JS is dynamically typed (weakly typed) language [Variables will hold any type of values/data]
* JS is multi-paradigm language [It supports OOP, Functional Programming, Procedural Programming etc.,]
* Java script is easy to learn
* Actual Name or Industry name of Java Script is ECMA Script
* ECMA – Electronic Computer Manufacturing Association
* In short Java Script (JS) is called as ES
* Java script can be added to HTML file in 3 ways (1. Inline 2. Internal 3. External )
* Inline JS are added directly to the html tags as an attribute
* Internal JS are added using the <script> tag
* External JS is added using the script tag and src attribute. (Recommended method)
* Javascript files will have .js extension
* Browser’s JS engine will execute JS code
* JavaScript is a interpreted language (It will be converted to machine level lang, line by line)

JAVA SCRIPT

History – Introduced in 1995. Brendan Eich in 1995, and became an ECMA standard in 1997.

Object based scripting language.

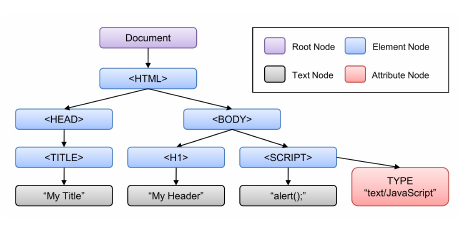
Light weight and cross – platform language.

JS is mainly used for DOM manipulation.

DOM – Document Object Model (It’s a Tree like representation of web page)

HTML is a Single rooted document. (Root of HTML tree is html tag)

Root of DOM is document Object.



JS is also used for Client Side validations ( Checking user inputs)

JS can change HTML content

JS can change HTML attributes

JS can Change HTML styles

JS can show/hide HTML element

JS Variables

1. Local Variable (variable declared inside any function, passed as an argument – available only inside the function or block)
2. Global Variable (variable declared outside any function, all functions can access global variable)

JS Variables are case sensitive

Ex : var x=20;

var X = 100;

Let’s assume we are going to learn german language

1) learn the alphabets

2) learn the words

3) learn the grammar to make the sentences

4) learn to write letters, documents etc.,

JS Language

1. Learn the supported Character set [A-Z, a-z, 0-9, +,-, \*,/, %, @,#, :, ;,(), [] )
2. Learn the keyword
3. Learn the syntax
4. Learn to write programs

Keywords also called as reserved words (pre-defined by the developer)

Let, var, const, if, for, else, do, while, case, class, else, etc.,

Operators (Arithmetic, Comparison, Logical, Assignment, Shorthand, increment/decrement, bitwise operators etc.,)

JS Data Types

1. Primitive [string, number, Boolean, undefined, null]
2. Non-Primitive (Reference) [Object, Array, RegExp]

JS variables are case sensitive.

Variables defined with let cannot be Redeclared.

Variables defined with let must be Declared before use.

Variables defined with let have Block Scope.

“let” keywords allow to create a block scoped variable (which can be accessed with in the block only)

“var” keyword allows to create a function scoped variable (Variable can be used inside that function only)

Var is function scoped

Let is block scoped

1. Arithmetic Operators [+,-, \*, /, %, \*\*, ++, --]
2. Comparison (Relational) Operators [<, >, <=, >=, ==, ===]
3. Bitwise Operators
4. Logical Operators
5. Assignment Operators
6. Special Operators

= Assigns value to the left

== Checks the value for equality

=== (Identical) Check the value, data type

Statements in JS

1. Normal Statements
2. Decision Making Statements (if, if.. else, nested if, switch)
3. Looping Statements ( Entry Control, Exit Control Loop)

Entry Control loop (0 or more) – condition will be evaluated before entering the loop body. This loop will execute zero or more time.

Exit Control loop (1 or more) – Condition will be evaluated while leaving the loop.

Entry control loop [For loop, while loop]

Exit Control loop [ do while]

Objects and Arrays

Arrays are used to store group of same value.

Objects in JS

1. Var employee = { firstName : “ABC”, lastName : “XYZ” };

Document.write(employee.firstName)

Document.write(employee.lastName)

Ways of creating object in Javascript

1. By object literal
2. By creating instance of Object directly (using new keyword)
3. By using an object constructor (using new keyword)

Add CSS style to the register form.

Add one more row in the register form. “Marital Status” : Married Unmarried (Radio button with two options)

If Married radio button is selected, needs to add new element namely “Spouse Name” with the text box in the Right.

Before the Text box, needs to display Mr/Ms or Mrs depending upon the selection

Hints :

Document.querySelector

Document.createElement