

# Assignment For Day 1

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## 1. Explain the use of JavaScript ( or What you can do using a JavaScript)

**Ans.** Some important uses of javascript are mentioned below:

- i. Web development:** Javascript is widely used in web development. It helps us to add dynamic behaviour to the website and add special effects, animations etc to an website. It enables the interaction between website and user.
- ii. Web-app development:** Javascript has also gained popularity to make robust web-applications(eg. google map).
- iii. Web server:** Using Nodejs we can create web servers which are more fast and dont use buffering and transfer chunk data.
- iv. App development:** Using React native (a javascript framework) we can build mobile applications and run them in various platforms. We dont need to write new code for different platforms, we write the code once and run it on different platforms.
- v. Game development:** Now we can also build games using javascript and some of its framework.
- vi. Others:** There are some other uses of javascript like- Client-side validation, Displaying date and time, To validate the user input before submission of the form, Open and close new windows, to display dialog boxes and pop-up windows, To create the forms that respond to user input without accessing the server etc.

## 2. What is the difference between client-side and server-side?

**Ans.** The main difference of client-side and server-side are-

- Client-side is the part of an web or application which involves program that run on client or users end where server-side runs at server end.
- Client side is also reffered as front-end and server side as back-end.
- Client-side developers mainly works with HTML, CSS & Javascript and server-side developers uses Java, Python, SQL, PHP etc.

- The main task of a client-side developer is to create website layout, designing UI, adding form validation, adding visual elements like color, font etc. Server-side developers main tasks are connecting website to database, developing dynamic website etc.

### 3. What is Nodejs?

**Ans.** Nodejs is an open source, cross platform, javascript runtime environment that executes javascript code outside a browser. Nodejs allows us to use javascript everywhere and in any browser including Mac os, Windows or Linux.

### 4. Explain Scope in JavaScript

**Ans.** Scope in Javascript determines accessibility of variables. Javascript has 3 types of scope-

- Block Scope:** Block scope is an area between {two curly braces} which can be between loops, if conditions or switch statement. ES6 (2015) introduced two new keywords **let** and **const** which provide block scope in javascript.
- Function Scope:** Each function creates a new scope in javascript. Variables defined in a function is not accessible from outside the function.
- Global Scope:** A variable declared outside a function is a global scope. Global variables can be accessed in any function.

### 5. JavaScript is asynchronous or synchronous.

**Ans.** Basically javascript is asynchronous but it can be used as synchronous also.

### 6. JavaScript is Single-threaded or Multi-threaded.

**Ans.** Javascript is single threaded, which means it can operate only one task at a given time.

### 7. Explain DOM in your own word.

**Ans.** DOM (Document Object Manipulation) is the way how a web browser represents a web page internally. 'Document' is the code of the web page and 'Objects' are the elements of that web page. Changing or manipulating the elements of a web page is called DOM.