Assignment for Day 1smiling face with smiling eyesrocket

## ANSWER -1

### 1. Adding interactive behavior to web pages

JavaScript allows users to interact with web pages. There are almost no limits to the things you can do with JavaScript on a web page – these are just a few examples:

* Show or hide more information with the click of a button
* Change the color of a button when the mouse hovers over it
* Slide through a carousel of images on the homepage
* Zooming in or zooming out on an image
* Displaying a timer or count-down on a website
* Playing audio and video in a web page
* Displaying animations
* Using a drop-down hamburger menu

### 2.     Creating web and mobile apps

Developers can use various JavaScript frameworks for developing and building web and mobile apps. JavaScript frameworks are collections of JavaScript code libraries that provide developers with pre-written code to use for routine programming features and tasks—literally a framework to build websites or web applications around.

Popular JavaScript front-end frameworks include React, React Native, Angular, and Vue. Many companies use Node.js, a JavaScript runtime environment built on Google Chrome’s JavaScript V8 engine. A few famous examples include PayPal, LinkedIn, Netflix, and Uber!

### 3.Building web servers and developing server applications

Beyond websites and apps, developers can also use JavaScript to build simple web servers and develop the back-end infrastructure using Node.js.

### 4.     Game development

Of course, you can also use JavaScript to create browser games. These are a great way for beginning developers to practice their JavaScript skills.

## ANSWER-2

The main difference between client-side and server-side scripting is given below.

| **Basis** | **Client-side Scripting** | **Server-side Scripting** |
| --- | --- | --- |
| Primary Function | The primary function of client-side scripting is to provide the requested output to the end-user | The primary function of server-side scripting is to manipulate and give access to the required database as per request. |
| Uses | The client-side is used as the front end, where the user gets to see what we have browsed. | The server-side is used as a back-end where data is processed and is not visible to the client user. |
| Processing | The client-side does not need any interaction with the server. | Server-side scripting on the other hand is all about communicating with the servers. |
| Dependability | Client-side scripting depends upon the user’s browser version. | Serve-side does not depend on the client. |
| Security | This way of scripting is less secure than Server-side scripting because of the accessibility of code provided to the client. | Server-side scripting is considered as a more secure way while working on a web application |
| Running | It runs on the end-user’s system. | It runs on the webserver. |
| Languages | HTML, JavaScript, CSS are used to display the request | PHP, Python, Ruby, NodeJS are some of the programming languages used at server-side |

## ANSWER-3

Node.js is an open-source, cross-platform, back-end JavaScript runtime environment that runs on the V8 engine and executes JavaScript code outside a web browser. Node.js lets developers use JavaScript to write command line tools and for server-side scripting—running scripts server-side to produce dynamic web page content before the page is sent to the user's web browser.

## ANSWER-4

Scope refers to the availability of variables and functions in certain parts of the code.

## ANSWER-5

JavaScript is asynchronous programming language.

## ANSWER-6

JavaScript is single-threaded.

## ANSWER-7

The Document Object Model (DOM) is an application programming interface (API) for HTML and XML documents. It defines the logical structure of documents and the way a document is accessed and manipulated.

With the Document Object Model, programmers can build documents, navigate their structure, and add, modify, or delete elements and content. Anything found in an HTML or XML document can be accessed, changed, deleted, or added using the Document Object Model.