

Assignment - 1

1) What is React JS?

React JS is a free and open source front-end javascript library. It is used for building user interfaces based on UI components. It is majorly used as a based in the development of single page application. It uses virtual DOM, so creating this usually requires the use of additional or extra libraries.

2) Why React JS?

It majorly allows developer to create large web applications that can change state, without reloading the page. It allows us to create reusable UI components and the main purpose

of react is to be fast, scalable and simple. It is being simple to read & easy to use made React easy to understand and implement.

3) What is the difference between library and framework?

<u>Library</u>	<u>Framework</u>
<ul style="list-style-type: none">★ Library is a set of reusable functions used by computer program.	<p>It is a piece of code that dictates the architecture of our project.</p>
<ul style="list-style-type: none">★ Example is ReactJS, jquery.	<p>Example is AngularJS</p>
<ul style="list-style-type: none">★ Flow of control and code will be done by us. (you are in charge)	<p>It only does the flow of control and code (framework is in charge)</p>

4. What is Virtual DOM?

A Virtual DOM is a lightweight javascript representation of the DOM. It is used in declarative frameworks such as React, Vue, js.

Updating virtual DOM is comparatively faster than updating the actual DOM. The virtual DOM is an in-memory representation of the real DOM elements generated by React components before any changes are made to the page.

Virtual DOM is just a copy of the original DOM kept in the memory and it is synced with the real DOM by libraries such as React DOM.

Virtual DOM has the same properties that of the Real DOM, but it lacks the power of directly change the content of the screen.

5) Real DOM v/s Virtual DOM?

Real DOM

Virtual DOM

* DOM represents the entire UI of your application.

* Its object has the same properties as a real DOM object, ~~but it takes the~~
~~real~~

* ~~It is~~ Manipulating is slower.

* Manipulating is much faster, because nothing gets drawn on screen.

* It is comparatively heavy.

* It is lightweight

* In Real DOM, you can directly change what's on the screen.

* It lacks the power to directly change what's on the screen

* When updated it will be affected.

* It can be updated without affecting real DOM.

6) What is Single Page Application?

A single page application is an application that loads a single HTML page and all the necessary assets required for the application to run. Any interactions with the page or subsequent pages do not require a round trip to the server which means that the page is not reloaded.

It is a web application or website that interacts with the user by dynamically rewriting the current webpage with new data from the webserver, instead of the default method of a web browser loading entire new pages.

Some examples are Gmail, Netflix.