**Introduction of react js…**

**Q:-1 What is React.js? How is it different from other JavaScript frameworks and libraries?**

* React.js is a JavaScript library used to build user interfaces (UIs), especially for websites that update often, like Facebook or Instagram. It helps developers make reusable pieces of code called components.
* **How is React.js different from other libraries or frameworks?**
* **React is a library**, not a full framework like Angular.
* It uses something called the **Virtual DOM**, which makes updates on the web page faster.
* It uses **components**, which are small parts of the UI you can reuse.
* It lets data flow in **one direction**, which makes apps easier to manage.

**Q:-2: Explain the core principles of React such as the virtual DOM and component- based architecture.**

* **Virtual DOM**
* The DOM is the structure of your web page.
* The Virtual DOM is a lightweight copy of the real DOM that React uses in the background.
* When something changes (like clicking a button), React updates the Virtual DOM first, compares it to the old one, and then only changes what's needed in the real DOM.
* This makes your app faster and smoother.
* **Component-Based Architecture**
* React breaks the UI into **small, reusable pieces** called **components**.
* Each component controls **its own part** of the web page.
* You can **reuse** components anywhere in your app.
* **Example**:  
  A website page can be split into components like:
* Header
* Sidebar
* Button
* Footer

**function Welcome() {**

**return <h1>Hello, User!</h1>;**

**}**

**Q:-3: What are the advantages of using React.js in web development?**

* You can build small parts (like buttons or forms) and use them again in other places.
* React uses a Virtual DOM, so only the parts that change are updated.
* This makes the website load faster.
* React uses simple JavaScript and looks like HTML (using JSX).
* Beginners can learn it quickly.
* React is made by Facebook and has a large developer community.
* You can easily find help, tools, and tutorials.
* Data moves in one direction, making the app easy to control and debug.
* Many popular websites (like Facebook, Instagram, Netflix) use React.