

## **Assignment - 6 : Soution**

### **Ques 1: What is a Microservice?**

**Solu 1:** Microservices are an architectural and organizational approach to software development where software is composed of small independent services that communicate over well-defined APIs. These services are owned by small, self-contained teams.

Microservices architectures make applications easier to scale and faster to develop, enabling innovation and accelerating time-to-market for new features.

### **Ques 2: What is Monolith architecture?**

**Solu 2:** Monolith arch. is a traditional way of developing softwares, where everything is kept in one place. Monolithic software is designed to be self-contained, wherein the program's components or functions are tightly coupled rather than loosely coupled, like in modular software programs.

### **Ques 3: What is the difference between Monolith and Microservice?**

**Solu 3: Monolith :** A monolithic architecture is a traditional model of a software program, which is built as a unified unit that is self-contained and independent from other applications.

Advantages : Easy deployment, Development, Performance, Simplified testing, Easy debugging.

**Microservice :** A microservices architecture, also simply known as microservices, is an architectural method that relies on a series of independently deployable services. These services have their own business logic and database with a specific goal.

Advantages : Flexible scaling, Continuous deployment, Highly maintainable and testable, Independently deployable, Technology flexibility.

### **Ques 4: Why do we need a useEffect Hook?**

**Solu 4:** The useEffect Hook allows you to perform side effects in your components. Some examples of side effects are: fetching data, directly updating the DOM, and timers. useEffect accepts two arguments, the callback function and the array of dependency.

By using this Hook, you tell React that your component needs to do something after render. React will remember the function you passed (we'll refer to it as our "effect"), and call it later after performing the DOM updates

```
useEffect(() => {}, []);
```

**Ques 5: What is Optional Chaining?**

**Solu 5:** The optional chaining (?.) operator accesses an object's property or calls a function. If the object accessed or function called is undefined or null, it returns undefined instead of throwing an error.

**Ques 6: What is Shimmer UI?**

**Solu 6:** Shimmer is a temporary animation placeholder for when a service call takes time to return data and we don't want to block rendering the rest of the UI.

**Ques 7: What is the difference between JS expression and JS statement?**

**Solu 7: JS Expression :** An expression is any word or group of words or symbols that is a value. Ex : const, let, 2, 4, s, a, true, false etc.

**JS Statement :** A statement is a group of expressions and/or statements that you design to carry out a task or an action. Ex const price = 500;

**Ques 8: What is Conditional Rendering, explain with a code example**

**Solu 8:** Conditional rendering is a term to describe the ability to render different user interface (UI) markup if a condition is true or false. In React, it allows us to render different elements or components based on a condition. Ex :

```
{isLoggedIn ? <button>Logout</button> : <button>Login</button>}
```

```
{isLoggedIn && <button>Logout</button>}
```

**Ques 9: What is CORS?**

**Solu 9:** Cross-origin resource sharing (CORS) is a browser mechanism which enables controlled access to resources located outside of a given domain.

**Ques 10: What is async and await?**

**Solu 10:** The async function declaration declares an async function where the await keyword is permitted within the function body. The async and await keywords enable asynchronous, promise-based behavior to be written in a cleaner style, avoiding the need to explicitly configure promise chains.

**Ques 11: What is the use of `const json = await data.json();` in getRestaurants()?**

**Solu 11:** `data.json()` is a method on the `Response` object that lets you extract a JSON object from the response. The method returns a promise, so you have to wait for the JSON: `await data.json()`.