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Assignment Questions 5

**Q.1** What’s difference between Synchronous and Asynchronous?

Ans:- **Synchronous** communication happens in real time, with both parties involved interacting with each other at the same time.

**Asynchronous** communication happens when information can be exchanged independent of time. The sender of the message does not need to wait for the recipient to be available to receive it.

**Q.2** What are Web Apis ?

Ans:- A Web API (Application Programming Interface) is a set of functions and procedures that allow two applications to communicate with each other. Web APIs are typically used to access data or services that are hosted on a remote server.

There are many different types of Web APIs

* **RESTful APIs**
* **SOAP APIs**
* **GraphQL APIs**

**Q.3** Explain SetTimeOut and setInterval ?

Ans:- **setTimeout()** and **setInterval()** are JavaScript functions that allow you to run code after a certain amount of time has passed. The main difference between the two functions is that **setTimeout()** only runs the code once, while **setInterval()** runs the code repeatedly at a specified interval.

**Q.4** how can you handle Async code in JavaScript ?

Ans:-   
There are two main ways to handle asynchronous code in JavaScript:

* Callbacks
* Promises

Callbacks are functions that are passed as arguments to other functions. They are used to handle the results of asynchronous operations.

**Promises** are a more modern way to handle asynchronous code in JavaScript. They are objects that represent the eventual completion (or failure) of an asynchronous operation.

**Q.5** What are Callbacks & Callback Hell ?

**Ans :- Callbacks** are functions that are passed as arguments to other functions. They are used to handle the results of asynchronous operations.

**Callback hell** is a problem that can occur when you use callbacks to handle the results of multiple asynchronous operations.

**Q.6** What are Promises & Explain Some Three Methods of Promise?

**Ans:-** Promises are a powerful tool in JavaScript that allow you to handle asynchronous code in a more concise and readable way

Promises have three main methods:

* resolve() is called when the asynchronous operation completes successfully.
* reject() is called when the asynchronous operation fails.
* then() is called when the asynchronous operation completes, whether successfully or not.

**Q.7** What’s async & await Keyword in JavaScript?

**Ans**:- The async keyword is used to declare an asynchronous function. An asynchronous function is a function that returns a promise. The await keyword is used to wait for the promise to resolve.

**Q.8** Explain Purpose of Try and Catch Block & Why do we need it?

**Ans:-** The try block will try to execute the code inside it. If the code inside the try block throws an error, the catch block will be executed. The catch block will catch the error and print it to the console.

The try and catch block are a powerful tool that can be used to handle errors in your JavaScript code.

**Q.9** Explain fetch?

**Ans:-** The fetch() method takes a URL as its argument and returns a promise. The promise will resolve with the response data, which can be a string, a JSON object, or an array of objects. The promise will reject with an error if the request fails.

**Q.10** How do you define an asynchronous function in JavaScript using async/await?

**Ans:-** An asynchronous function in JavaScript using async/await is defined using the async keyword. The async keyword tells the JavaScript interpreter that the function is an asynchronous function. The await keyword is used to wait for the promise to resolve.