1. useEffect []

dependency

1. forEach and map

forEach: return undefined

map: return a new array

1. npm & yarn

JavaScript package management tools for project dependencies.

yarn: speed, consistency, offline mode, version clarity

npm: stability, widespread adoption, scripts, incremental installs

yarn have better performance in large projects.

1. S3 deployment

Amazon S3 as a storage service is used to host static websites.

* **Create Bucket**: In AWS Management Console, create a new bucket with an unique name. Choose geographical location and configure permissions and other options.
* **Upload Static Files**: Upload static website files with AWS Management Console, AWS CLI (Command Line Interface), or S3 client tools (such as Cyberduck or AWS SDKs).
* **Static Website Hosting**: Enable "Static Website Hosting” and configure the index and error document.
* **Configure Domain and DNS**: Set DNS records of the domain at the domain registrar or DNS service provider to point to the S3 bucket's endpoint.
* **Enable HTTPS**: Configure an SSL/TLS certificate with AWS Certificate Manager (ACM) and associate that with CloudFront (if used) or S3 bucket configuration.
* **Updates**: Re-upload files or automate using CI/CD tools.

1. axios

JS library for making HTTP requests (get, post, put, delete) used in both browser and Node.js environments.

1. async/await & then/catch

async/await: try/catch for errors, preferred, only functions

then/catch: catch for errors, compatible, any promises

A computer screen with text and images

Description automatically generatedA computer screen with text

Description automatically generated

1. TypeScript

TypeScript is a superset of JavaScript. Any valid JavaScript is also valid TypeScript.

* Static Typing: Define types of variables, function parameters, and return types.
* Interfaces (not in JS) and Classes (ES6)
* Enums and Generics (Symbol in ES6)
* Modules (export in ES6)
* Type Inference (not in JS)

1. Docker and containerize backend
2. ‘Callback hell’ or ‘pyramid of doom’

A situation where nested callbacks result in code that looks like a deep and unreadable pyramid. This often occurs when multiple asynchronous operations depend on the results of previous operations.

A screen shot of a computer program

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‘Promise’ or ‘async/await’ could alleviate the issues. ‘Async’ before the function declaration indicates that the function will perform asynchronous operations; ‘await’ inside an ‘async’ function pauses the execution of the function util the promises is resolved/rejected.

1. Callback alternative

Promises, async/await, generators and yield, event emitters

1. Props drilling

Process of passing down properties through multiple levels of nested components in a React application. If a deeply nested component needs access to that data, props have to be passed through each intermediate component in the hierarchy.

Developers often consider React Context API, Redux or other state management libraries.

A screen shot of a computer program

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1. Redux / Recoil / MobX

Redux:

* **Store**: A centralized, immutable state container.
* **Actions**: Plain JavaScript objects describing changes.
* **Reducers**: Functions specifying how the state changes in response to actions.
* **Middleware**: Functions that have access to the actions before they reach the reducers.

Recoil:

* **Atoms**: Units of state.
* **Selectors**: Derivations of state.
* **React Hooks**: Use hooks like useRecoilState and useRecoilValue to interact.

MobX:

* **Observables**: State that can be observed.
* **Actions**: Functions that modify the state.
* **Reactions**: Side effects that are triggered when observables change.

Jest