**Week 14**

**14.1 Intro to NextJS**

* Crawlers initially didn’t run JS. They only went through HTML. The initial HTML file doesn’t necessarily has anything. When JS runs, it eventually puts things on DOM. You first get index.html file, then the script.js. This causes SEO issues and Waterfalling.
* NextJS applications cannot be scaled via CDNs. React can be because of caching.
* The root level layout.tsx creates a layout for page.tsx as well as all the internal routes.
* If you need SEO then it should be server side component.
* Every component by default is a server side component.
* Files which have onClick handler need to be added “use client” to tell Next that is a client side component. useState is also something that should be client side.
* You should not put everything in client component as it will take advantage of server side away.

**14.2 NextJS Backend**

* In NextJS, you can do one deployment for both FE and BE.
* NextJS lets you do async components in server side. This does not work on client side. React does not let you do async components.
* Async components lets you do server side rendering.
* While the await operation is stuck in page.tsx, loading.tsx would be shown.
* NextJS FE is not distributed through CDN. We use edge network.
* You can sacrifice loading and use statically generated pages so that crawler can read the page.
* In NextJS, the request to the backend is sent by the NextJS server and not by the browser. SSR.
* Only server components can be asynchronous and not client components.
* If our frontend is talking to our own server, we can put the database logic in the frontend .tsx file. As long as we don’t use “use client”, the backend logic won’t be sent to the browser.
* Use globalThis so that a single prisma client is used whenever a page gets hot reloaded.
* Server Actions lets you call the function both from the client and from the server. Browser (client) can sort of call the function.
* Whenever we’re creating a server action we need to specify “use server”. This is because when the browser would call it, it would have “use client”. “use server” tells the browser that the following function is server side.