

Assignment

❖ What is NPM?

- NPM is a package manager, where all the packages are stored in order to use it.
- We are using so many packages in our product one of them is React. It is itself a package and to manage this package we again need so many other packages to add some other functionality in it, some use to test it, some use to modify/add this and so on.
- NPM is basically a very essential thing in software development.

❖ What is Parcel/Webpack? Why do we need it?

- It's a bundler that bundles our app.
- We need it because it makes our app production ready and it basically plays a very important role and behind the scenes it is doing so much work in order to make our application faster, smoother, arranged, light-weight etc.

❖ What is .parcel-cache?

- It will be created at the time of build and it contains the cache of our project in order to fast up our build and rebuild in the production.

❖ What is NPX?

- NPX is a Node package eXecuter. It is a NPM runner and use to run the already installed packages in the NPM.

❖ What is the difference between Dependencies and DevDependencies?

- Dependencies are the packages that are required to run the application properly such as express, react, mongoose etc.
- DevDependencies are the packages that are not required to run the application but only in the development mode such as Babel-cli, eslint and mocha etc.

❖ What is Tree Shaking?

- On production build, if possible parcel arranging all the module in a same row rather than making a different scope for every module. Which we called “**Scope hosting**”. It will help in picking up the module when called and improve the run time and performance.

So parcel also analyze the import and export of each module and remove everything that isn't used.

This is called “**Tree Shaking**” or Dead Code elimination”

❖ What is Hot Module Replacement?

- When we are doing development and make any changes in the code then Hot Module Replacement automatically rebuilds the changes file and updates your app in the browser without a whole page refresh.

❖ List down your favorite 5 superpowers of parcel and describe any 3 of them in your own words.

- My 5 favorites are below.

1. HMR
2. Local Server
3. Caching
4. Bundling
5. Code Splitting

- Describe 3 are..

- Local Server

- So basically host our application locally in order to provide features where we can show the live pre-preview of our application and at the same time it is using HMR.

- Code Splitting

- So there is a method called bundle that creates a bundle with all our required files like all JS files, CSS files, HTML and so on. So when the number of files and size will increase then it will cost as downloading from the whole bundle at once and loading time will increase that's why we are doing this to reduce the load time and make our application fast and quick.

So now the question is how we are doing this? Basically our bundler is to apply the logic and split the code and bundle it in such a way so that application load time increases.

- Caching

- Caching is beautifully designed to make applications even faster so basically at the time of build it creates all the file data in caching so that it will cache the data and make the application faster.

- ❖ What is '.gitignore' ? what should we add and not add into it?

- So .gitignore is a file where we are mention the file that we don't want to push in the github.
- All the files that we will regenerate again will not push on github.

- ❖ What is the difference between package.json and package-lock.json.

- Package.json

- It's a configuration of our npm.
- It basically stores npm meta data like name, version, dependency etc.

- Package-lock.json

- It stores the exact version of all dependencies and its sub-dependencies.

- ❖ What is node_modules ? Is it a good idea to push that on git?

- Node module is a folder in node application where all the packages like react, redux, materialUI etc.. files are stored inside the application so that application can use them as per requirement.
- No, the node_module file can be generated later by using “npm install” command. So any file that can be regenerated that will not push on the git.

❖ What is the dist folder?

- **dist** is a development build of our project. So whenever we run parcel (npx parcel index.html) it will create a development build and create inside dist folder.

- ★ What is browserlists ‘Read about dif bundlers: vite, webpack, parcel.
- ★ Read about :^ caret and ~ tilda
- ★ Read about script types in html (MDN Docs)