Igniting the App

Npm is Everything but not a node package manager. It manages packages.
It is a repository where all the packages are hoisted.

Do npm init and it will create a package.json file

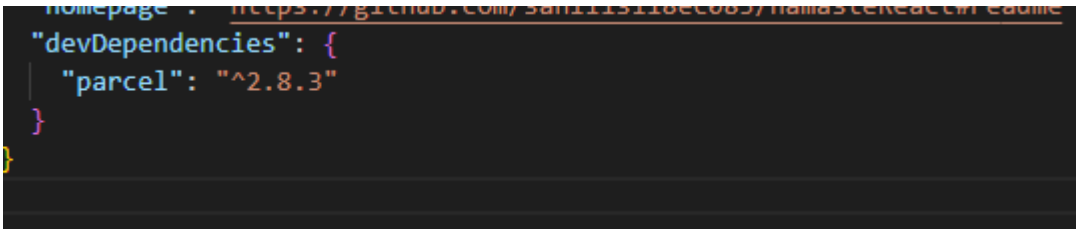
Now we are going to install some dependencies.

Webpack , parcel, vite these three are bundlers. These bundles are used to package and shipped our application to be pushed to production.
Even npx create react app uses web pack behind the scenes.
We will be using parcel. Parcel will ignite our application.

npm install -D parcel
There are two types of dependencies.

1. Normal dependency
2. Dev dependency

Dev dependency are used in dev phase, it is shown by -D
Npm contains all the packages. When we do npm install -D parcel
Our application will install parcel package from npm repository where parcel is hoisted.



Package.json will keep a track of all the package used in the application.

What is this ^ sign?
This is called a carrot.

Carrot vs tilde in package.json?
Right now the version of parcel available is 2.8.3
Suppose a new version 2.8.4 comes. IF we put a carrot parcel will automatically update it to 2.8.4
If there is a minor update and you put a carrot, it will update it to 2.8.4
For major updates like 3.0.1, we need to a tilde ~
It is safe to put a carrot because it is ok to update to minor versions and it is dangerous to update to major updates.

When we install parcel, we have got another package lock.json file

PACKAGE.JSON vs PACKAGE LOCK.JSON

PACKAGE.JSON keeps track of all the dependencies/ packages needed by the application.

PACKAGE LOCK JSON keeps track of the exact version that is being installed. It locks the version and keeps a record of the exact version.
PACKAGE.JSON can have a carrot or tilde but there is no tilde or caret in PACKAGE LOCK.JSON because it keeps note of the exact version.
So you should push both package.json and package lock.json to git. Package.json will tell whatever the dependencies needed to be installed and package lock.json will keep the exact version of dependencies and even if there is a carrot in package.json , it will install node modules as per version present in package lock.json

Why are so many packages downloaded when we only download parcel?

When we install parcel, it will have a dependency on some other package , and that other package may have a dependency on other package. So even if you are installing parcel, other packages will also be installed. This is called transitive dependency.
Thats why node modules are so huge. Because a package is dependent on other package and that is dependent on other and this chain continues.

Why we need .gitignore file?

Make a gitignore file and put all those things which you want to get tracked by git. Put them inside the gitignore file
Like this `/node_modules`

Donot put package and package lock file in gitignore because you want to get to know of which packages u want to get installed using package.json and if you want to install package you need packagelock.json.
Package.json and package lock.json will help us to download node modules