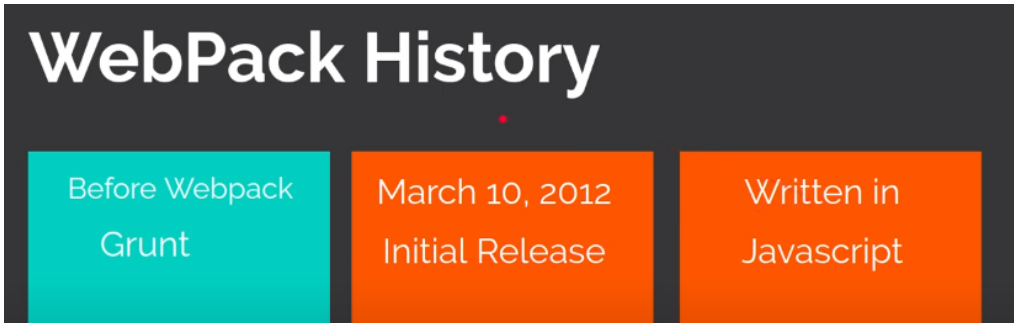
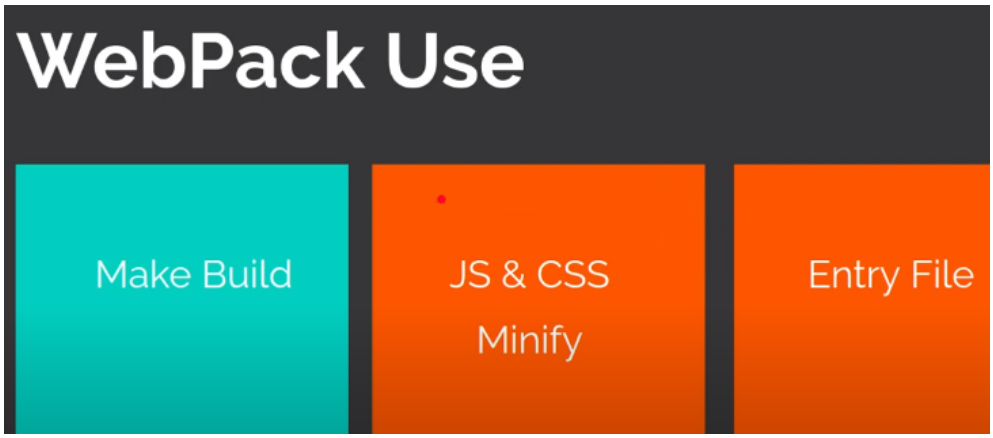
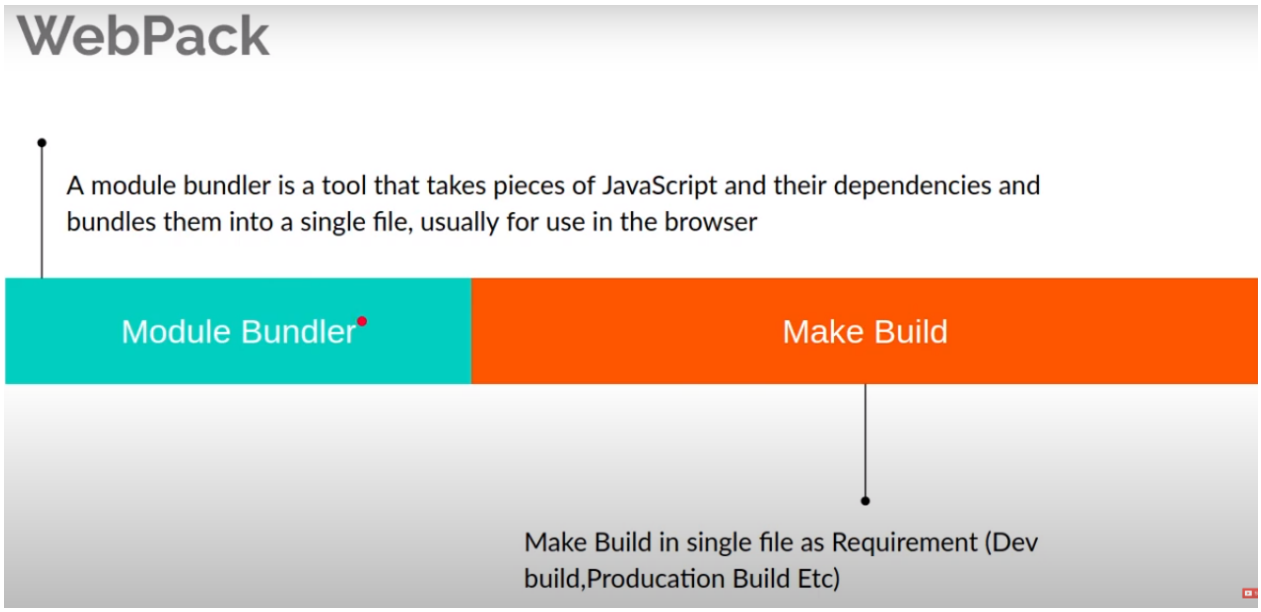
# Webpack

Webpack is used to compile JavaScript modules.




- **Build for basic JavaScript App:**
- Create a folder.

```
$mkdir <folder name>
```

- Create Package.json in CLI

```
$npm init -y
```

When you are the default config of webpack,you need two folders, one is dist and another is src.

In the dist folder,create a file index.html.
In the src,create a file index.js.

How can you bundle two files together,Install webpack dependency.

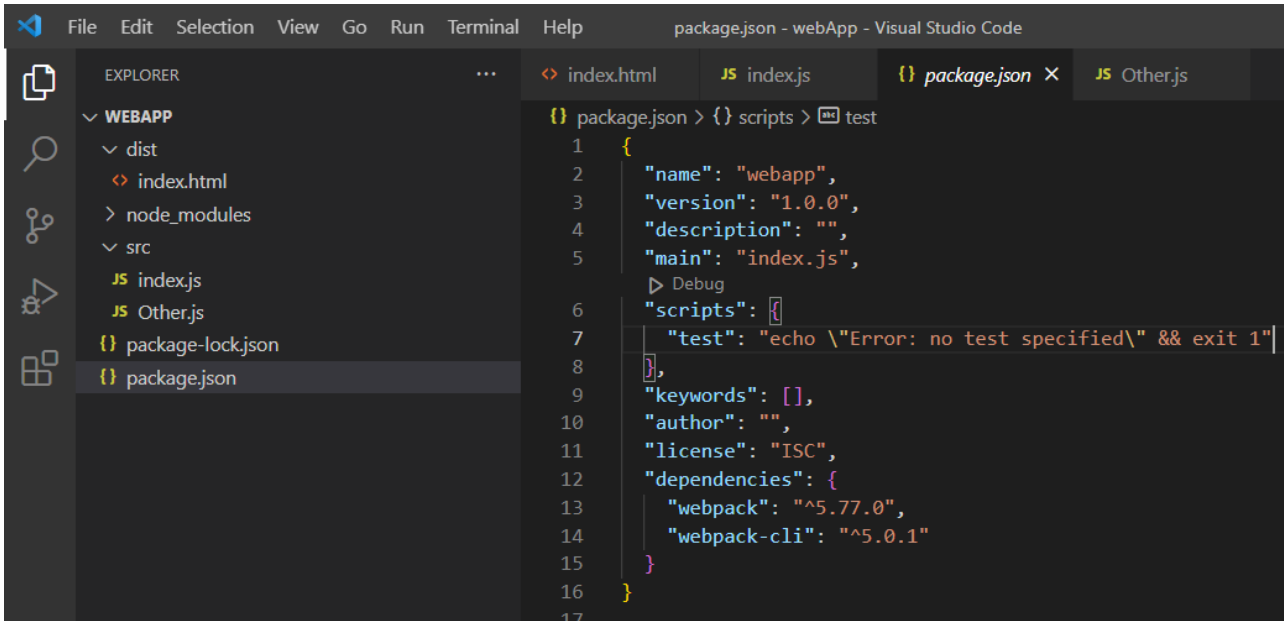
```
$npm i webpack webpack-cli - -save
```

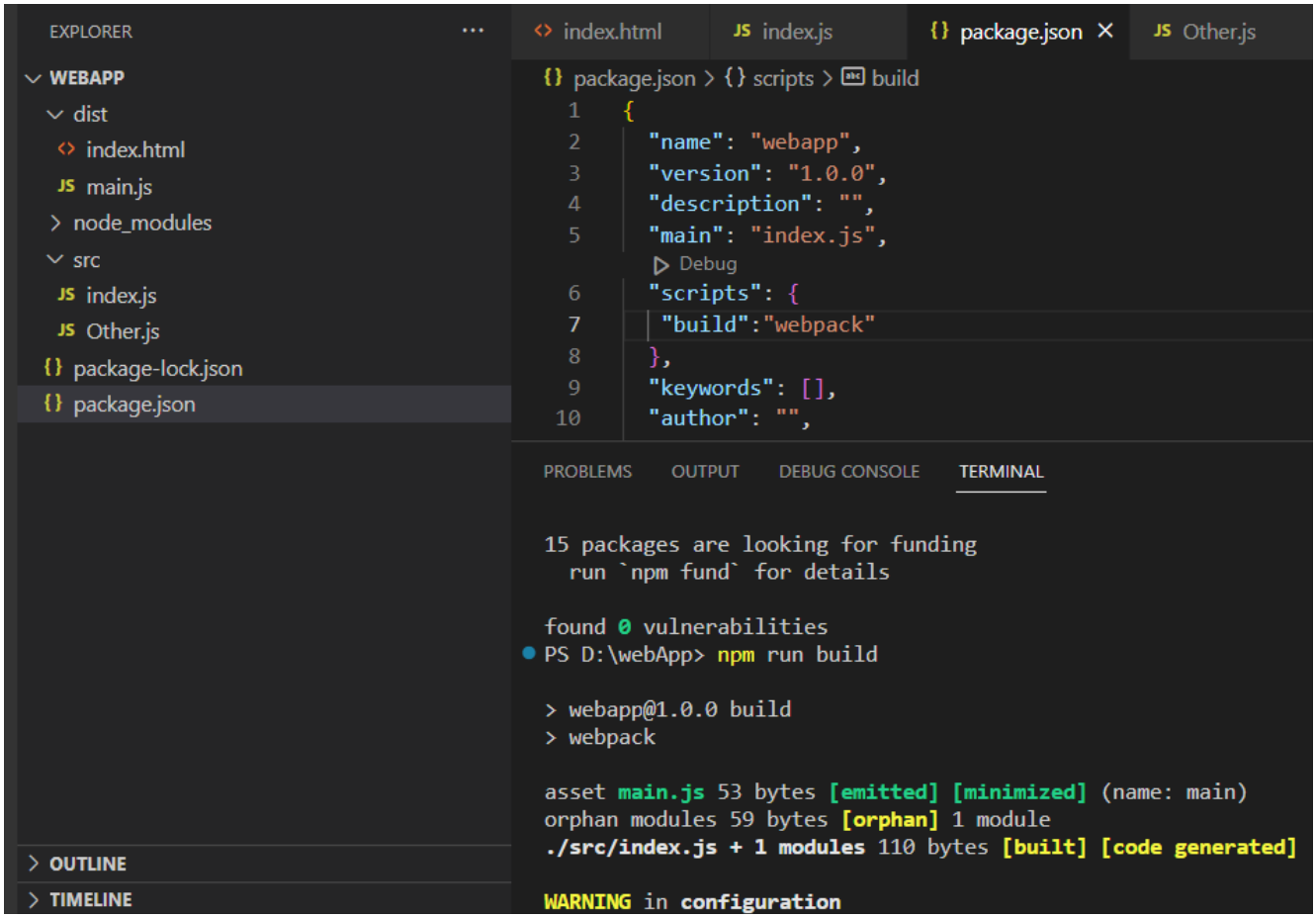
And a package. Json,in script,write “build”

```
“Build”:”webpack”
```

Run this in terminal:

```
$npm run <script Name>
$npm run build
```



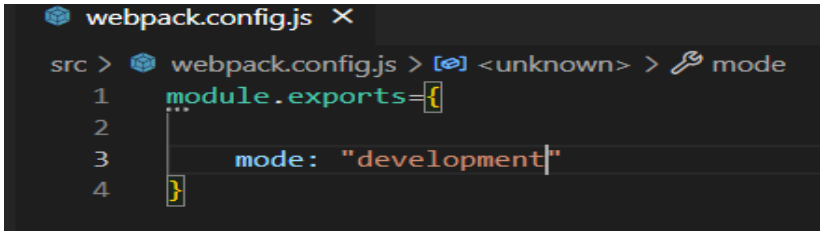



Then you see that one file is created,
Main.js

This file is known as a bundle of javascript.

## Make Config file

Make a default file for config file,Name of the default file is that webpack.config.js (In root folder).



Run this->> $npm run build

When it is in `development` and `production` mode,the main.js file will change to a different pattern.

**Mode: development**

```
// webpack.development.config.js
module.exports = {
  mode: 'development',
};
```

**Mode: production**

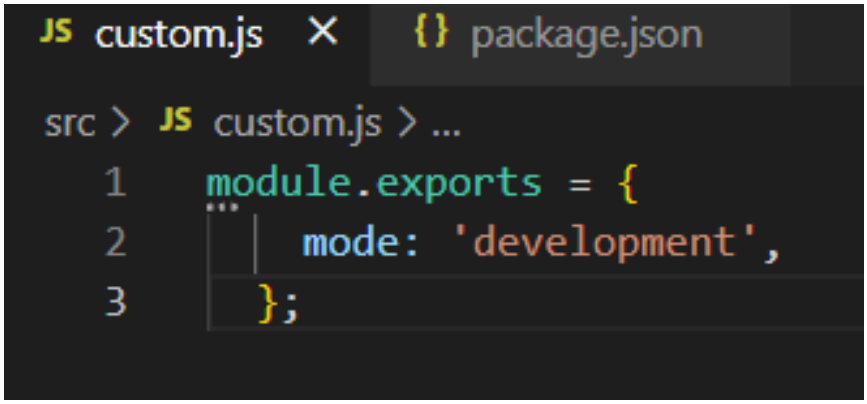
```
// webpack.production.config.js
module.exports = {
  mode: 'production',
};
```

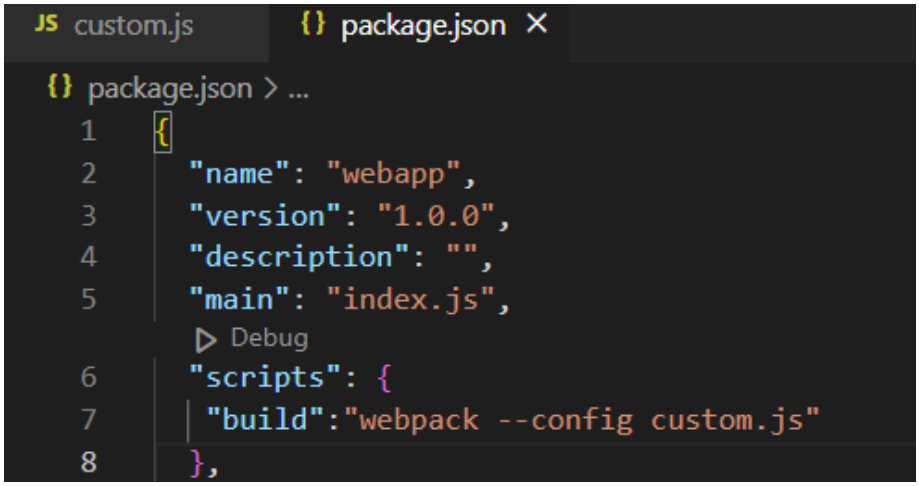
**Mode: none**

```
// webpack.custom.config.js
module.exports = {
  mode: 'none',
};
```

If you want to change the config name.
For an example->>>> custom.js

Then you write,in a package. Json file change in scripts,






Name syntax->>>

Build: "webpack --config <file Name>

NOTE: Always remember that webpack.config.js file is created in the root folder.

If your webpackmode is empty,then it will be in production mode.


Then you $npm run build

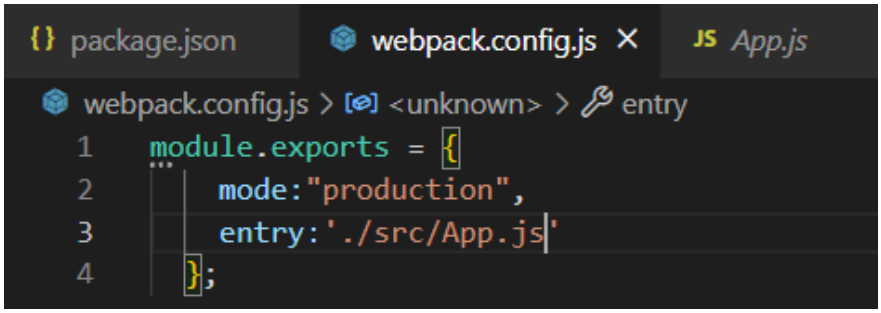
# Entry and Output file

By default,the entry file is index.js. And the output file is main.js,which is build file.

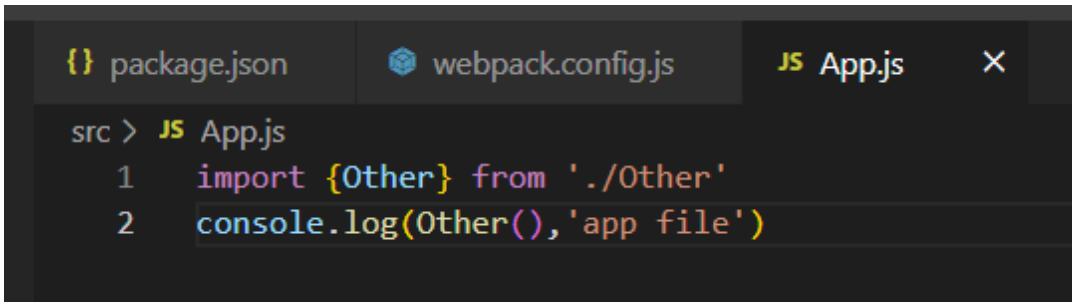
If you want to change input and output file name, For an example, index.js to app.js, main.js to <file name>

Define entry point->>

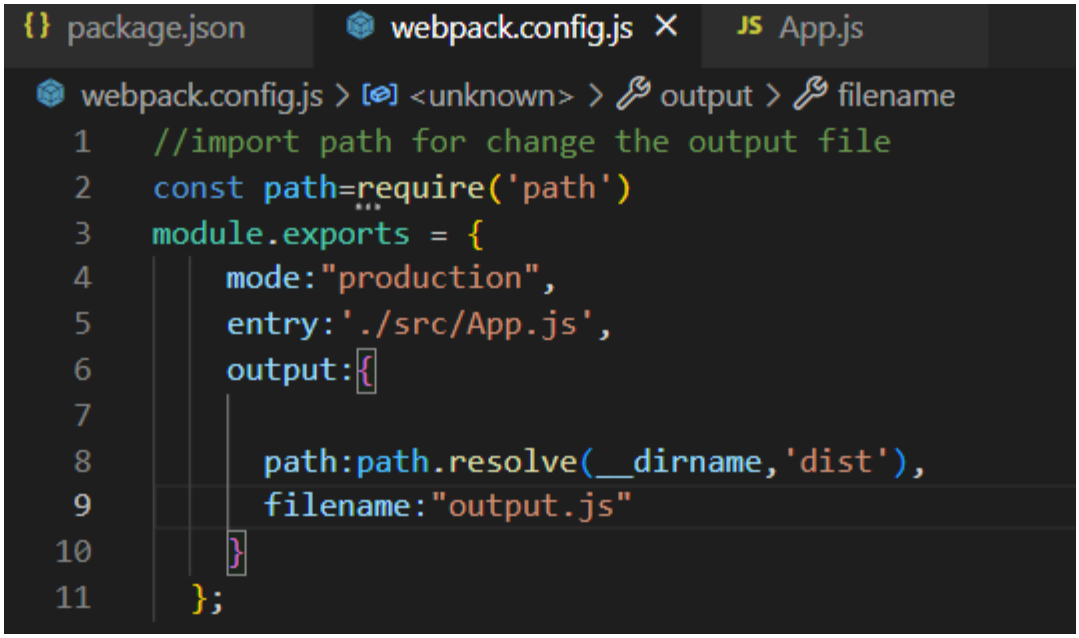
entry:'path name'




Entry file—->>

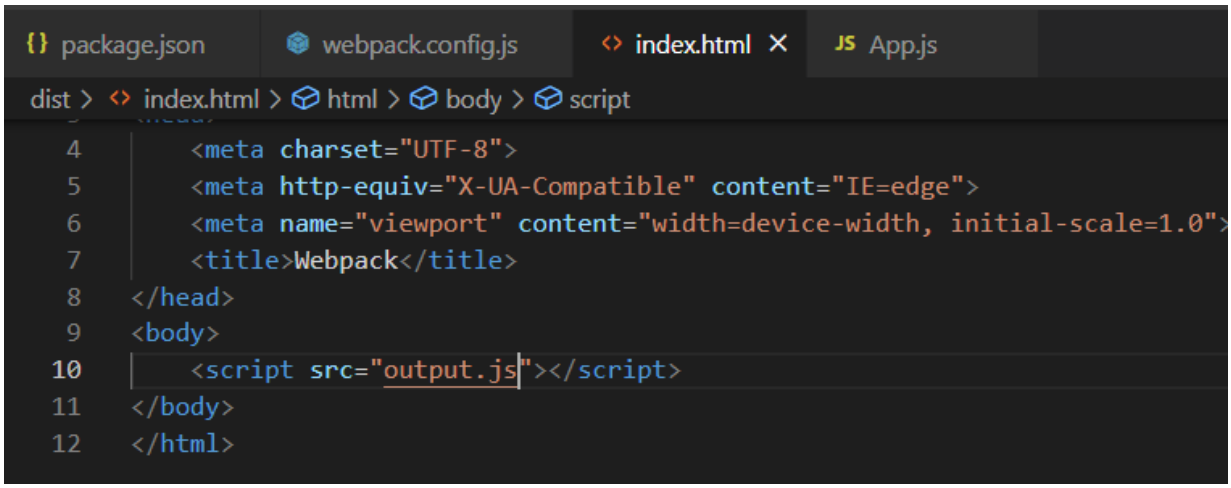



Now,Change the output file,(webpack.config.js)
Import path ,this path imports from node package.
In module.exports,define output with two things,one is path and another is file name.




Run this-->> $npm run build

These output files want to run,then also change in index.html's script.



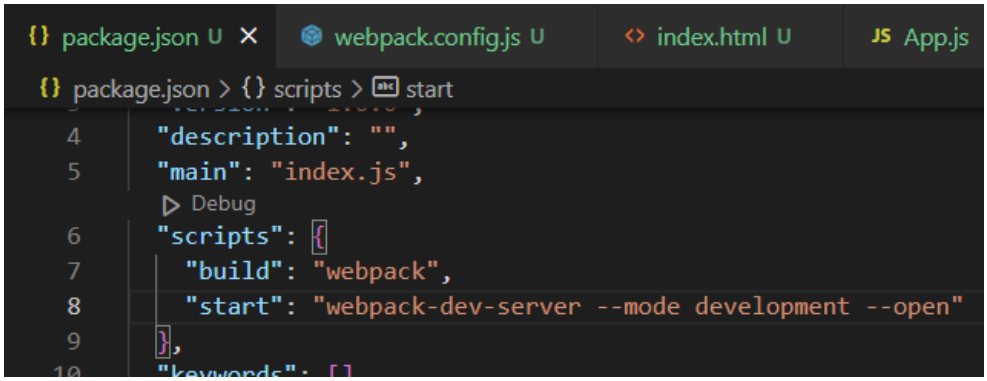

Run this output in the browser.

# Dev Server

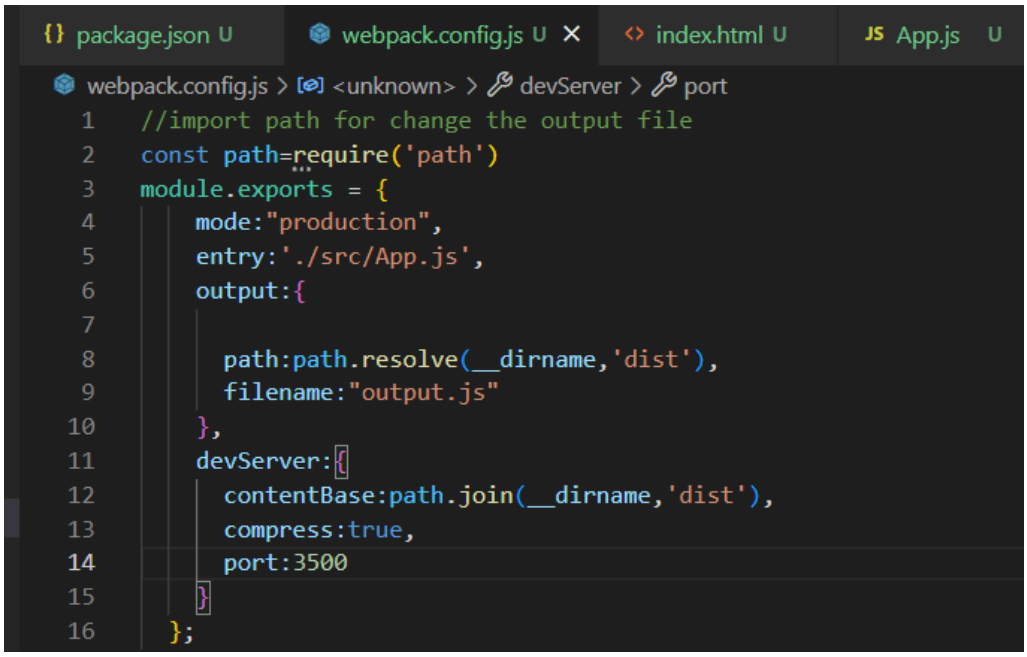
We want to It is automatically run.
Install webpack server or webpack dev server.
$npm i webpack-dev-server - -save-dev

Save-dev for dev dependencies.

Change the package.json,scripts->> starts



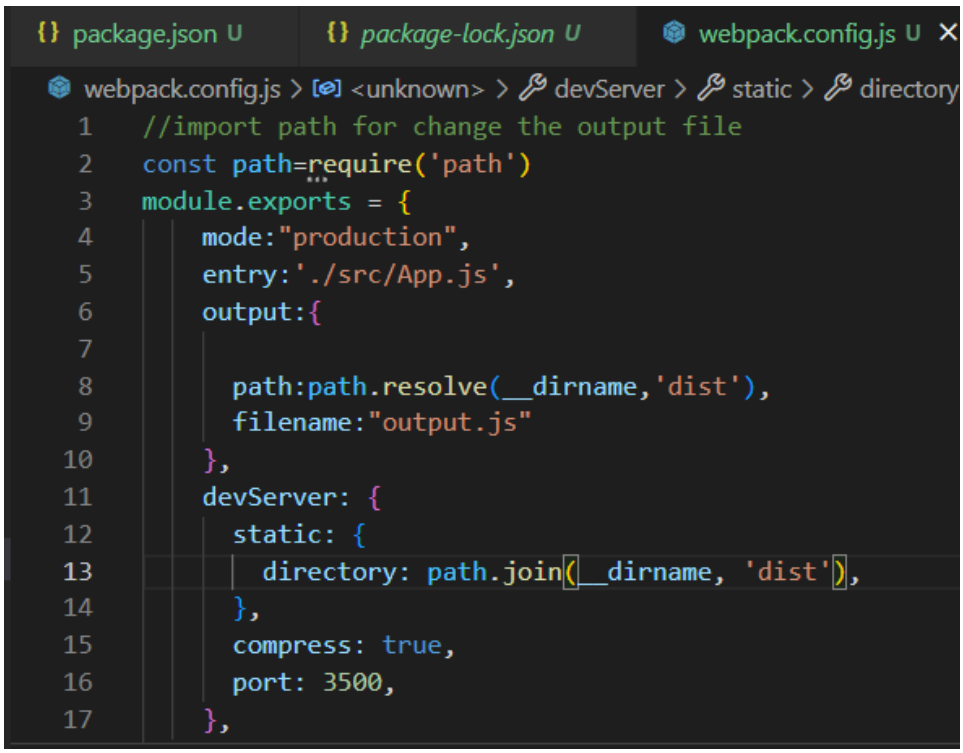

Change also webpack.config.js.




In devServer: 3 key value pair added- ->>
contentBase,compress,port.

Then this is run - ->

$npm start




Link->>>

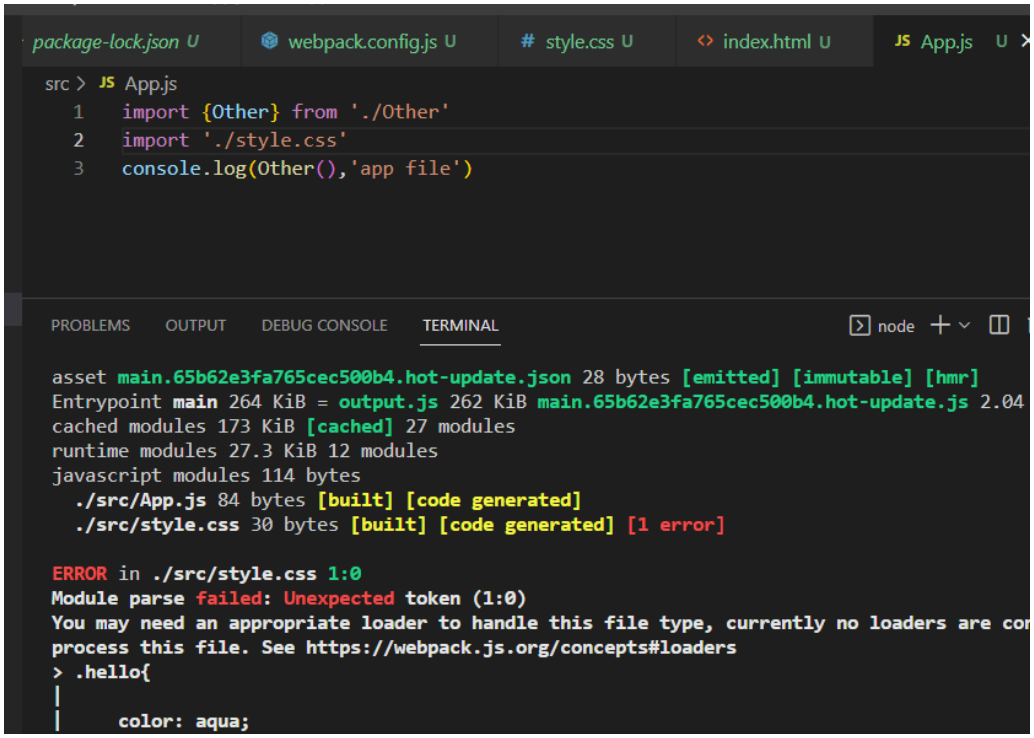
https://webpack.js.org/configuration/dev-server/#devserver

# CSS and style Loader

Use css and style with webpack.

Create file in src for styling.

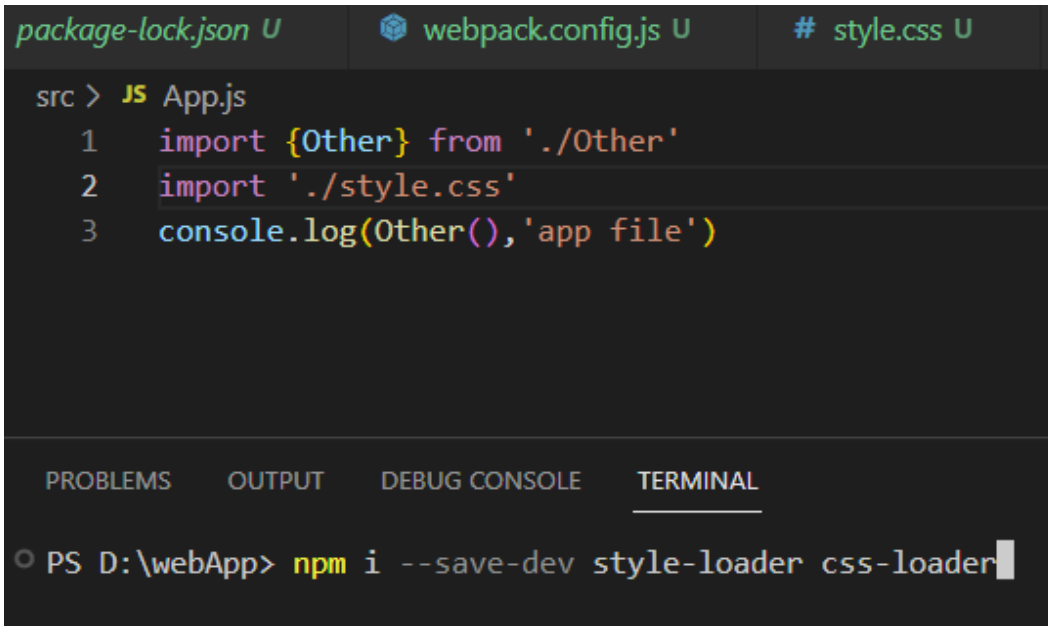
Import it into app.js,it is throwing an parse error.




How to resolve this error?

—>> For this install two packages for this,

One is a style-loader and another css-loader.



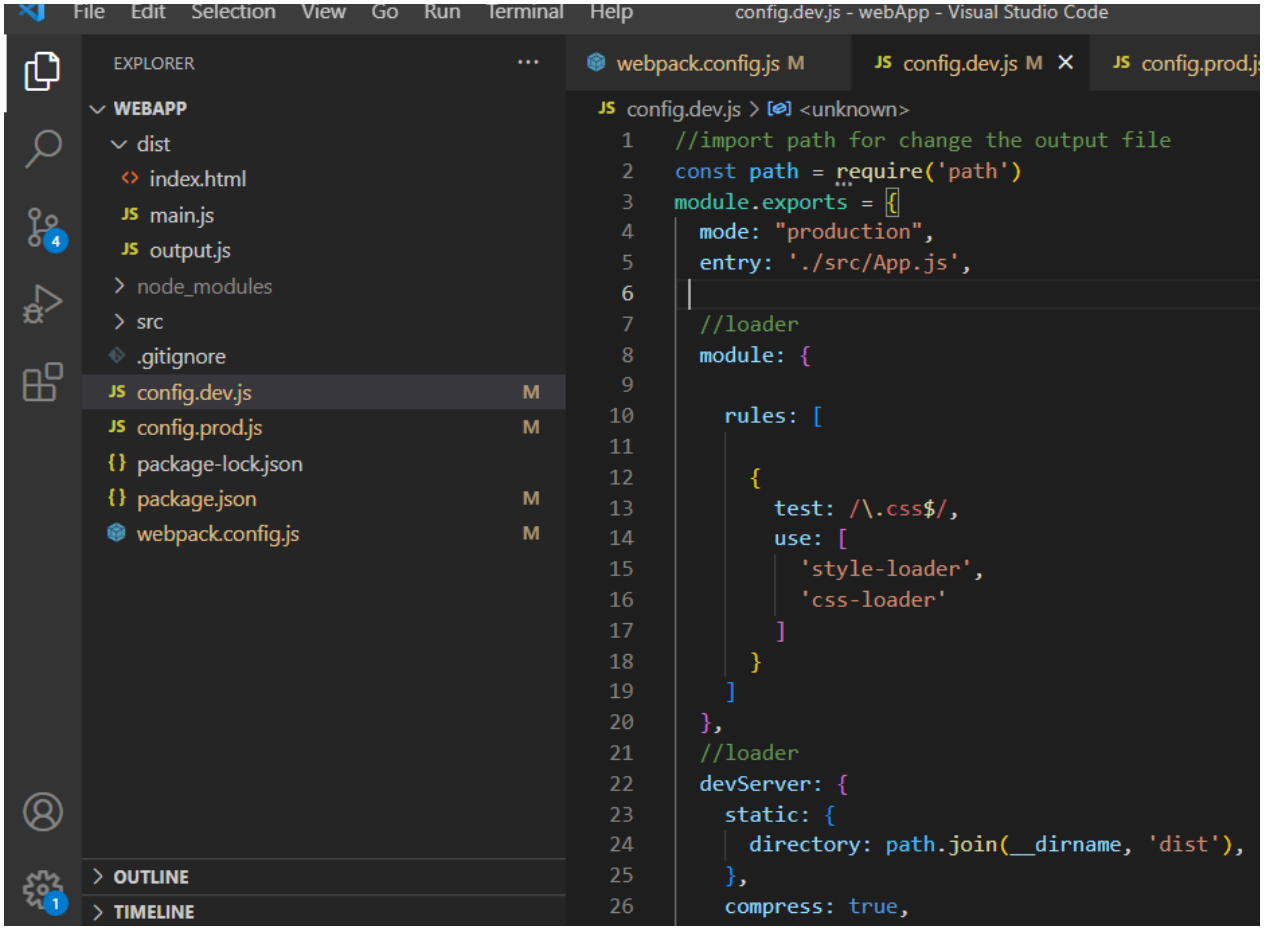

Some code written into webpack.config.js.

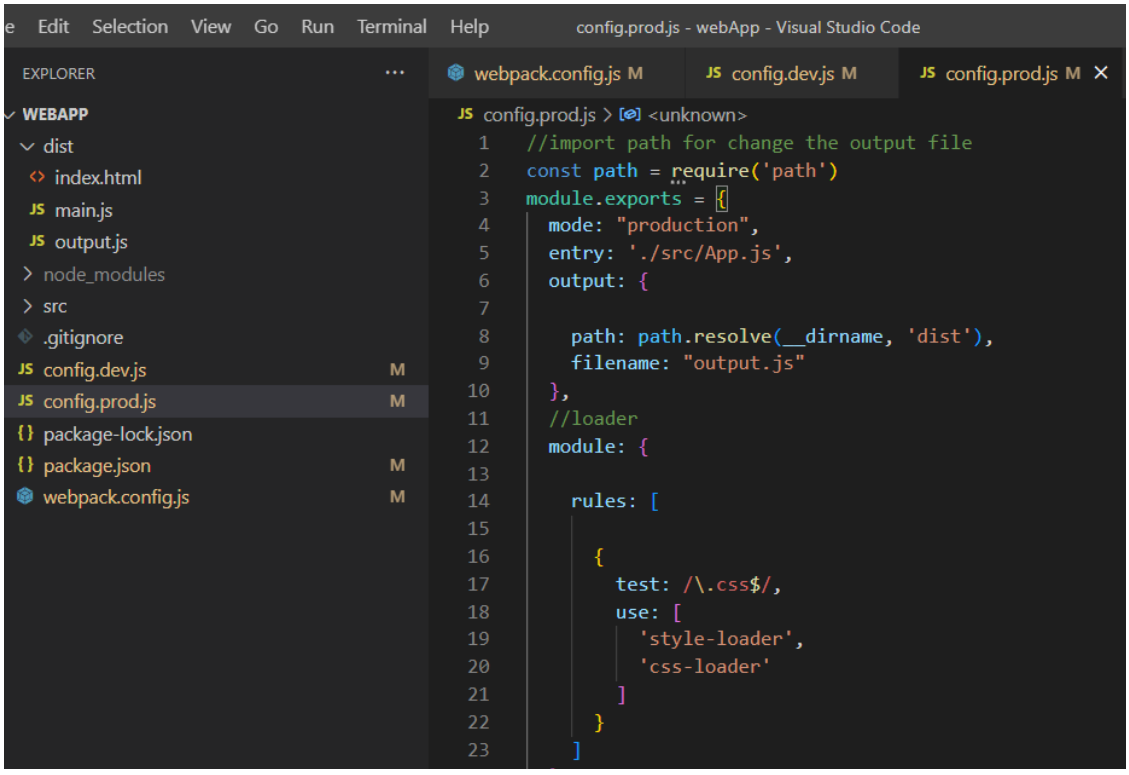

Run this css—> $npm start

## Different config file environments

How to create files for different mode, production and development environments.

For an example—-> create two files,like config.dev.js and config.prod.js.


File Edit Selection View Go Run Terminal Help
config.dev.js - webApp - Visual Studio Code
EXPLORER
WEBAPP
dist
index.html
main.js
output.js
node_modules
src
.gitignore
config.dev.js M
config.prod.js M
package-lock.json
package.json M
webpack.config.js M
OUTLINE
TIMELINE
webpack.config.js M
config.dev.js M
config.prod.j
config.dev.js > <unknown>
1 //import path for change the output file
2 const path = require('path')
3 module.exports = {
4 mode: "production",
5 entry: './src/App.js',
6
7 //loader
8 module: {
9
10 rules: [
11
12 {
13 test: /\.css$/,
14 use: [
15 'style-loader',
16 'css-loader'
17 ]
18 }
19 ]
20 },
21 //loader
22 devServer: {
23 static: {
24 directory: path.join(__dirname, 'dist'),
25 },
26 compress: true,


e Edit Selection View Go Run Terminal Help
config.prod.js - webApp - Visual Studio Code
EXPLORER
WEBAPP
dist
index.html
main.js
output.js
node_modules
src
.gitignore
config.dev.js M
config.prod.js M
package-lock.json
package.json M
webpack.config.js M
webpack.config.js M
config.dev.js M
config.prod.js M
config.prod.js > <unknown>
1 //import path for change the output file
2 const path = require('path')
3 module.exports = {
4 mode: "production",
5 entry: './src/App.js',
6 output: {
7
8 path: path.resolve(__dirname, 'dist'),
9 filename: "output.js"
10 },
11 //loader
12 module: {
13
14 rules: [
15
16 {
17 test: /\.css$/,
18 use: [
19 'style-loader',
20 'css-loader'
21 ]
22 }
23 ]

Start development server->>>

```
$npm start
```

Start production server->>>

```
$npm run build
```