

# Angular-8

## Angular dev build vs prod build

**Presentation BY RAJ PRUDHVI**

Contact us: <https://training.uplatz.com>

Email: [info@uplatz.com](mailto:info@uplatz.com)

Phone: +44 7836 212635



# Angular dev build vs prod build

- To generate a development build we can use

**ng build**

- To generate a production build we use

**ng build --prod**

# Differences between dev build and prod build

**Source Maps** : Development build generate Source Maps where as production build does not.

## What are Source Maps

To improve the performance, the application's JavaScript and CSS files are combined and compressed. It is extremely difficult to debug those compressed files. A source map holds information about the original files and can be used to map the code within a compressed file back to it's original position in a source file.

So with the help of these source maps we can easily debug our applications even after the files are compressed and combined.

# Differences between dev build and prod build

By default, a development build produce source maps where as a production build does not. However, we can change this default behavior by using **--source-map** option along with the ng build command.

The following command produces a development build without source maps

```
ng build --source-map=false
```

On the other hand, if you want source maps along with your production build

```
ng build --prod --source-map=true
```

# Differences between dev build and prod build

**Extracts CSS** : With the development build global styles are extracted to .js files where as with the production build they are extracted to .css files. To change this default behavior use **--extract-css** option

The following command produces a development build with global styles extracted to .css file(s) instead of .js ones.

**ng build --extract-css**

# Differences between dev build and prod build

**Minification & Uglification** : A Prod Build is both minified and uglified, where as a Dev Build is not.

## What is Minification

The process of removing excess whitespace, comments, and optional tokens like curly brackets and semicolons is called Minification.

## What is Uglification

The process of transforming code to use short variable and function names is called uglification.

The minified and uglified version of the file is smaller in size than the full version, resulting in faster response times and lower bandwidth costs.

# Differences between dev build and prod build

**Tree Shaking** : A Prod build is Tree Shaked, where as a Dev build is not.

## What is Tree Shaking

Tree shaking is the process of removing any code that we are not actually using in our application from the final bundle. It's one of the most effective techniques to reduce the application size.

If you look at the bundles generated by the production build, they are significantly less in size compared with the bundles generated by the development build. This is because with the production build the code is tree shaken to remove dead code i.e the code that is not referenced by the application.

# Differences between dev build and prod build

**Ahead-of-Time (AOT) Compilation :** With a production build we get AOT (Ahead-of-Time) compilation, i.e. the Angular component templates are pre-compiled, where as with a development build they are not.

| Feature      | Development Build | Production Build |
|--------------|-------------------|------------------|
| Source Maps  | Yes               | No               |
| Extracts CSS | .js file          | .css file        |
| Minifaction  | No                | Yes              |
| Uglification | No                | Yes              |
| Tree Shaking | No                | Yes              |
| AOT          | No                | Yes              |





Thank You

Contact us: <https://training.uplatz.com>

Email: [info@uplatz.com](mailto:info@uplatz.com)

Phone: +44 7836 212635

