Angular Training

Intermediate Level

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Setup:

- Node Version:

```
node --version
```

- OPTUM’s npm registry:

```
npm config set registry https://repo1.uhc.com/artifactory/api/npm/npm-virtual/ --global
```

- Angular setup:

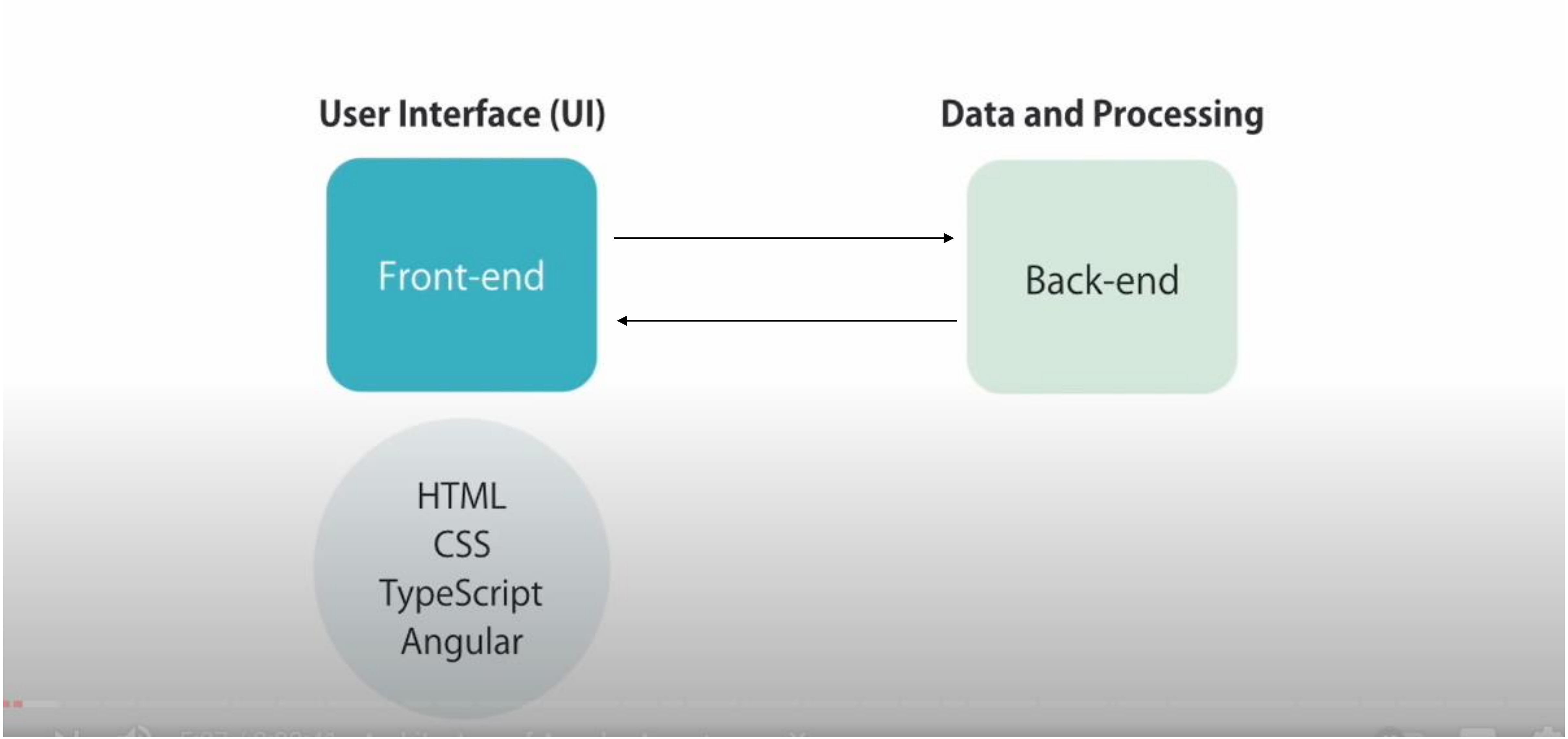
```
npm install -g @angular/cli
```

Create a workspace and initial application

Cmd: ng new my-app

- No for strict type checking.
- Select Yes(Y) for Routing.
- Select SCSS for Styling.
- Download VS code Editor.
  Link: https://code.visualstudio.com/download

Angular Basics



User Interface (UI)

Data and Processing

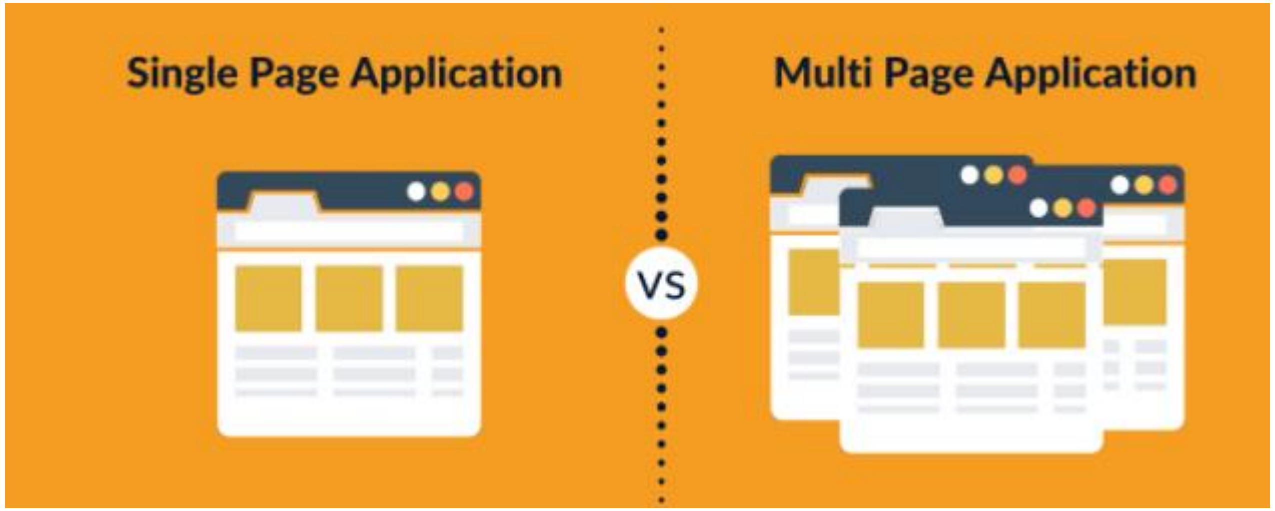
Front-end

Back-end

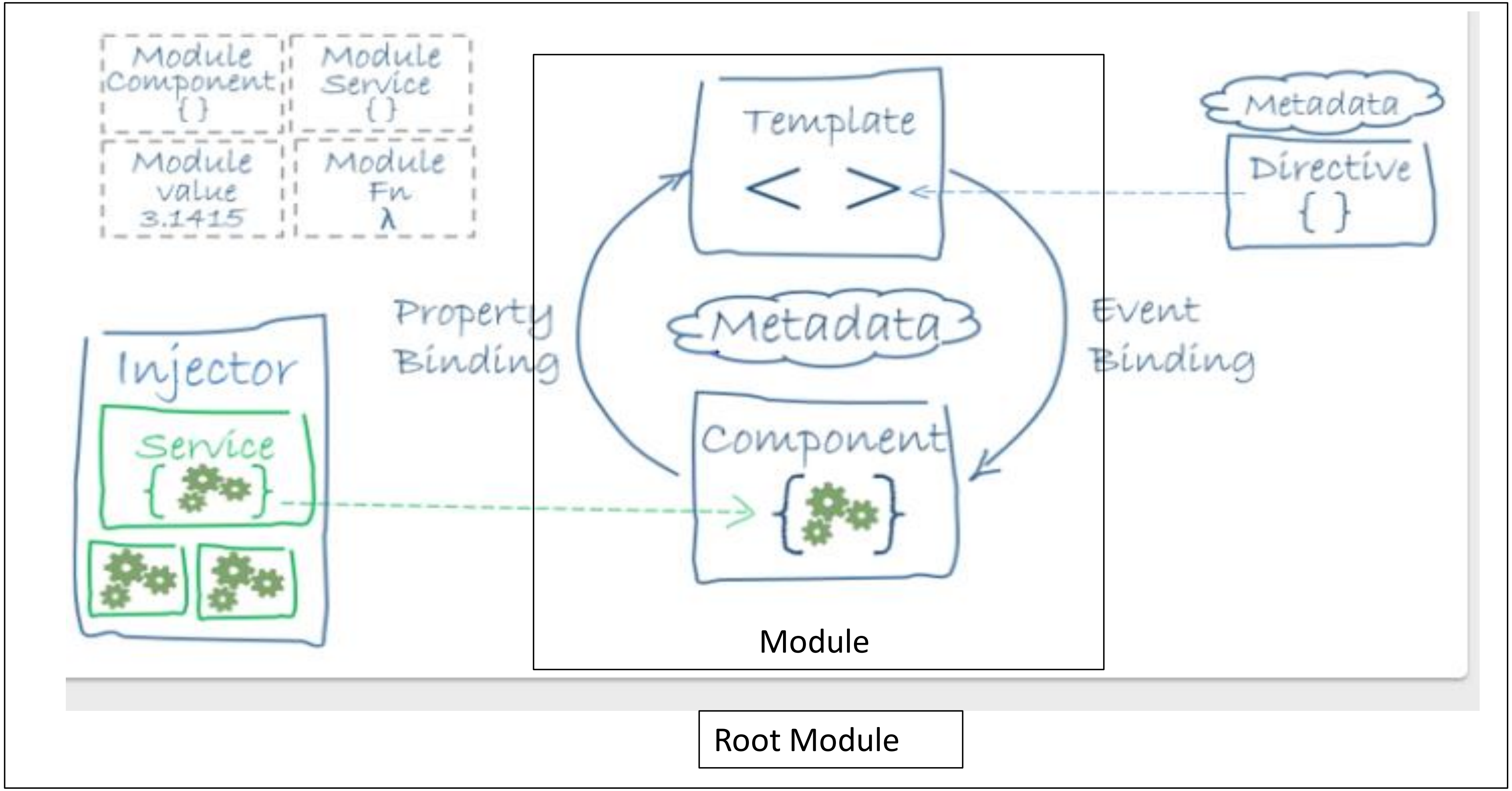
HTML
CSS
TypeScript
Angular

Angular Basics

- Applications that are contained within one web page are called single-page applications (SPA).
- All the views are displayed in one page i.e., “index.html”.



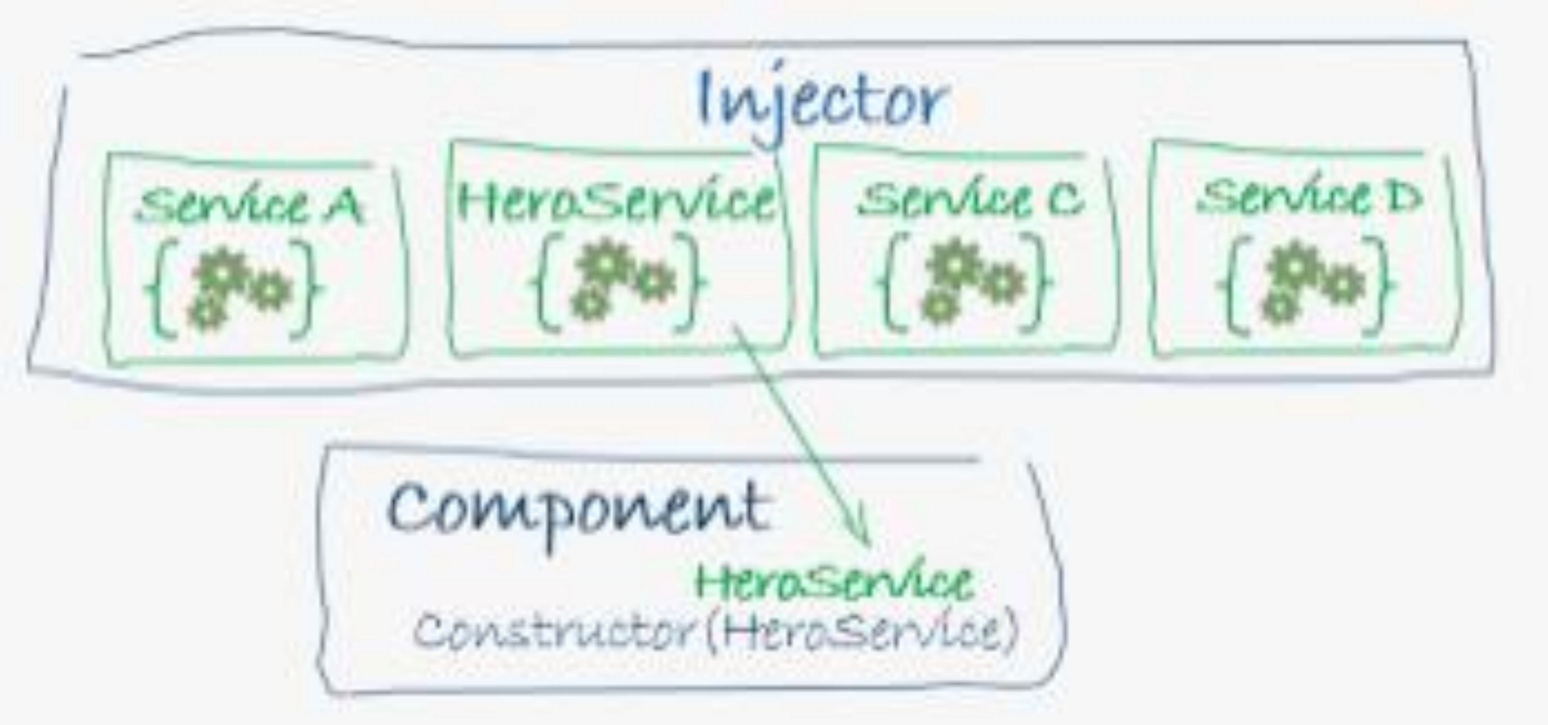
Angular Architecture



Module

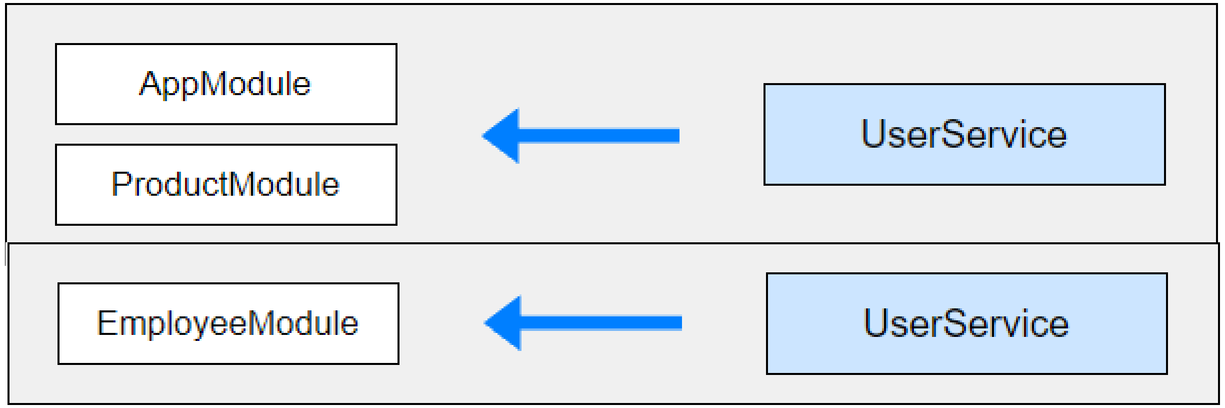
Root Module

Dependency Injection



Provider Scope

- Root Module Level (Application Level).
- Module Level.
- Component Level.
- Root Module (Application Level) & Lazy Loaded Module Level (Lazy Loaded Module’s unique instance).



Angular Modularity

- Modules are a great way to organize an application and extend it with capabilities from external libraries.

- The Angular framework itself is a set of JavaScript modules.

- Frequently used Angular modules :
  - BrowserModule
  - CommonModule
  - FormsModule
  - ReactiveFormsModule
  - RouterModule
  - HttpClientModule

Types of Modules

- Root Module
- Core Module
- Feature Modules
- Routing Modules
- Shared Modules
- Service Module

Routing

- Routing allows us to navigate through all the views by configuring the route for each component that will display a view.
- **Navigating through Angular Application Routes**
  - Menu option, link, image, buttons chained with click events activates a route.
  - Typing the URL in URL address bar.
  - Browser’s forward, backward buttons.
- Route Configuration

Eg:
```
<base href=“/”> // index.html
RouterModule.forRoot([
{ path: ‘home', component: BbbCompComponent } ]), //AppModule.ts
```

Route declarations

```
const routes: Routes = [
// maps specific URL path segement
          { path: 'home', component: PcompComponent },

// specifies a router param and maps the specific URL path segment
          { path: 'product/:id', component: ProductDetailComponent },

// specifies & maps a empty route
          { path: '', redirect: 'home‘, pathMatch: ‘full'},

// specifies & maps a wildcard path route
          { path: '**', component: PageNotFoundComponent}];
```

Location Strategies in Angular Router

- **HashLocationStrategy**
  Eg: http://localhost:4200/#/product
  - uses the anchor tags technique to achieve client-side routing.
- **PathLocationStrategy**
  Eg: http://localhost:4200/product
  - HTML5 allows browsers to programmatically alter the browser’s history through the history object.
  - Default strategy in Angular application