
# Angular 16 : Online Class

# Routing

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# Router-outlet

Router-outlet in Angular works as a placeholder which is used to load the different components dynamically based on the activated component or current route state. Navigation can be done using router-outlet directive and the activated component will take place inside the router-outlet to load its content.

To enable routing, we need to use router-outlet into our HTML template like this.

```
<router-outlet></router-outlet>
```

# Wildcard Route

**Wildcard** route to intercept invalid URLs and handle them gracefully.

A *wildcard* route has a path consisting of two asterisks (* *).

It matches *every* URL, the router will select *this* route if it can't match a route earlier in the configuration. A wildcard route can navigate to a custom "404 Not Found" component or redirect to an existing route.

```
{ path: '**', component: PageNotFoundComponent }
```

If the entire router configuration is processed and there is no match, router navigation fails and an error is logged.

**Note:**
If you add a wildcard route as the first route, no other routes would be reached and the wildcard route would always be matched. As a result, you should always add a wildcard route as the last route in your router configuration.

# Redirecting Routes

A redirect route that translates the initial relative URL (") to the desired default path ( component-one)
When application starts, it navigates to the empty route by default. We can configure the router to redirect to a named route by default:

A router has no routes until you configure it.

```
export const routes: Routes = [
{ path='', redirectTo: 'component-one', pathMatch: 'full' },
path: 'component-one', component: ComponentOne
{ path: 'component-two', component: ComponentTwo
l;
```

# Redirecting Routes

- This route redirects a URL that fully matches the empty path to the route whose path is 'component-one‘
- **A redirect route requires a pathMatch property to tell the router how to match a URL to the path of a route. The router throws an error if you don't.**
- For the special case of an empty URL we also need to add the pathMatch: 'full' property so Angular knows it should be matching exactly the empty string and not partially the empty string.

# Difference between Href and routerLink

## Href

it stands for hyper reference , generally used for making link to switch between multiple pages for simple HTML. href is html anchor tag attribute to navigate to another page. Here a new page will be loaded.

## RouterLink

RouterLink is used to achieve the same functionality but angular 2 or above are single page applications, where the page should not reload. RouterLink navigates to New Url and the component is rendered in place of routeroutlet without reloading the page.

**routerLink** - functionality similar to href but this is in the form of angular2, means to say that routerLink is used in angular 2 for routing purpose and behind the scene routerLink is being converted into href for switch between pages (routes in angular's term)

# Difference between [routerLink] and routerLink

## [routerLink]

When you use brackets, it means you're passing a bindable property (a variable).

```
<a [routerLink]="routerLinkVariable"></a>
```

So this variable (routerLinkVariable) could be defined inside your class and it should have a value like below:

```
export class myComponent {
    public routerLinkVariable = "/home"; // the value of the variable is string!
}
```

But with variables, you have the opportunity to make it dynamic right.

```
export class myComponent {

    public routerLinkVariable = "/home"; // the value of the variable is string!

    updateRouterLinkVariable(){

        this.routerLinkVariable = '/about';
    }
```

# Difference between [routerLink] and routerLink

**[routerLink]**

The other specialty about using brackets specifically for routerLink is that you can pass dynamic parameters to the link you're navigating to:

So adding a new variable

```
export class myComponent {
        private dynamicParameter = '129';
        public routerLinkVariable = "/home";
}
```

Updating the [routerLink]

```
  <a [routerLink]="[routerLinkVariable,dynamicParameter]"></a>
```

When you want to click on this link, it would become:

```
  <a href="/home/129"></a>
```

**routerLink**

Where as without brackets you're passing string only and you can't change it, it's hard coded and it'll be like that throughout your app.

```
<a routerLink="/home"></a>
```

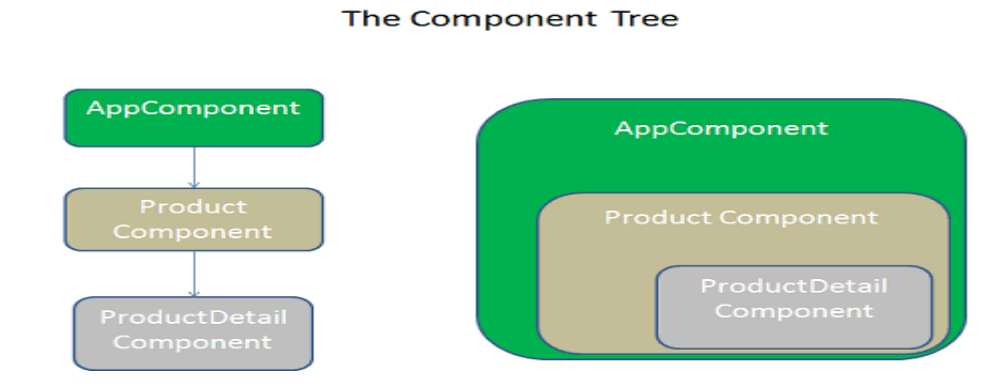
# Child Routes / Nested Routes

The Angular 2 and above applications are based on the idea of Components. The Components follows a Tree structure, where we have a root component at the top. We can then add child components forming loosely coupled components resembling a Tree.

The Routes in Angular also follows the component tree structure and allows us to define the nested or child routes.

Example

Consider the following Component Tree



# Child Routes / Nested Routes

Example

```
const routes: Routes = [
{ path: '', redirectTo: 'dashboard', pathMatch: 'full' },
{ path: 'dashboard', component: DashboardComponent },
{ path: 'about', component: AboutComponent },
{ path: 'contact', component: ContactComponent },

{
path: 'student',
children: [
{ path: '', component: StudentComponent , pathMatch: 'full' },
{ path: 'studentdetails', component: StudentdetailsComponent },
{ path: 'studentregistration', component: StudentregistrationComponent },
]
},

{ path: '**', component: PagenotfoundComponent },
];
```