GFT

Angular routing

GFT INTERNAL TRAINING

INNOVATE. TRANSFORM. DELIVER.

Router

- Angular Router is an optional service that presents a particular view (set of components) for a given URL
- it is not part of the Angular core. It is in its own library package, @angular/router
- to use it import what you need from it

```
import { RouterModule, Routes } from '@angular/router';
```

Agenda

1. Configuring Routes
2. Navigation
3. Route parameters
4. Angular router overview
5. since Angular 7
6. Learning resources

Configuring Routes

Base URL Tag

The Base URL tag must be set within the <head> tag of index.html

```
<html>
<head>
  <meta charset="utf-8">
  <title>Prueba1</title>
  <base href="/">
  <meta name="viewport" content="width
  <link rel="icon" type="image/x-icon"
</head>
```

Routes definition object

Routes type -> array of routes that defines the routing for the application

```
const routes: Routes = [
  { path: '', redirectTo: '/about', pathMatch: 'full' },
  { path: 'about', component: AboutComponent },
  { path: 'list', component: ListComponent },
  { path: 'add', component: AddComponent },
  { path: 'detail/:id', component: DetailComponent },
  { path: '**', component: NotFoundComponent }
];
```

Route properties

- **path** -> URL to be shown in the browser when app is on this route
- **component** -> component to be rendered when the app is on this route
- **redirectTo** -> redirect route
- **pathMatch** -> defaults to 'prefix'; determines whether to match full URLs or just the beginning. When defining a route with “” set pathMatch to 'full', otherwise it will match all paths
- **children** - array of route definitions objects representing the child routes of this route

https://angular.io/api/router/Routes

- ...

Routes definition object

- each route has a path
- each route has a component or a redirect
- order of the routes in the configuration matters, because the router uses a first-match wins strategy when matching routes => more **specific routes should be placed above** less specific routes
- therefore the wildcard will be always the last because it matches every URL and should be selected only if no other route has been matched first

```
{ path: 'add', component: AddComponent },
{ path: 'detail/:id', component: DetailComponent },
{ path: '**', component: NotFoundComponent }
```

Router module configuration

```
import { RouterModule } from '@angular/router';
```

```
@NgModule({
  declarations: [
    AppComponent,
    HelloWorldComponent
  ],
  imports: [
    BrowserModule,
    FormsModule,
    HttpModule,
    RouterModule.forRoot(routes)
  ],
```

routes: array with the app routing

Router outlet

where the components of the routes will be render

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

Navigation

Navigation with links

```
<nav>
  <ul>
    <li><a routerLink="/home" routerLinkActive="active">Home</a></li>
    <li><a routerLink="/login" routerLinkActive="active">Login</a></li>
    <li><a routerLink="/about" routerLinkActive="active">About us</a></li>
  </ul>
</nav>
```

path

class added by router to the link when it is active

Navigation programmatically

```
import { Router } from '@angular/router';
```

```
constructor( private cancionesService: CancionesService,
             private router: Router) {   }
```

```
this.router.navigate(['list']);
```

learn by doing

- create an angular app with angular-cli
- add these components: links, buttons, A, B and C
- links and buttons will always appear
- links will show links to A, B and C
- buttons will show buttons to programmatically go to A, B, C
- put the routes definitions in a file called app.routes.ts
- the link to the active state should be highlighted
- if we request localhost:4200 it will show A component
- a component with an error message should appear if we request a non existing URI


localhost:4200/A
Welcome to routes ABC app!!
links
A B C
buttons
A
B
C
a works!


localhost:4200/Ahfghjg**´´k
Welcome to routes ABC app!!
links
A B C
buttons
A
B
C
We don`t have what you asked for

Routes parameters

Declaring Route Parameters

```
{ path: '', redirectTo: 'product-list', pathMatch: 'full' },
{ path: 'product-list', component: ProductList },
{ path: 'product-details/:id', component: ProductDetails }
```

For example, to see the product details page for product with id 5, you should use the following URL:
`localhost:4200/product-details/5`

Navigation with parameters

- with links

```
<a *ngFor="let product of products"
  [routerLink]="['/product-details', product.id]">
  {{ product.name }}
</a>
```

- programmatically

```
goToProductDetails(id) {
  this.router.navigate(['/product-details', id]);
}
```

Reading route parameters

```
export class LoanDetailsPage implements OnInit, OnDestroy {
  id: number;
  private sub: any;

  constructor(private route: ActivatedRoute) {}

  ngOnInit() {
    this.sub = this.route.params.subscribe(params => {
       this.id = +params['id']; // (+) converts string 'id' to a number

       // In a real app: dispatch action to load the details here.
    });
  }

  ngOnDestroy() {
    this.sub.unsubscribe();
  }
}
```

Reading route parameters

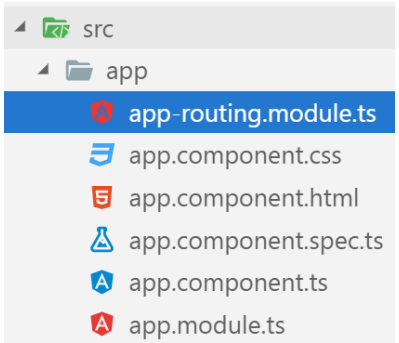
- params property on ActivatedRoute is an Observable
- this allows not recreate the component when navigating to the same component
- in this case the parameter may change without the component being recreated

since Angular 7

```
C:\User                    top>ng new withRooter
? Would you like to add Angular routing? (y/N) y
```

app-routing.module.ts

```
1  import { NgModule } from '@angular/core';
2  import { Routes, RouterModule } from '@angular/router';
3
4  const routes: Routes = [];
5
6  @NgModule({
7    imports: [RouterModule.forRoot(routes)],
8    exports: [RouterModule]
9  })
10 export class AppRoutingModule { }
```



app.module.ts

```
1  import { BrowserModule } from '@angular/platform-browser
2  import { NgModule } from '@angular/core';
3  import { AppRoutingModule } from './app-routing.module';
4  import { AppComponent } from './app.component';
5  @NgModule({
6    declarations: [
7      AppComponent
8    ],
9    imports: [
10     BrowserModule,
11     AppRoutingModule
12   ],
```

app.component.html

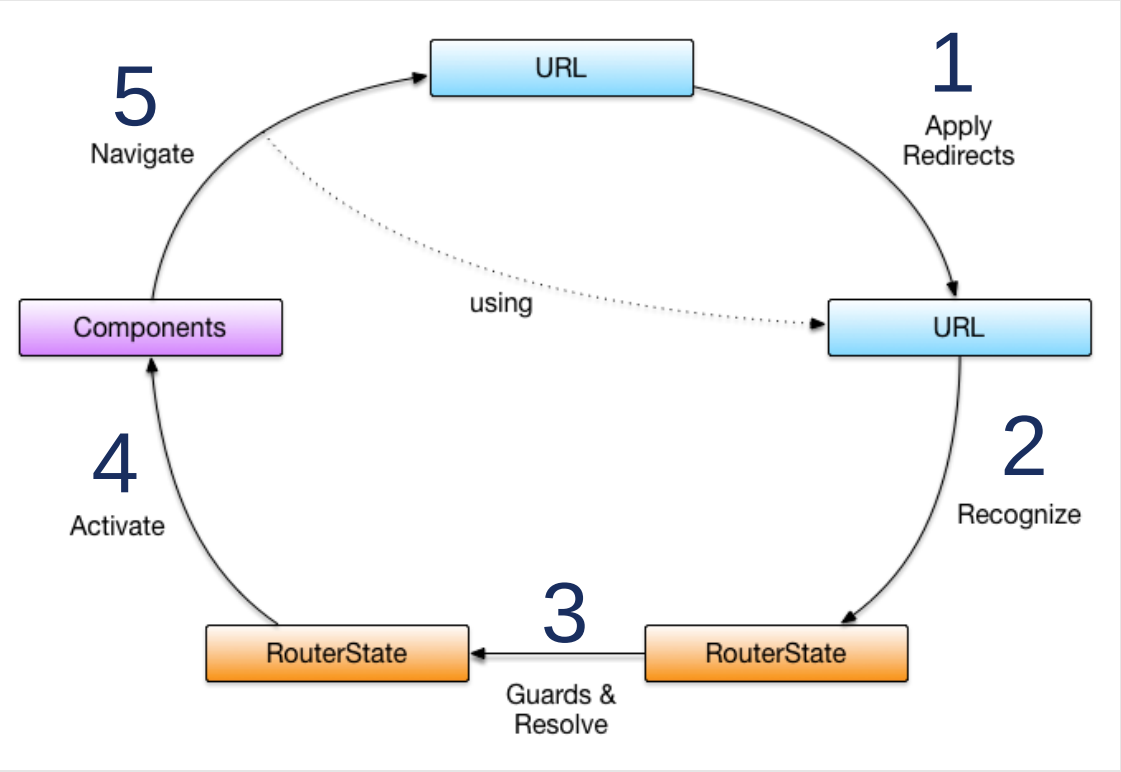
```
<h2>Here are some links to help you start: </h
<ul>
  <li>
    <h2><a target="_blank" rel="noopener" href
  </li>
  <li>
    <h2><a target="_blank" rel="noopener" href
  </li>
  <li>
    <h2><a target="_blank" rel="noopener" href
  </li>
</ul>

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

Angular router overview

Some concepts

- **router state** -> arrangement of application components that defines what is visible on the screen
- **navigation** -> transition from one router state to another
- **router job** -> manage navigation
- **URL** (in a well managed web app) -> serialized router state

Angular router



https://leanpub.com/router

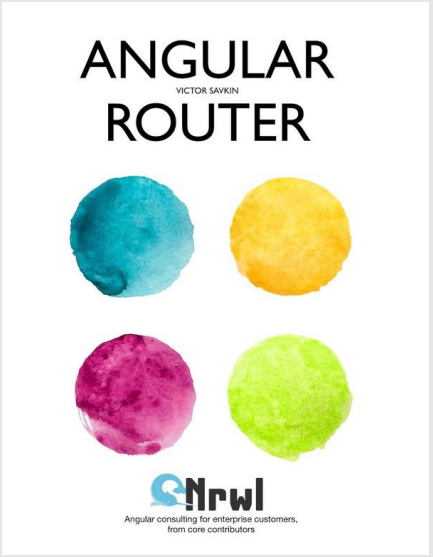
Learning resources

Learning resources

- https://angular.io/guide/router

- book by Angular Router main contributor Victor Savkin

  https://leanpub.com/router (free sample)



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