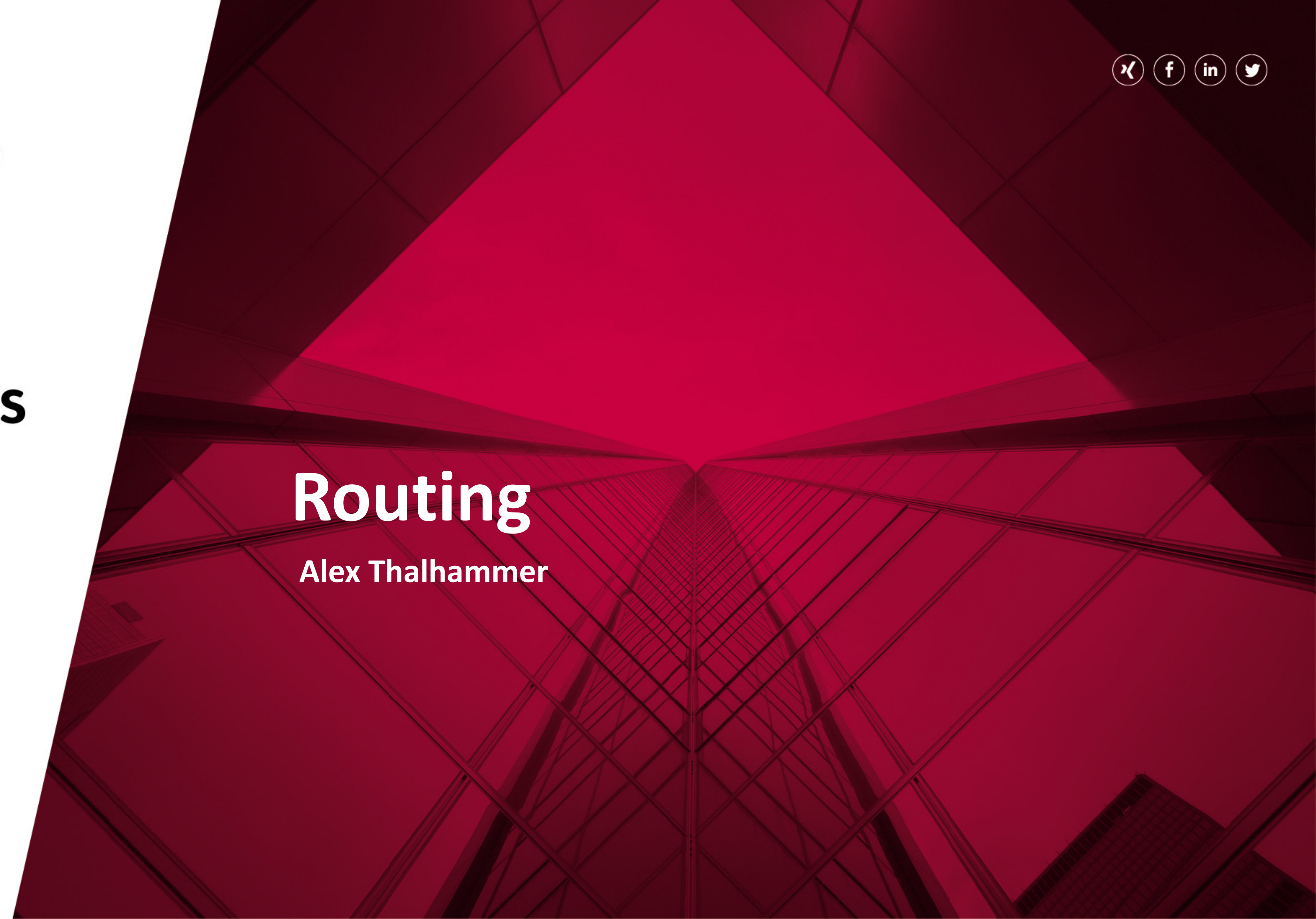
ANGULAR
ARCHITECTS
INSIDE KNOWLEDGE



Routing

Alex Thalhammer

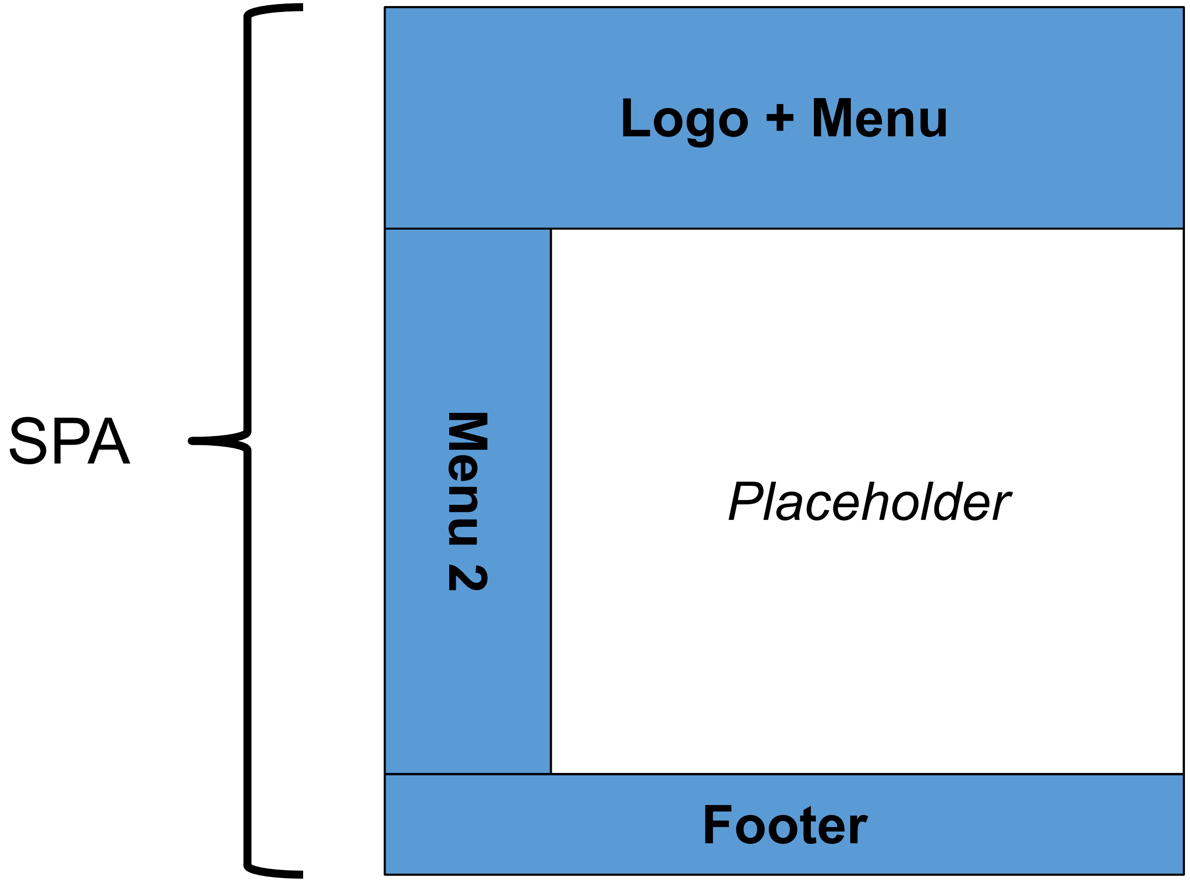
Outline

- Motivation
- Configuration
- Routing parameters

Motivation

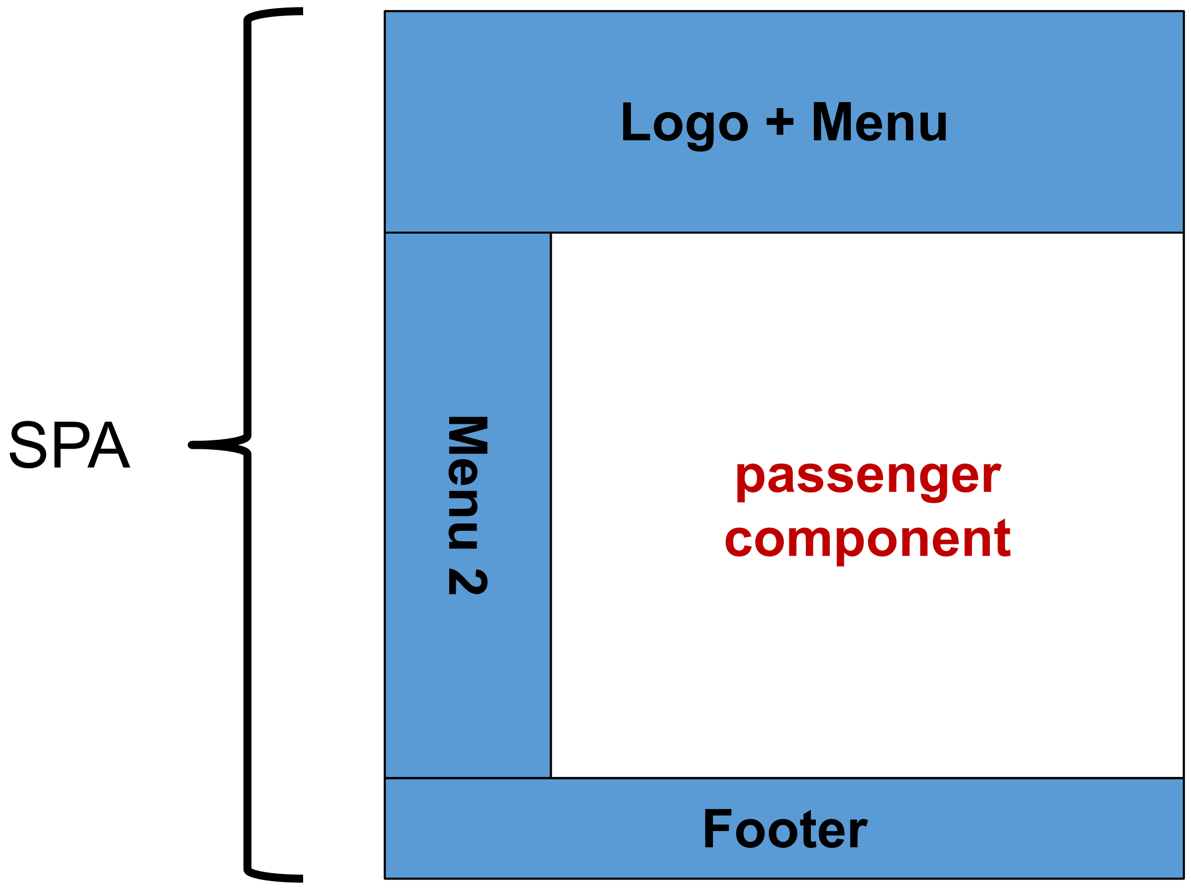
- SPAs → single page application
- Simulate pages → routes
- URL should direct to the routed component
  - Menus & bookmarks
  - Sharing (social)
  - **Back button!**
  - **For development**

Routing in Angular



Routing in Angular

/flight-demo/**passenger**



SPA

Logo + Menu

Menu 2

passenger component

Footer

Routing via hash fragment

- /flight-demo**#passenger**
- Hash-Fragment is never sent to the server

- But we don't like this, do we?

Routing via History API

- /flight-demo/**passenger**

- Readable for humans!

- Whole URL will be send to the server
  - Server responds with the SPA
  - Server can optionally render the inital view
    - Performance, SEO, …
  - SPA informs the browser which part of the URL belongs:
    - to the server
    - to the Angular Route

Angular Router

Preparation

- Angular Module: RouterModule (@angular/router)
- Definition of the limit between URL and Angular Route with the History API:
  - Options to define:
    - angular.json
    - <base href="/"> in index.html
    - Token: APP_BASE_HREF (@angular/common)

Configuration

```
export const APP_ROUTES: Routes = [
    {
        path: 'home',
        component: HomeComponent
    },
    {
        path: 'flight-search',
        component: FlightSearchComponent
    }
]
```

Configuration

```
export const APP_ROUTES: Routes = [
    {
        path: '',
        redirectTo: 'home',
        pathMatch: 'full'
    },
    {
        path: 'home',
        component: HomeComponent
    },
    {
        path: 'flight-search',
        component: FlightSearchComponent
    }
]
```

Configuration

```
export const APP_ROUTES: Routes = [
    {
        path: '',
        redirectTo: 'home',
        pathMatch: 'full'
    },
    {
        path: 'home',
        component: HomeComponent
    },
    […]
    {
        path: '**',     <---------------
        redirectTo: 'home'
    }
]
```

Last route!!!

Configuration

```
// app.module.ts
@NgModule({
    imports: [
        BrowserModule,
        HttpModule,
        FormsModule,
        RouterModule.forRoot(APP_ROUTES)
    ],
    […]
})
export class AppModule {}
```

for feature module: forChild

for root module

View von AppComponent

```
<a [routerLink]="'/'">Home</a>
<a [routerLink]="'/flight-search'">Search flight</a>

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

View von AppComponent

```
<a routerLink="/">Home</a>
<a routerLink="/flight-search">Search flight</a>

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

Programatic routing

```
export class AppComponent {

    constructor(private router: Router) {}

    navigateToFlightSearch(): void {
        this.router.navigate(['/flight-search']);
    }

}
```

DEMO

Routing with parameters

Parameters

- passenger/7
- passenger/7;details=true;page=7
- passenger/7;details=true;page=7/flights

Configuration

```
const APP_ROUTES: Routes = [

    […]

    {
        path: 'flight-search',
        component: FlightSearchComponent
    },
    {
        path: 'flight-edit/:id',
        component: FlightEditComponent
    }
}
```

Parse parameters

```
export class FlightEditComponent {
    id = '';

    constructor(private route: ActivatedRoute) {

    ngOnInit(): void {
        this.route.params.subscribe(
            (params) => {
                this.id = params['id'];
                this.showDetails = params['showDetails'];
                […]
            }
        );
    }
    […]
}
```

Parse parameters - alternative

```
export class FlightEditComponent {
    id = '';

    constructor(private route: ActivatedRoute) {

    ngOnInit(): void {
       this.route.paramMap.subscribe(
            (paramMap) => {
                this.id = paramMap.get('id');
                this.showDetails = paramMap.get('showDetails');
                […]
            }
        );
    }
    […]
}
```

Parse parameters - number

```
export class FlightEditComponent {
    id = 0;

    constructor(private route: ActivatedRoute) {

    ngOnInit(): void {
        this.route.paramMap.subscribe(
            (paramMap) => {
                this.id = Number(paramMap.get('id'));
                this.showDetails = paramMap.get('showDetails');
                […]
            }
        );
    }
    […]
}
```

Links of routes with parameters

```
<a [routerLink]="['/flight-edit', flight.id]">Edit</a>
```

Links of routes with parameters

```
<a [routerLink]="['/flight-edit', flight.id, {showDetails:true}]">Edit</a>
```

DEMO

LAB