




About me...

- Manfred Steyer
- SOFTWAREarchitekt.at
- Trainer & Consultant
- Focus: Angular
- Google Developer Expert (GDE)



ANGULAR
COLLEGE
INSIDE KNOWLEDGE



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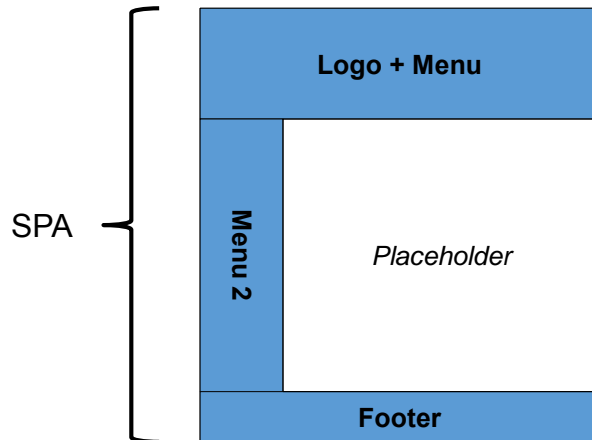
Contents

- Basics
- Child Routes
- Aux Routes
- Guards
- Lazy Loading



Angular Router

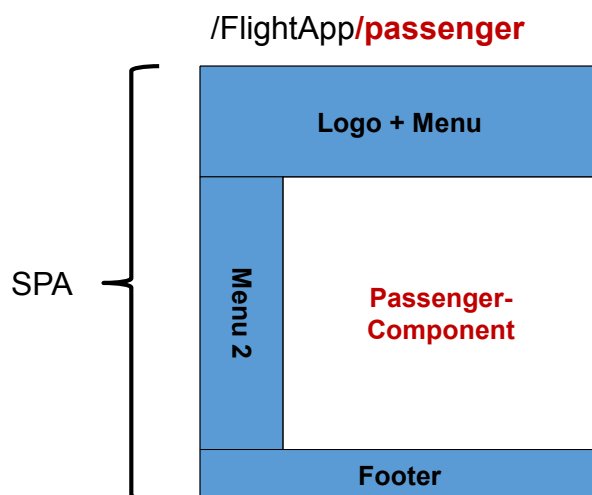
Routing in Angular



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Routing in Angular



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Configuration

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

Configuration

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

For Root-Module

For Feature-Module: forChild

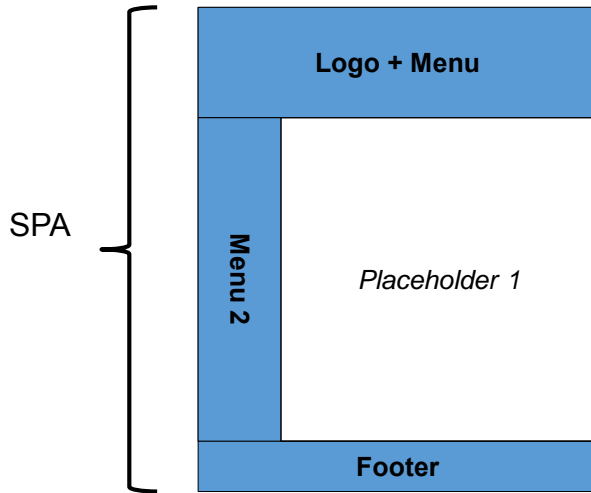
AppComponent

```
<a routerLink="/home">Home</a>  
<a routerLink="/flight-search">Flight Search</a>  
  
<div>  
  <router-outlet></router-outlet>  
</div>
```

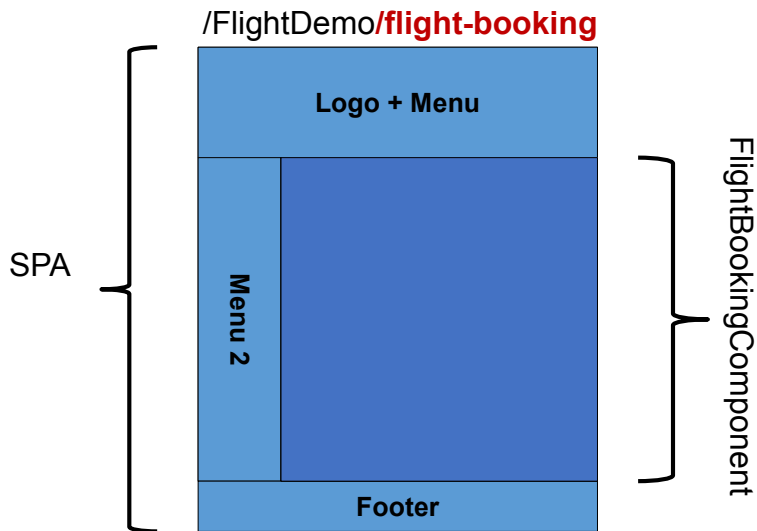


Hierarchical Routing

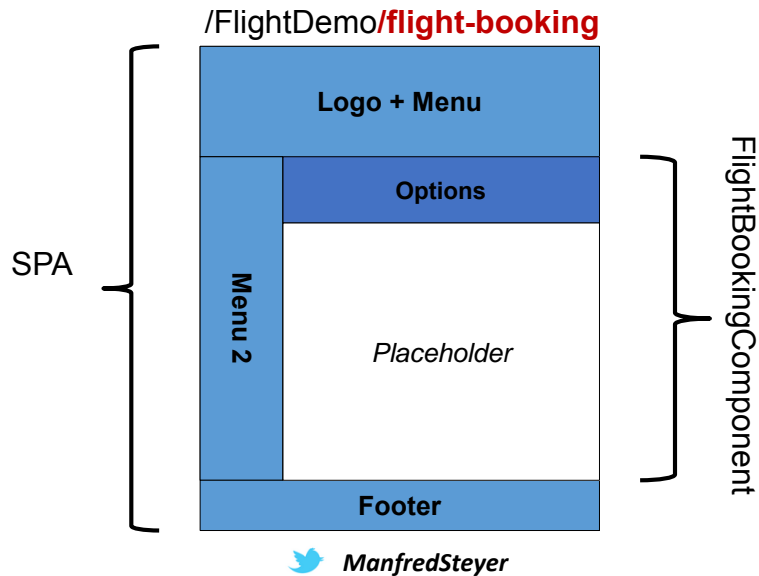
Hierarchical Routing



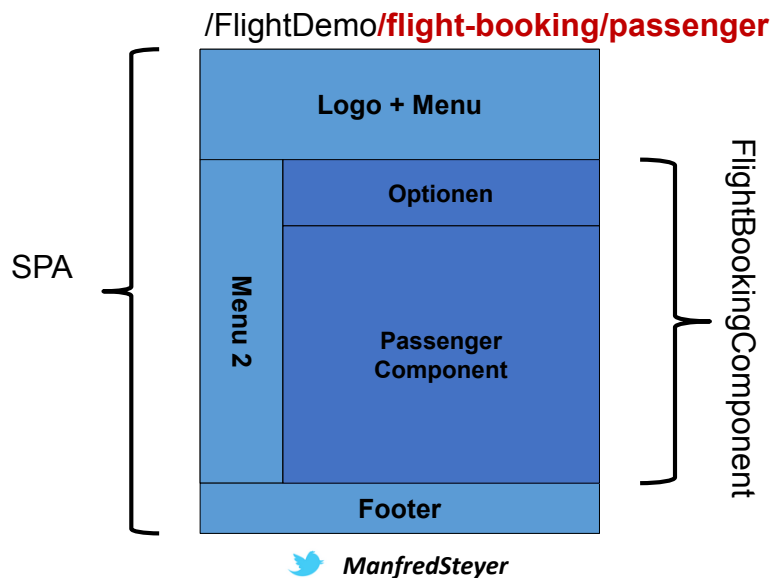
Hierarchical Routing



Hierarchical Routing



Hierarchical Routing

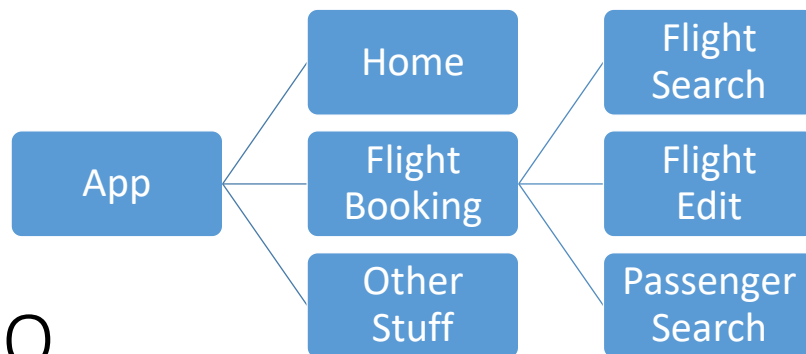


Configuration

```
const APP_ROUTES: Routes = [  
  {  
    path: '',  
    component: HomeComponent  
  },  
  {  
    path: 'flight-booking',  
    component: FlightBookingComponent,  
    children: [  
      {  
        path: 'flight-search',  
        component: FlightSearchComponent  
      },  
      [...]  
    ]  
  }  
];
```

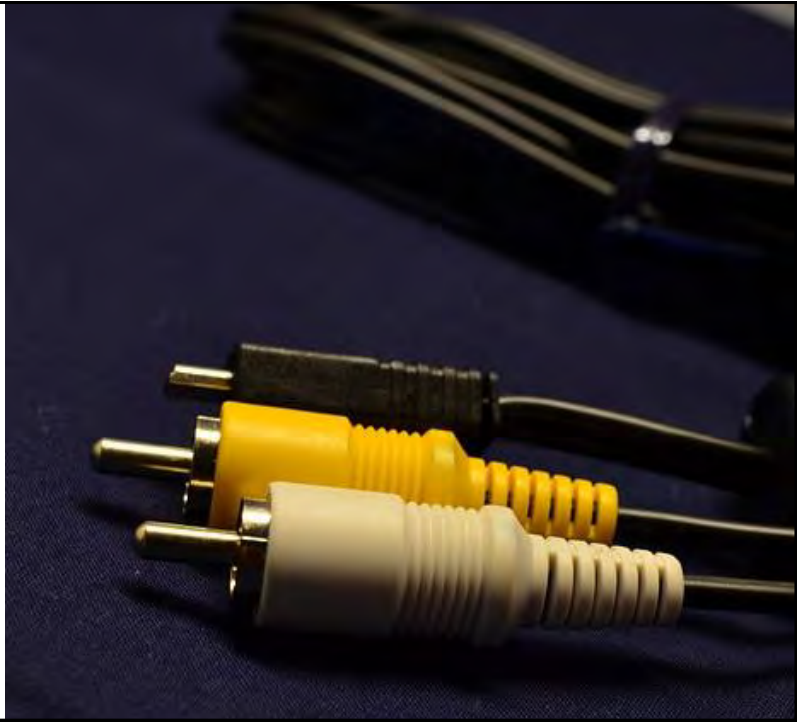
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DEMO

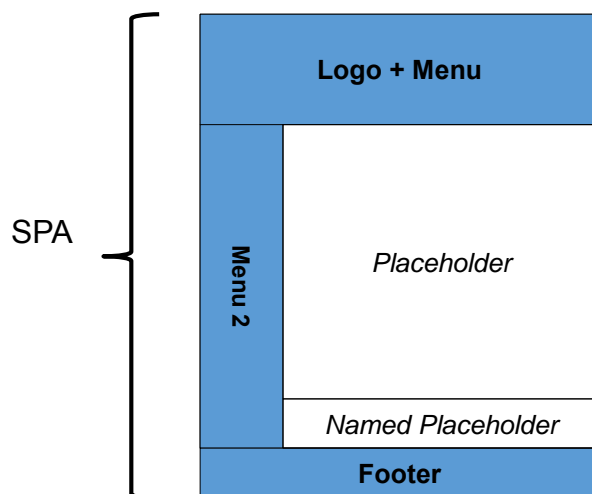


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Aux Routes

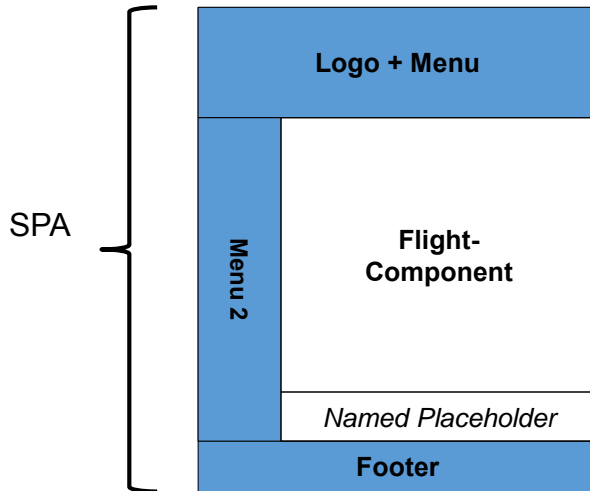


Aux-Routes



Aux-Routes

/FlightApp/**flights**

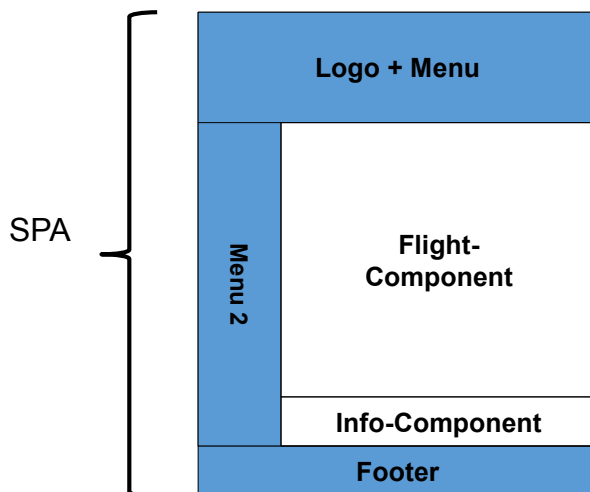


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Aux-Routes

/FlightApp/**flights(aux:info)**

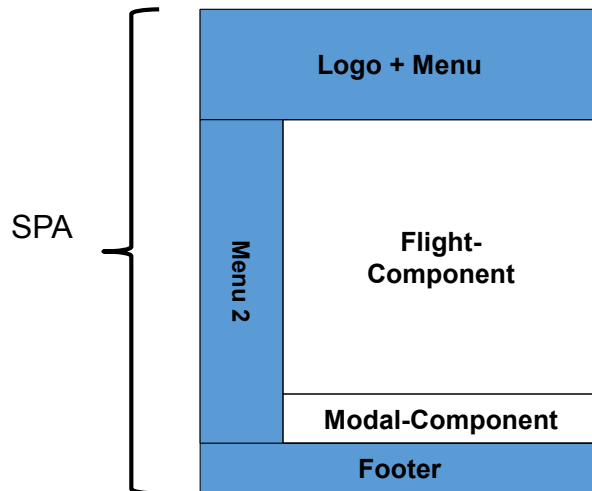


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Aux-Routes

/FlightApp/**flights(aux:info/modal)**

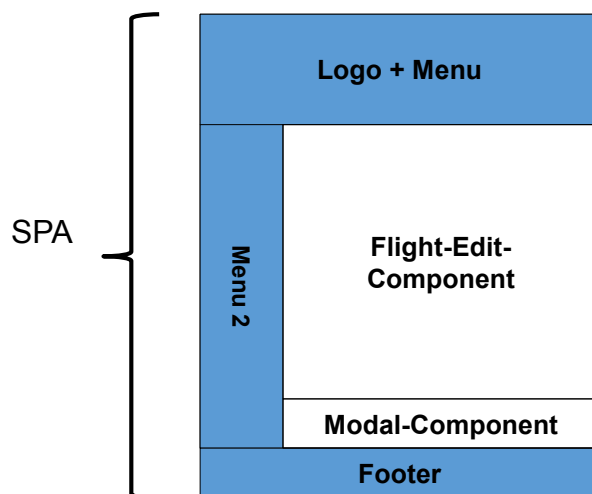


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Aux-Routes

/FlightApp/**flights(aux:info/modal)/edit/17**



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Use Cases

- Partly autonomous parts of an application
- „Norton Commander Style“
- (CSS-based) Popups and Modals

DEMO



Guards

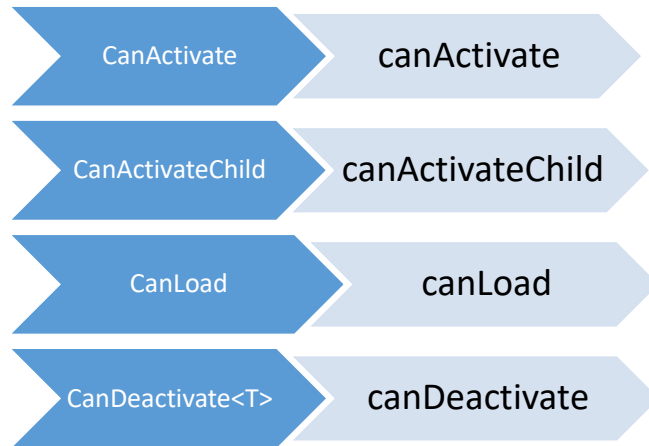
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What are Guard?

- Services
- Can prevent the Activation or Deactivation of a Route

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Guards



Result: boolean | Observable<boolean> | Promise<boolean>

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Guards and the Router Configuration

```
const APP_ROUTES: Routes = [
  {
    path: '/flight-booking',
    component: FlightBookingComponent,
    canActivate: [AuthGuard],
    children: [
      {
        path: 'flight-edit/:id',
        component: FlightEditComponent,
        canDeactivate: [FlightEditGuard]
      },
      [...]
    ]
  }
]
```

Provider for Guards

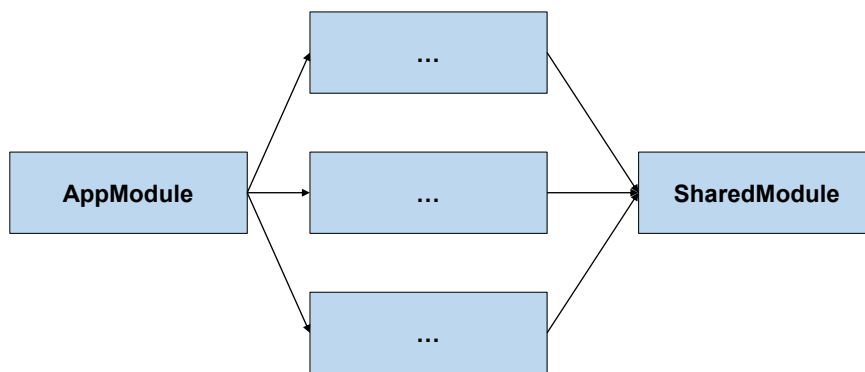
```
// app.module.ts
@NgModule({
  providers: [
    FlightEditGuard,
    AuthGuard
  ],
  [...]
})
export class AppModule {
}
```

DEMO

Lazy Loading



Module Structure

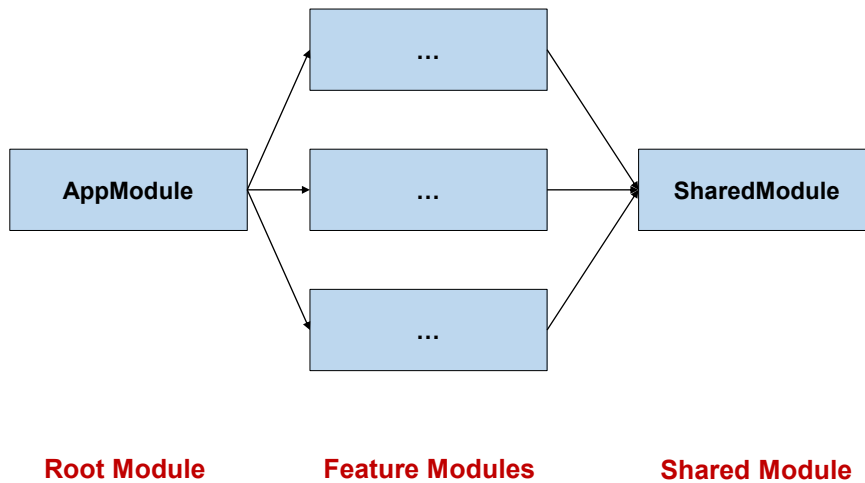


Root Module

Feature Modules

Shared Module

Lazy Loading



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Root Module with Lazy Loading

```
const APP_ROUTE_CONFIG: Routes = [  
  {  
    path: 'home',  
    component: HomeComponent  
  },  
  {  
    path: 'flights',  
    loadChildren:  
      './[...]/flight-booking.module#FlightBookingModule'  
  }  
];
```

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Routes for Feature Module

```
const FLIGHT_ROUTES = [
  {
    path: '',
    component: FlightBookingComponent,
    [...]
  },
  [...]
]
```

Routes for Feature Module

```
const FLIGHT_ROUTES = [
  {
    path: '/bookings',
    component: FlightBookingComponent,
    [...]
  },
  [...]
]
```

Url: /flights/bookings

Triggers Lazy Loading

DEMO

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Preloading



Idea

- Modules that **might be needed** later are loaded after (!) the start of the application
- When the module is actually needed, it is available **immediately**

Activating Preloading

```
const AppRoutesModule =  
  RouterModule.forRoot(  
    ROUTE_CONFIG,  
    { preloadingStrategy: PreloadAllModules });
```

DEMO

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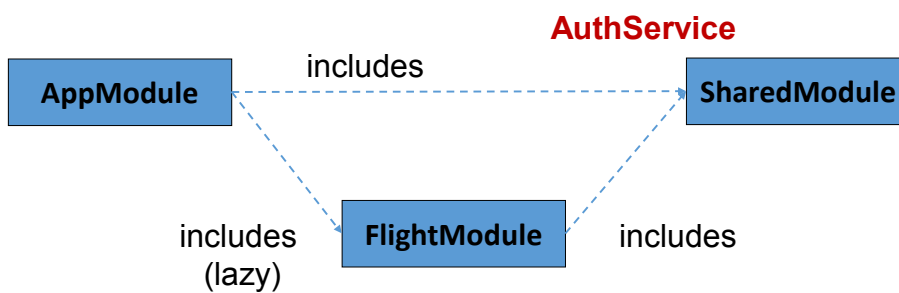
Lazy Loading and Shared Modules

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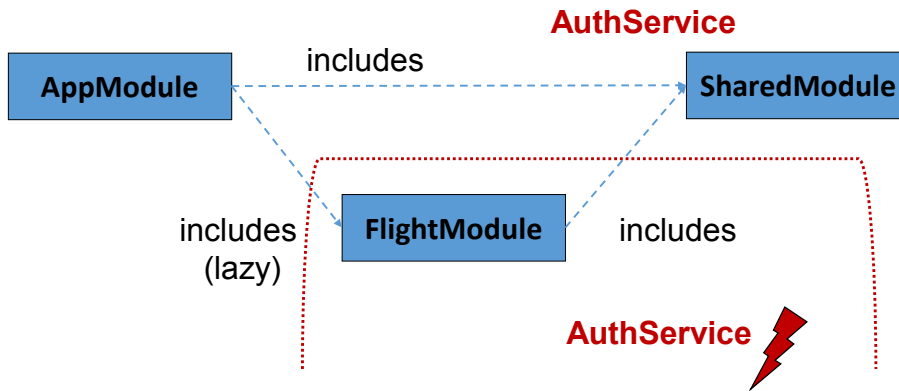


DEMO

Lazy Loading and Shared Modules



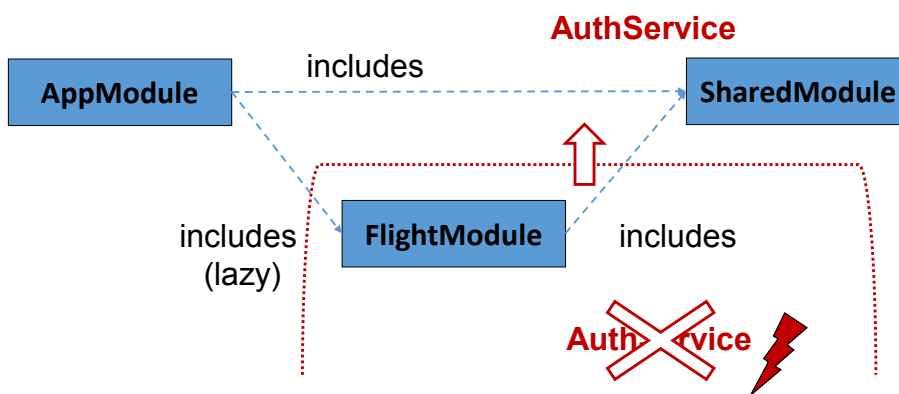
Lazy Loading and Shared Modules



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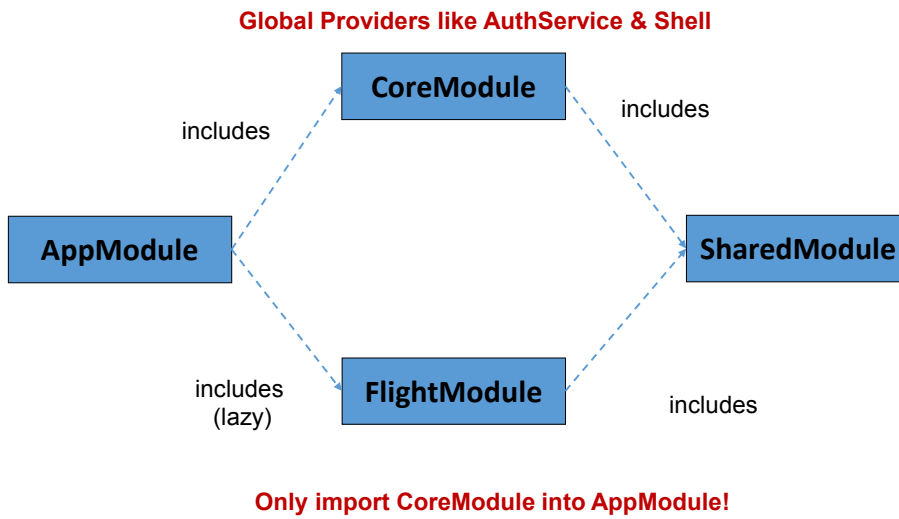
Lazy Loading and Shared Modules



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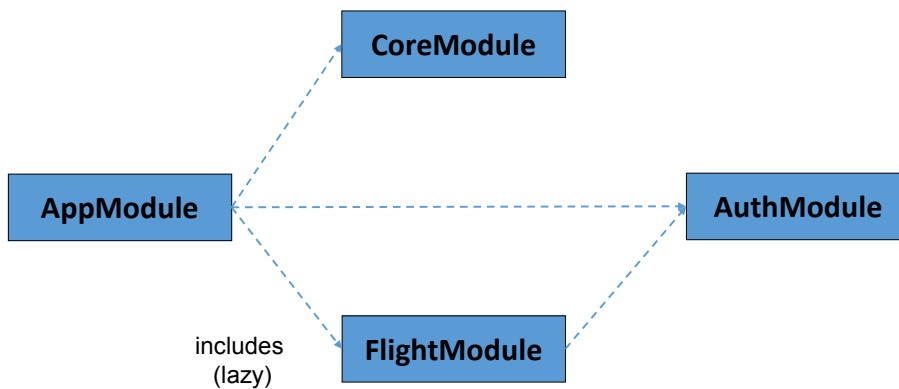
Solution



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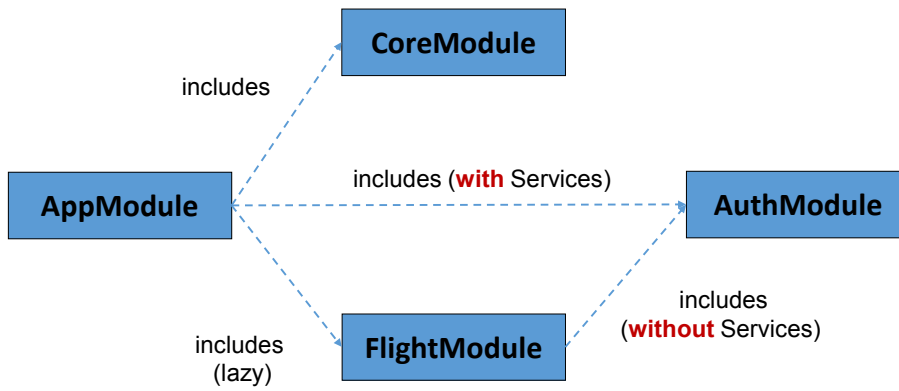
Solution



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Solution



Auth Module

```
@NgModule({  
  [...],  
  providers: []  
})  
export class AuthModule {  
}
```

Auth Module

```
@NgModule({
  [...],
  providers: []
})
export class AuthModule {
  static forRoot(): ModuleWithProviders {
    return {
      ngModule: AuthModule,
      providers: [AuthService, [...]]
    }
  }
}
```

DEMO

Conclusion

Child
Routes

Aux
Routes

Guards

Lazy
Loading

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