Angular TS – Routing And Navigations

[**✅ Task 6: Routing and Navigation** 1](#_Toc204791309)

[**1️⃣ Purpose** 1](#_Toc204791310)

[**2️⃣ Theory** 1](#_Toc204791311)

[**3️⃣ Prerequisites** 1](#_Toc204791312)

[**4️⃣ Code Example (Step-by-Step)** 2](#_Toc204791313)

[**✅ g) Test Navigation** 3](#_Toc204791314)

[**5️⃣ Project Structure Snapshot** 3](#_Toc204791315)

[**✅ 6️⃣ Summary** 4](#_Toc204791316)

**✅ Task 6: Routing and Navigation**

**1️⃣ Purpose**

To:

* Set up routing using **standalone components**.
* Navigate between components using <a [routerLink]>, router.navigate(), and RouterOutlet.

**2️⃣ Theory**

| **Concept** | **Description** |
| --- | --- |
| RouterModule | Angular module that handles routing logic. |
| Routes | Array defining path-to-component mappings. |
| RouterOutlet | Placeholder directive to display routed components. |
| routerLink | Directive for navigation without page reload. |
| router.navigate() | Method to navigate programmatically. |

**3️⃣ Prerequisites**

* Angular 18 project with standalone components.
* At least 2 components (e.g., Home, About, Student List).

**4️⃣ Code Example (Step-by-Step)**

**✅ a) Create 2 Sample Components**

ng generate component components/home --standalone

ng generate component components/about --standalone

**✅ b) home.component.ts**

import { Component } from '@angular/core';

import { CommonModule } from '@angular/common';

@Component({

selector: 'app-home',

standalone: true,

imports: [CommonModule],

template: `<h2>🏠 Welcome to Home Page</h2>`

})

export class HomeComponent {}

**✅ c) about.component.ts**

import { Component } from '@angular/core';

import { CommonModule } from '@angular/common';

@Component({

selector: 'app-about',

standalone: true,

imports: [CommonModule],

template: `<h2>ℹ️ About Page</h2>`

})

export class AboutComponent {}

**✅ d) Define Routes in app.routes.ts**

import { Routes } from '@angular/router';

import { HomeComponent } from './components/home/home.component';

import { AboutComponent } from './components/about/about.component';

import { StudentListComponent } from './components/student-list/student-list.component';

export const appRoutes: Routes = [

{ path: '', component: HomeComponent },

{ path: 'about', component: AboutComponent },

{ path: 'students', component: StudentListComponent }

];

**✅ e) Update app.config.ts**

import { ApplicationConfig } from '@angular/core';

import { provideRouter } from '@angular/router';

import { appRoutes } from './app.routes';

export const appConfig: ApplicationConfig = {

providers: [provideRouter(appRoutes)]

};

**✅ f) Update app.component.ts**

import { Component } from '@angular/core';

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

@Component({

selector: 'app-root',

standalone: true,

imports: [RouterModule],

template: `

<nav>

<a routerLink="/">Home</a> |

<a routerLink="/about">About</a> |

<a routerLink="/students">Students</a>

</nav>

<hr />

<router-outlet></router-outlet>

`

})

export class AppComponent {}

**✅ g) Test Navigation**

* Serve the app:
* ng serve
* Test in browser:
  + Navigate via URL /about, /students, or /.
  + Use navbar links.

**5️⃣ Project Structure Snapshot**

src/

├── app/

│ ├── components/

│ │ ├── home/ ✅

│ │ ├── about/ ✅

│ │ └── student-list/

│ ├── app.routes.ts ✅

│ ├── app.config.ts ✅

│ └── app.component.ts ✅

**✅ 6️⃣ Summary**

* Standalone routing setup uses provideRouter(appRoutes).
* Navigation can be done using [routerLink] or router.navigate().
* <router-outlet> is essential for dynamic component display.