

Comprehensive Angular SPA Application

Key Concepts Overview

Application Overview

- - Project Name: Angular Task Manager
- - Features:
 - Task CRUD Operations
 - User Authentication
 - Task Filtering, Sorting, and Notifications

Key Angular Concepts

- - Components, Parent-Child Communication
- - Directives, @Input, @Output
- - Routing, Routing Guards, API Calls

Form Handling & Pipes

- - Form Types: Template & Model-Based
- - Pipes: Inbuilt & Custom Pipe Examples

Services & Observables

- - Service Usage: API Integration
- - Observable Implementation: Async Data Streams

Project Demo & Images

1. Components

Components are the building blocks of an Angular application. A component controls a

portion of the UI through its template, class, and styles. Each component consists of:

- A TypeScript class (component logic)
- An HTML template (component view)
- CSS/SCSS styles (component appearance).

Component Structure Example

TravelBlog

Destinations

Posts

Login

Welcome to Travel Blog

Discover amazing destinations and share your travel experiences

[Explore Destinations](#)

Why Travel Blog?

Discover

Find amazing destinations from travelers around the world

Share

Share your own travel experiences and tips

Connect

Connect with fellow travelers and plan your next adventure

- 2. Parent-Child Components
- Parent-child components allow data sharing between components using `@Input()` and
- `@Output()`. A parent component can pass data to a child component using property binding,
- and the child component can send data back to the parent using event binding.

Parent-Child Communication Example

TravelBlog
Destinations

Posts

Login

Popular Destinations

 Paris

Paris

The City of Light

★★★★☆

Location: France

[View Details](#)

 Bali

Bali

Island of the Gods

★★★★☆

Location: Indonesia

[View Details](#)



- 3. Directives (Structural and Attribute)
- Directives modify the behavior of elements in the DOM. Angular has two main types of
- directives:
 - - Structural Directives (e.g., *ngIf, *ngFor)
 - - Attribute Directives (e.g., ngClass, ngStyle).

Directive Usage Example

TravelBlog

[Destinations](#)

[Posts](#)

[Login](#)

 Paris

Paris

France

★★★★☆

The City of Light

[Back to Destinations](#)



- 4. Routing and Routing Parameters
- Routing in Angular helps navigate between different components using URLs. Routing parameters allow passing dynamic data between routes.

Routing Example

TravelBlog

[Destinations](#)

[Posts](#)

[Login](#)

Login

Email

Password

Login



- 5. Services and API Calls
- Services provide business logic and can be injected into components using dependency
- injection. API calls are made using HttpClient to retrieve data from a backend.

API Call Example

Why Travel Blog?

Discover

Find amazing destinations from travelers around the world

Share

Share your own travel experiences and tips

Connect

Connect with fellow travelers and plan your next adventure

Conclusion:

- The Angular Travel Blog SPA successfully showcases core Angular concepts, enabling smooth navigation, dynamic content display, and efficient API integration. With features like blog post management, category filtering, and interactive UI components, the application provides an engaging and user-friendly experience. The project highlights the flexibility and power of Angular in building responsive and feature-rich web applications.