RISING TECHNOLOGY

ANGULAR TRAINING TOPICS

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1. **Introduction to Angular**
    - What is Angular?
    - Key features and benefits of Angular
    - Angular architecture overview
    - Setting up an Angular development environment
2. **Angular Basics**
    - Components and templates
    - Data binding and interpolation
    - Directives and structural directives
    - Services and dependency injection
    - Modules and NgModule
3. **Angular CLI**
    - Installing and configuring the Angular CLI
    - Generating components, services, and modules
    - Building and running Angular applications
    - Testing and debugging with the CLI
4. **Components and Templates**
    - Creating and using components
    - Component lifecycle hooks
    - Component communication using inputs and outputs
    - Template syntax and expressions
    - Template-driven forms
5. **Directives**
    - Built-in directives (e.g., ngIf, ngFor, ngSwitch)
    - Custom directives
    - Attribute directives
    - Structural directives

6. **Data Binding and Interpolation**
    - Property binding
    - Event binding
    - Two-way binding
    - Interpolation and template expressions
    - Pipes for data transformation
7. **Services and Dependency Injection**
    - Creating and using services
    - Injecting dependencies with DI
    - Singleton and hierarchical injectors
    - Injectable decorators
    - Providing services in modules
8. **Routing and Navigation**
    - Configuring and using the Angular Router
    - Route parameters and query parameters
    - Nested routes and child routes
    - Lazy loading and preloading strategies
    - Route guards and resolvers
9. **Forms and Validation**
    - Template-driven forms
    - Reactive forms and FormBuilder
    - Form controls, form groups, and form arrays
    - Form validation and error handling
    - Custom validators and async validators

10. HTTP and API Integration

- Making HTTP requests with Angular's HttpClient
- Handling HTTP responses and error handling
- Creating RESTful API services
- Interceptors for modifying requests and responses
- Authentication and authorization with HTTP

11. State Management with RxJS

- Introduction to reactive programming with RxJS
- Observables and operators
- Managing application state with RxJS
- Redux pattern with NgRx (optional)

12. Testing Angular Applications

- Unit testing with Jasmine and Karma
- Testing components, services, and directives
- Testing async operations and HTTP requests
- Test doubles and mocking dependencies
- End-to-end testing with Protractor (optional)

13. Angular Best Practices and Performance Optimization

- Angular coding styles and conventions
- Performance optimization techniques
- Change detection and OnPush strategy
- Lazy loading and code splitting
- Handling large-scale applications and performance pitfalls

14. Deployment and Build Optimization

- Building optimized production builds
- Angular production configuration
- AOT (Ahead-of-Time) compilation
- Bundle size optimization techniques
- Deployment options and best practices

15. Internationalization and Localization

- Angular i18n and localization support
- Translations and language switching
- Date, time, and number formatting
- Message extraction and translation management

16. Angular Material (optional)

- Introduction to Angular Material
- Using Material components and themes
- Customizing Material styles and theming
- Dialogs, snackbars, and tooltips
- Data tables and form controls

17. Advanced Angular Topics (optional)

- Dynamic component creation and rendering
- Animation and transitions in Angular
- Server-side rendering (SSR) with Angular Universal
- Accessibility considerations in Angular
- Performance profiling and optimization techniques