

Single Page Applications (SPA)

1. **What is a Single Page Application (SPA)?**

- A) An application with multiple pages.
- B) An application that loads a single HTML page and dynamically updates it.
- C) An application that requires a page reload for every interaction.
- D) None of the above.
- **Answer:** B

2. **Which of the following is a characteristic of SPA?**

- A) Requires full page reloads.
- B) Minimal data transfer between client and server.
- C) Slow user experience.
- D) Requires server-side rendering.
- **Answer:** B

3. **What technology is primarily used to update the content in SPA without reloading the page?**

- A) AJAX
- B) CSS
- C) HTML
- D) PHP
- ****Answer:**** A

4. ****Which of the following is a benefit of using SPAs?****

- A) Improved performance.
- B) Better SEO.
- C) Increased server load.
- D) Slower development.
- ****Answer:**** A

5. ****Which JavaScript framework is commonly used to develop SPAs?****

- A) React
- B) Laravel
- C) Django
- D) Spring
- ****Answer:**** A

6. ****SPAs are known for their ability to provide a...****

- A) Poor user experience.
- B) Static user experience.
- C) Dynamic and fast user experience.
- D) Unpredictable user experience.
- ****Answer:** C**

7. ****In a SPA, the initial page load fetches...****

- A) Only the HTML.
- B) HTML, CSS, and JavaScript.
- C) Only the CSS.
- D) Only the JavaScript.
- ****Answer:** B**

8. ****Which of the following is not a characteristic of SPAs?****

- A) Improved user experience.
- B) Reduced server load.
- C) Increased bandwidth usage.
- D) Slower initial load time.

- **Answer:** C

9. **What is the primary goal of SPAs?**

- A) To reduce the complexity of client-side code.
- B) To minimize server-side logic.
- C) To provide a seamless and smooth user experience.
- D) To increase server requests.

- **Answer:** C

10. **Which component of SPAs helps to maintain the state of the application on the client side?**

- A) HTML
- B) CSS
- C) JavaScript
- D) SQL

- **Answer:** C

Angular Introduction

11. **What is Angular?**

- A) A server-side framework.
- B) A database management system.
- C) A client-side JavaScript framework for building SPAs.
- D) A CSS preprocessor.
- ****Answer:** C**

12. ****Who developed Angular?****

- A) Facebook
- B) Google
- C) Microsoft
- D) Apple
- ****Answer:** B**

13. ****Angular is written in...****

- A) Java
- B) Python
- C) TypeScript
- D) PHP
- ****Answer:** C**

14. ****Which of the following IDEs can be used for Angular development?****

- A) Visual Studio Code
- B) Eclipse
- C) PyCharm
- D) Xcode
- ****Answer:**** A

15. ****What is Angular CLI?****

- A) A command-line interface tool to initialize, develop, scaffold, and maintain Angular applications.
- B) A library for handling HTTP requests.
- C) A CSS framework.
- D) A testing framework.
- ****Answer:**** A

16. ****How do you install Angular CLI?****

- A) ``npm install -g @angular/cli``
- B) ``apt-get install angular-cli``
- C) ``pip install angular-cli``
- D) ``gem install angular-cli``

- **Answer:** A

17. **Which command is used to create a new Angular project?**

- A) `ng new project-name``
 - B) `angular new project-name``
 - C) `create-angular-app project-name``
 - D) `npm init project-name``
- **Answer:** A

18. **In Angular, the root module is typically named...**

- A) AppModule
 - B) RootModule
 - C) MainModule
 - D) CoreModule
- **Answer:** A

19. **Which file is the main entry point of an Angular application?**

- A) `index.html``

- B) `main.ts`
- C) `app.module.ts`
- D) `styles.css`
- **Answer:** B

20. **The decorator used to define a component in Angular is...**

- A) `@Service`
- B) `@NgModule`
- C) `@Component`
- D) `@Injectable`
- **Answer:** C

21. **Which Angular CLI command is used to run the Angular application?**

- A) `ng serve`
- B) `ng start`
- C) `ng build`
- D) `ng deploy`
- **Answer:** A

22. ****Which file in an Angular project contains the metadata about the project?****

- A) `angular.json`
- B) `package.json`
- C) `tsconfig.json`
- D) `main.ts`
- ****Answer:**** A

23. ****What does the Angular CLI command `ng generate component` do?****

- A) Creates a new Angular service.
- B) Generates a new Angular component.
- C) Generates a new Angular module.
- D) Creates a new Angular directive.
- ****Answer:**** B

24. ****Which configuration file in Angular is used for setting up TypeScript compiler options?****

- A) `tsconfig.json`
- B) `angular.json`
- C) `package.json`

- D) `main.ts`
- **Answer:** A

25. **What is the purpose of the `AppModule` in Angular?**

- A) To bootstrap the Angular application.
- B) To define the main entry point.
- C) To manage the styles of the application.
- D) To handle HTTP requests.
- **Answer:** A

26. **Which command is used to add Bootstrap to an Angular project?**

- A) `npm install bootstrap`
- B) `ng add bootstrap`
- C) `npm install @angular/bootstrap`
- D) `ng add @ng-bootstrap/ng-bootstrap`
- **Answer:** A

27. **Which of the following is a decorator in Angular?**

- A) `@Injectable``
- B) `@Component``
- C) `@Directive``
- D) All of the above
- **Answer:** D

28. **How can you style an Angular component using Bootstrap?**

- A) By importing Bootstrap CSS in `styles.css``.
- B) By using inline styles.
- C) By adding Bootstrap classes in the component's HTML.
- D) All of the above.
- **Answer:** D

29. **Which Angular CLI command is used to build the application for production?**

- A) `ng build --prod``
- B) `ng serve --prod``
- C) `ng start --prod``
- D) `ng deploy --prod``

- **Answer:** A

30. **What is the purpose of `@NgModule` decorator in Angular?**

- A) To define an Angular module.
- B) To create a new component.
- C) To define a service.
- D) To handle routing.

- **Answer:** A

Characteristics of Single Page Applications

31. **Which of the following is true about SPAs?**

- A) SPAs reduce the load on the server.
- B) SPAs require frequent full-page reloads.
- C) SPAs are not SEO-friendly.
- D) SPAs cannot be built using Angular.

- **Answer:** A

32. **A key feature of SPAs is the separation of...**

- A) HTML and CSS.

- B) Client-side and server-side code.
- C) Business logic and presentation.
- D) Static and dynamic content.
- **Answer:** C

33. **Which of the following techniques is commonly used in SPAs to update parts of the web page?**

- A) AJAX
- B) Server-Sent Events
- C) WebSockets
- D) All of the above
- **Answer:** A

34. **In an SPA, data is typically fetched from the server using...**

- A) GET and POST requests.
- B) HTML forms.
- C) SQL queries.
- D) FTP.
- **Answer:** A

35. ****Which of the following is a common challenge when developing SPAs?****

- A) Maintaining URL state.
- B) Handling server-side rendering.
-

C) Reducing the number of server requests.

- D) Integrating with databases.
- ****Answer:** A**

36. ****How do SPAs typically handle navigation?****

- A) By loading new HTML pages.
- B) By dynamically updating the content and URL.
- C) By using server-side scripts.
- D) By reloading the entire page.
- ****Answer:** B**

37. ****SPAs improve user experience by...****

- A) Reducing page load times.
- B) Increasing the number of server requests.
- C) Minimizing client-side code.

- D) Using only server-side rendering.

- ****Answer:**** A

38. ****Which of the following is a drawback of SPAs?****

- A) Slower initial load time.

- B) Poor user experience.

- C) Increased server load.

- D) Less responsive interfaces.

- ****Answer:**** A

39. ****In SPAs, what is often used to manage application state?****

- A) Redux or NgRx

- B) PHP

- C) SQL databases

- D) CSS frameworks

- ****Answer:**** A

40. ****Which characteristic of SPAs can improve performance?****

- A) Caching data on the client-side.
- B) Frequent server requests.
- C) Using multiple HTML pages.
- D) None of the above.
- ****Answer:** A**

JavaScript Frameworks for SPAs

41. ****Which of the following is a popular JavaScript framework for building SPAs?****

- A) Angular
- B) Laravel
- C) Ruby on Rails
- D) ASP.NET
- ****Answer:** A**

42. ****React is a JavaScript library for building...****

- A) Server-side applications.
- B) User interfaces.
- C) Databases.
- D) APIs.

- **Answer:** B

43. **Vue.js is known for being...**

- A) Easy to integrate with other projects and libraries.
 - B) A backend framework.
 - C) Used primarily for mobile app development.
 - D) Developed by Google.
- **Answer:** A

44. **Which JavaScript framework uses a virtual DOM for performance optimization?**

- A) Angular
 - B) Vue.js
 - C) React
 - D) Ember.js
- **Answer:** C

45. **Ember.js follows the convention over...**

- A) Configuration paradigm.
- B) Performance paradigm.

- C) Scalability paradigm.
- D) Flexibility paradigm.
- ****Answer:**** A

46. ****Which framework provides two-way data binding out of the box?****

- A) Angular
- B) React
- C) Vue.js
- D) Backbone.js
- ****Answer:**** A

47. ****React components are written using...****

- A) JavaScript and HTML.
- B) JSX.
- C) PHP.
- D) CSS.
- ****Answer:**** B

48. ****Vue.js uses what syntax for templating?****

- A) JSX

- B) Handlebars
- C) HTML-based templates
- D) PHP
- ****Answer:** C**

49. ****Angular uses what kind of architecture?****

- A) MVC (Model-View-Controller)
- B) MVVM (Model-View-ViewModel)
- C) MVT (Model-View-Template)
- D) None of the above.
- ****Answer:** B**

50. ****Which of the following frameworks is known for its simplicity and small size?****

- A) Angular
- B) React
- C) Vue.js
- D) Ember.js
- ****Answer:** C**

Angular Environment and IDEs

51. ****Which command installs the Angular CLI?****

- A) ``npm install -g @angular/cli``
- B) ``apt-get install angular-cli``
- C) ``pip install angular-cli``
- D) ``gem install angular-cli``
- ****Answer:**** A

52. ****Which IDE is commonly used for Angular development?****

- A) Visual Studio Code
- B) Eclipse
- C) NetBeans
- D) IntelliJ IDEA
- ****Answer:**** A

53. ****Angular CLI stands for...****

- A) Angular Command Line Interface
- B) Angular Component Library Integration
- C) Angular Common Language Interface
- D) Angular Custom Language Implementation

- **Answer:** A

54. **How do you start a new Angular project using CLI?**

- A) `ng new project-name``
 - B) `angular new project-name``
 - C) `create-angular-app project-name``
 - D) `ng create project-name``
- **Answer:** A

55. **Which configuration file in Angular contains project metadata?**

- A) `angular.json``
 - B) `package.json``
 - C) `tsconfig.json``
 - D) `main.ts``
- **Answer:** A

56. **What is the default port for Angular development server?**

- A) 3000

- B) 4200
- C) 8080
- D) 5000
- ****Answer:** B**

57. ****In Angular, which file is the main entry point for the application?****

- A) `index.html`
- B) `main.ts`
- C) `app.module.ts`
- D) `styles.css`
- ****Answer:** B**

58. ****Which file in Angular contains the root module?****

- A) `main.ts`
- B) `index.html`
- C) `app.module.ts`
- D) `angular.json`
- ****Answer:** C**

59. ****The Angular CLI command to serve the application is...****

- A) `ng serve`
- B) `ng start`
- C) `ng build`
- D) `ng deploy`
- ****Answer:**** A

60. ****Which of the following IDEs is best suited for Angular development?****

- A) Visual Studio Code
- B) PyCharm
- C) Sublime Text
- D) Atom
- ****Answer:**** A

Installing Angular CLI and Creating a Sample Project

61. ****The command to globally install Angular CLI is...****

- A) `npm install -g @angular/cli`

- B) `npm install angular-cli`
- C) `apt-get install angular-cli`
- D) `pip install angular-cli`
- **Answer:** A

62. **How do you create a new Angular project?**

- A) `ng new project-name`
- B) `angular create project-name`
- C) `npm new project-name`
- D) `ng create project-name`
- **Answer:** A

63. **Which file is automatically generated when creating a new Angular project?**

- A) `angular.json`
- B) `webpack.config.js`
- C) `gulpfile.js`
- D) `Gruntfile.js`
- **Answer:** A

64. ****Which command runs the Angular development server?****

- A) ``ng serve``
- B) ``npm start``
- C) ``node server.js``
- D) ``ng start``
- ****Answer:**** A

65. ****What is the purpose of the ``src/app`` directory in an Angular project?****

- A) To contain the application's source code.
- B) To store configuration files.
- C) To handle build scripts.
- D) To manage environment settings.
- ****Answer:**** A

66. ****In Angular, the ``package.json`` file is used for... ****

- A) Listing project dependencies.
- B) Configuring TypeScript settings.
- C) Managing HTML templates.
- D) Handling CSS styles.

- **Answer:** A

67. **The `angular.json` file contains...**

- A) Project metadata and configuration.
- B) TypeScript compiler options.
- C) JavaScript libraries.
- D) CSS styles.

- **Answer:** A

68. **To create a new component in Angular, you would use...**

- A) `ng generate component component-name``
- B) `ng new component component-name``
- C) `ng create component component-name``
- D) `ng init component component-name``

- **Answer:** A

69. **The command `ng generate module`` does what in Angular?**

- A) Creates a new Angular module.
- B) Creates a new Angular component.

- C) Creates a new Angular service.
- D) Creates a new Angular directive.
- ****Answer:**** A

70. ****Which command is used to run tests in an Angular project?****

- A) ``ng test``
- B) ``ng serve``
- C) ``ng build``
- D) ``ng deploy``
- ****Answer:**** A

Directory Structure and Various Configuration Files

71. ****The ``src`` directory in an Angular project typically contains... ****

- A) Source code files.
- B) Configuration files.
- C) Documentation.
-

D) Server scripts.

- **Answer:** A

72. **What is the purpose of `main.ts` in an Angular project?**

- A) To bootstrap the Angular application.
- B) To define application styles.
- C) To manage project dependencies.
- D) To configure the Angular router.

- **Answer:** A

73. **The `app.module.ts` file is used to...**

- A) Define the root module of the application.
- B) Configure project dependencies.
- C) Set up routing.
- D) Handle HTTP requests.

- **Answer:** A

74. **Which file specifies the root component of an Angular application?**

- A) `index.html`
- B) `app.module.ts`
- C) `main.ts`
- D) `angular.json`
- ****Answer:**** B

75. ****The `tsconfig.json` file is used to...****

- A) Configure TypeScript compiler options.
- B) Manage project dependencies.
- C) Define application styles.
- D) Handle environment variables.
- ****Answer:**** A

76. ****Which file contains the project's metadata and scripts for building and serving the application?****

- A) `angular.json`
- B) `package.json`
- C) `main.ts`
- D) `tsconfig.json`
- ****Answer:**** B

77. ****Where would you find the main HTML file for the Angular application?****

- A) `src/index.html`
- B) `src/app/app.component.html`
- C) `src/app.module.ts`
- D) `src/styles.css`
- ****Answer:**** A

78. ****What is the role of `polyfills.ts` in an Angular project?****

- A) To provide polyfills for older browsers.
- B) To handle HTTP requests.
- C) To manage project dependencies.
- D) To configure TypeScript settings.
- ****Answer:**** A

79. ****The `styles.css` file in Angular is used to...****

- A) Define global styles for the application.
- B) Manage component-specific styles.
- C) Configure the Angular router.
- D) Define TypeScript compiler options.

- **Answer:** A

80. **Which directory in an Angular project contains the application source code?**

- A) `src/app`
 - B) `src/config`
 - C) `src/assets`
 - D) `src/environments`
- **Answer:** A

Bootstrapping Angular Application

81. **Which file is responsible for bootstrapping the Angular application?**

- A) `main.ts`
 - B) `app.module.ts`
 - C) `index.html`
 - D) `angular.json`
- **Answer:** A

82. ****The `bootstrap` array in `@NgModule` decorator is used to...**

- A) Specify the root component to be bootstrapped.
- B) Import external libraries.
- C) Define routes.
- D) Configure application styles.
- ****Answer:** A**

83. ****In `main.ts`, the `platformBrowserDynamic` function is used to...**

- A) Bootstrap the Angular application.
- B) Configure project dependencies.
- C) Define application styles.
- D) Handle HTTP requests.
- ****Answer:** A**

84. ****Which Angular module is typically bootstrapped in `main.ts`?**

- A) `AppModule`
- B) `MainModule`
- C) `RootModule`

- D) `CoreModule`

- **Answer:** A

85. **Bootstrapping in Angular refers to...**

- A) Initializing the Angular application.

- B) Configuring application routes.

- C) Managing project dependencies.

- D) Defining application styles.

- **Answer:** A

86. **Which file is executed first when running an Angular application?**

- A) `main.ts`

- B) `app.module.ts`

- C) `index.html`

- D) `angular.json`

- **Answer:** A

87. **The `@NgModule` decorator is used in which file for bootstrapping?**

- A) `app.module.ts`

- B) `main.ts`
- C) `index.html`
- D) `styles.css`
- **Answer:** A

88. **The `imports` array in `@NgModule` decorator is used to...**

- A) Import other Angular modules.
- B) Define application styles.
- C) Configure the Angular router.
- D) Handle HTTP requests.
- **Answer:** A

89. **In Angular, `platformBrowserDynamic` is part of which module?**

- A) `@angular/platform-browser-dynamic`
- B) `@angular/core`
- C) `@angular/common`
- D) `@angular/router`
- **Answer:** A

90. ****Which decorator is used to define an Angular module?****

- A) `@NgModule``
- B) `@Component``
- C) `@Injectable``
- D) `@Directive``
- ****Answer:**** A

Angular CLI Commands

91. ****Which command is used to build an Angular project for production?****

- A) `ng build --prod``
- B) `ng serve --prod``
- C) `ng start --prod``
- D) `ng deploy --prod``
- ****Answer:**** A

92. ****The command `ng generate component`` is used to...****

- A) Create a new Angular component.

- B) Generate a new Angular module.
- C) Create a new Angular service.
- D) Generate a new Angular directive.
- ****Answer:** A**

93. ****Which command adds a new Angular service to the project?****

- A) ``ng generate service service-name``
- B) ``ng new service service-name``
- C) ``ng create service service-name``
- D) ``ng add service service-name``
- ****Answer:** A**

94. ****How do you run unit tests in an Angular project?****

- A) ``ng test``
- B) ``ng serve``
- C) ``ng build``
- D) ``ng deploy``
- ****Answer:** A**

95. ****Which command in Angular CLI is used to update Angular dependencies?****

- A) ``ng update``
- B) ``ng upgrade``
- C) ``ng refresh``
- D) ``ng install``
- ****Answer:**** A

96. ****The command ``ng e2e`` is used for...****

- A) Running end-to-end tests.
- B) Generating components.
- C) Creating services.
- D) Bootstrapping the application.
- ****Answer:**** A

97. ****Which Angular CLI command is used to lint the project?****

- A) ``ng lint``
- B) ``ng test``
- C) ``ng serve``
- D) ``ng build``

- **Answer:** A

98. **What is the purpose of the command `ng add`?**

- A) To add support for external libraries.
- B) To create new components.
- C) To run tests.
- D) To build the project.

- **Answer:** A

99. **Which command is used to generate a new Angular module?**

- A) `ng generate module module-name`
- B) `ng new module module-name`
- C) `ng create module module-name`
- D) `ng init module module-name`

- **Answer:** A

100. **Which Angular CLI command is used to deploy the application?**

- A) `ng deploy`

- B) `ng serve`
- C) `ng build`
- D) `ng test`
- ****Answer:** A**