FAQ on Angular

1. What’s new in Angular 5?

Certain tools are optimized in the new version of [Angular](https://www.greycampus.com/angularjs-training-instructor-led), let us see what the tools are:

* Angular 5 supports Typescript version 2.4
* Angular 5 supports RxJS 5.5 which has new features like Pipeable Operators
* A build tool to make the js bundles (files) lighter
* Ahead of Time (AOT) is updated to be on by default
* Events like ActivationStart and ActivationEnd are introduced in Router

2. Name the building blocks of Angular.

The Angular application is made using the following:

Modules

Component

Template

Directives

Data Binding

Services

Dependency Injection

Routing

3. What is Transpiling in Angular?

Transpiling is the process of converting the typescript into javascript (using Traceur, a JS compiler). Though typescript is used to write code in the Angular applications, the code is internally transpiled into javascript.

4. Which of the Angular life cycle component execution happens when a data-bound input value updates?

ngOnChanges is the life cycle hook that gets executed whenever a change happens to the data that was bound to an input.

5. Differentiate between Components and Directives in Angular 5.

Components break up the application into smaller parts; whereas, Directives add behavior to an existing DOM element.

6. What is the use of @Input and @Output?

When it comes to the communication of Angular Components, which are in Parent-Child Relationship; we use @Input in Child Component when we are passing data from Parent to Child Component and @Output is used in Child Component to receive an event from Child to Parent Component.

Learn more about [***Top 5 Skills That Make You A Sure Shot Programmer***](https://www.greycampus.com/blog/programming/top-five-skills-that-make-you-a-sure-shot-programmer)

7. What is ng-content Directive?

The HTML elements like p (paragraph) or h1 (heading) have some content between the tags. For example, <p>this is a paragraph</p> and <h1>this is a heading</h1>. Now, similar to this, what if we want to have some custom text or content between the angular tags like  <app-tax>some tax-related content</app-tax> This will not work the way it worked for HTML elements.  Now, in such cases, the <ng-content> tag directive is used.

8. What does a router.navigate do?

When we want to route to a component we use router.navigate.  Syntax: this.router.navigate([‘/component\_name’]);

9. What is ViewEncapsulation?

ViewEncapsulation decides whether the styles defined in a component can affect the entire application or not. There are three ways to do this in Angular:

Emulated: styles from other HTML spread to the component.

Native: styles from other HTML do not spread to the component.

None: styles defined in a component are visible to all components.

[](https://click.linksynergy.com/deeplink?id=IY6IT2r0Xn0&mid=39197&murl=https%3A%2F%2Fwww.udemy.com%2Fcourses%2Fsearch%2F%3Fq%3Dangular%2Bjs)

10. What are Services in Angular and what command is used to create a service?

Services help us in not repeating the code. With the creation of services, we can use the same code from different components. Here is the command to create a service in angular, ng g service User (a UserService is created when this command is used).

11. What is Dependency Injection in Angular 4?

When a component is dependent on another component the dependency is injected/provided during runtime.

12. What is Routing in Angular 5?

Routing helps a user in navigating to different pages using links.

13. How to handle Events in Angular 5?

Any activity (button click, mouse click, mouse hover, mouse move, etc) of a user on a frontend/web screen is termed as an event. Such events are passed from the view (.HTML) page to a typescript component (.ts).

14. What is a RouterOutlet?

RouterOutlet is a substitution for templates rendering the components. In other words, it represents or renders the components on a template at a particular location.

15. Explain the usage of {{}}?

The set of brackets {{}} when used with an HTML tag, represent data from a component. For example, on a HTML page which has <h1>{{variableName}}</h1>, here the ‘variableName’ is actually typescript (component) data representing its value on the template; i.e., HTML. This entire concept is called String Interpolation.

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16. In how many ways the Data Binding can be done?

Data Binding happens between the HTML (template) and typescript (component). Data binding can be done in 3 ways:

(i) Property Binding (ii) Event Binding (iii) Two-Way Data Binding.

17. What is the sequence of Angular Lifecycle Hooks?

OnChange()  -  OnInit()  -  DoCheck()  -  AfterContentInit()  -  AfterContentChecked()  -  AfterViewInit()  -  AfterViewChecked()  -  OnDestroy().

18. What is the purpose of using package.json in the angular project?

With the existence of package.json, it will be easy to manage the dependencies of the project. If we are using typescript in the angular project then we can mention the typescript package and version of typescript in package.json.

19. How is SPA (Single Page Application) technology different from the traditional web technology?

In traditional web technology, the client requests for a web page (HTML/JSP/asp) and the server sends the resource (or HTML page), and the client again requests for another page and the server responds with another resource. The problem here is a lot of time is consumed in the requesting/responding or due to a lot of reloading. Whereas, in the SPA technology, we maintain only one page (index.HTML) even though the URL keeps on changing.

20. What is Component in Angular Terminology?

A web page in Angular has many components involved in it. A Component is basically a block in which the data can be displayed on HTML using some logic usually written in typescript.

21. What are ngModel and how do we represent it?

ngModel is a directive which can be applied on a text field. This a two-way data binding. ngModel is represented by [()]

22. What does a Subscribe method do in Angular 4?

It is a method which is subscribed to an observable. Whenever the subscribe method is called, an independent execution of the observable happens.

23. Differentiate between Observables and Promises.

Observables are lazy, which means nothing happens until a subscription is made. Whereas Promises are eager; which means as soon as a promise is created, the execution takes place. Observable is a stream in which passing of zero or more events is possible and the callback is called for each event. Whereas, promise handles a single event.

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24. What is an AsyncPipe in Angular?

When an observable or promise returns something, we use a temporary property to hold the content. Later, we bind the same content to the template. With the usage of AsyncPipe, the promise or observable can be directly used in a template and a temporary property is not required.

25. Explain Authentication and Authorization.

Authentication: The user login credentials are passed to an authenticate API (on the server). On the server side validation of the credentials happens and a JSON Web Token (JWT) is returned. JWT is a JSON object that has some information or attributes about the current user.  Once the JWT is given to the client, the client or the user will be identified with that JWT.

Authorization: After logging in successfully, the authenticated or genuine user does not have access to everything. The user is not authorized to access someone else’s data,  he/she is authorized to access some data.

26. What is AOT Compilation?

Every angular application gets compiled internally. The angular compiler takes javascript code, compiles it and produces javascript code again. Ahead-of-Time Compilation does not happen every time or for every user, as is the case with Just-In-Time (JIT) Compilation.

27. What is Redux?

It is a library which helps us maintain the state of the application. Redux is not required in applications that are simple with the simple data flow, it is used in Single Page Applications that have complex data flow.

28. What are the Pipes?

This feature is used to change the output on the template; something like changing the string into uppercase and displaying it on the template. It can also change Date format accordingly.

29. Differentiate between ng-Class and ng-Style.

In ng-Class, loading of CSS class is possible; whereas, in ng-Style we can set the CSS style.

30. Why Typescript with Angular?

Typescript is a superset of Javascript. Earlier, Javascript was the only client-side language supported by all browsers. But, the problem with Javascript is, it is not a pure Object Oriented Programming Language. The code written in JS without following patterns like Prototype Pattern becomes messy and finally leading to difficulties in maintainability and reusability. Instead of learning concepts (like patterns) to maintain code, programmers prefer to maintain the code in an OOP approach and is made available with a programming language like Typescript was thus developed by Microsoft in a way that it can work as Javascript and also offer what javascript cannot ie;

* pure OOPS as Typescript offers concepts like Generics, Interfaces and Types (a Static Typed Language) which makes it is easier to catch incorrect data types passing to variables.
* TS provides flexibility to programmers experienced in java, .net as it offers encapsulation through classes and interfaces.
* JS version ES5 offers features like Constructor Function, Dynamic Types, Prototypes. The next version of Javascript ie ES6 introduced a new feature like Class keyword but not supported by many browsers.
* TS offers Arrow Functions (=>) which is an ES6 feature not supported by many browsers directly but when used in TS, gets compiled into JS ES5 and runs in any browser.
* TS is not the only alternative to JS, we have CoffeeScript, Dart(Google).
* Finally, it is like, TS makes life easier when compared to JS.

Q1: What is difference between "declarations", "providers" and "import" in NgModule?

Topic: **Angular**  
Difficulty: ⭐⭐⭐

* imports makes the exported declarations of other modules available in the current module
* declarations are to make directives (including components and pipes) from the current module available to other directives in the current module. Selectors of directives, components or pipes are only matched against the HTML if they are declared or imported.
* providers are to make services and values known to DI. They are added to the root scope and they are injected to other services or directives that have them as dependency.

A special case for providers are lazy loaded modules that get their own child injector. providers of a lazy loaded module are only provided to this lazy loaded module by default (not the whole application as it is with other modules).

🔗 **Source:** medium.com  
💡 **Don't miss:** [68 More Angular Interview Questions & Answers](https://www.fullstack.cafe/Angular)

Q2: What is AOT?

Topic: **Angular**  
Difficulty: ⭐⭐⭐

The Angular Ahead-of-Time compiler pre-compiles application components and their templates during the build process. Apps compiled with AOT launch faster for several reasons.

* Application components execute immediately, without client-side compilation.
* Templates are embedded as code within their components so there is no client-side request for template files.
* You don't download the Angular compiler, which is pretty big on its own.
* The compiler discards unused Angular directives that a tree-shaking tool can then exclude.

🔗 **Source:** stackoverflow.com  
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Q3: Explain the difference between "Constructor" and "ngOnInit"

Topic: **Angular**  
Difficulty: ⭐⭐⭐

* The Constructor is a default method of the class that is executed when the class is instantiated and ensures proper initialization of fields in the class and its subclasses.
* ngOnInit is a life cycle hook called by Angular to indicate that Angular is done creating the component. We have to import OnInit in order to use like this (actually implementing OnInit is not mandatory but considered good practice).

Mostly we use ngOnInit for all the initialization/declaration and avoid stuff to work in the constructor. The constructor should only be used to initialize class members but shouldn't do actual "work".

🔗 **Source:** stackoverflow.com  
💡 **Don't miss:** [68 More Angular Interview Questions & Answers](https://www.fullstack.cafe/Angular)

Q4: What's new in Angular 6 and why shall we upgrade to it?

Topic: **Angular**  
Difficulty: ⭐⭐⭐

* **Angular Elements** - Angular Elements is a project that lets you wrap your Angular components as Web Components and embed them in a non-Angular application.
* **New Rendering Engine: Ivy** - increases in speed and decreases in application size.
* **Tree-shakeable providers** - a new, recommended, way to register a provider, directly inside the @Injectable() decorator, using the new providedInattribute
* **RxJS 6** - Angular 6 now uses RxJS 6 internally, and requires you to update your application also. RxJS released a library called rxjs-compat, that allows you to bump RxJS to version 6.0 even if you, or one of the libraries you’re using, is still using one of the “old” syntaxes.
* **ElementRef<T>** - in Angular 5.0 or older, is that the said ElementRef had its nativeElement property typed as any. In Angular 6.0, you can now type ElementRef more strictly.
* **Animations** - The polyfill web-animations-js is not necessary anymore for animations in Angular 6.0, except if you are using the AnimationBuilder.
* **i18n** - possibility to have “runtime i18n”, without having to build the application once per locale.

🔗 **Source:** ninja-squad.com  
💡 **Don't miss:** [68 More Angular Interview Questions & Answers](https://www.fullstack.cafe/Angular)

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| All Angular Q&A |  |

Q5: Why would you use renderer methods instead of using native element methods?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐

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Q6: What is Zone in Angular?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐

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Q7: Why would you use lazy loading modules in Angular app?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐

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Q8: What are the lifecycle hooks for components and directives?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐

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Q9: How would you insert an embedded view from a prepared TemplateRef?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐

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Q10: How to detect a route change in Angular?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐

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Q11: What does a just-in-time (JIT) compiler do (in general)?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐

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Q12: How do you create application to use scss? What changed for Angular 6?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐

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Q13: What is ngUpgrage?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐

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Q14: What is Reactive programming and how does it relate to Angular?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐

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Q15: Name some security best practices in Angular

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐

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Q16: Could I use jQuery with Angular?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐

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Q17: What is the Angular equivalent to an AngularJS "$watch"?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐⭐

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Q18: Just-in-Time (JiT) vs Ahead-of-Time (AoT) compilation. Explain the difference.

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐⭐

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Q19: Do you know how you can run angularJS and angular side by side?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐⭐

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Q20: Could you provide some particular examples of using ngZone?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐⭐

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Q21: Why angular uses url segment?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐⭐

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Q22: When to use query parameters versus matrix parameters?

Topic: **Angular**  
Difficulty: ⭐⭐⭐⭐⭐

* Query parameters: <http://example.com/apples?order=random&color=blue>
* Matrix parameters: <http://example.com/apples;order=random;color=blue>

**Answer:**