

Angular Interview Questions (Part1)

1. What is Angular ?

- Angular is an open source JavaScript framework to build web and mobile application.

2. What can be done using Angular CLI ?

- Angular CLI is command line tool which help to generate boilerplate code like sample application and can also generate template for component, service, directive etc.
- There are commands to compile, build and run the angular application.
- Commands are like `ng g c <componentName>`

3. What is Angular Component ?

- Component is comprised of template/view and class which is associated with view.
- Template/view is created with HTML and Angular directives.
- Class consists of properties which represents data for view and methods which performs actions for view.
- Component also have metadata which holds additional information about component for Angular.

4. What is Decorator ?

- Decorator is a function that adds metadata to a class and its members.
- Like Class becomes Angular component because of `@Component` decorator.
- Other decorators are like `@Directive`, `@NgModule`, `@Pipe` etc

5. What is Directive ?

- Directive provides the capability to create new html element and capability add new behaviour to the existing elements

- like *ngIf* which provides the capability to remove or add the element based on condition provided to the directive.
- **ngIf* and **ngFor* are structural directive because it's capable of changing the structure of DOM (Document Object Model)
- Component itself is a directive with a template.

6. What are Attribute directives?

- Capability to change the appearance or behavior of an element, component, or another directive like *ngStyle*
- We can create custom Angular attribute directives with `@Directive` decorator

7. What are differences between Property and Event Binding?

- Property binding provides the capability to binds the value(defined as properties in class) to the attributes of the element
- Event binding provides the capability to bind the methods(defined in class) to the browser events or user actions.
- Property binding use square brackets as notation `[attributeName]` whereas Event binding use parentheses as notation `(eventName)`

8. What is two way data binding in Angular?

- Two way data binding means data flow from view/HTML to class (TypeScript or JavaScript file) and data flow back to view from class
- *ngModel* is the directive which helps to accept user Input and assign it to class property.

9. What are ways to communicate between Components ?

- There are multiple ways component interactions
 - 1) Pass data from parent to child with input binding `@input`
 - 2) Parent listens for child event with `@Output` decorator
 - 3) Parent interacts with child via local variable like accessing the properties and methods of child

- 4) Parent access the properties and methods of child with help of @ViewChild decorator
- 5) Parent and Child communicate via service

10. What is significance of @Input and @Output decorator ?

- Child component receives data from parent component using @Input decorator
- Child component emits events with help of @Output decorator
- Parent can send data to child similar to property binding
- Parent can list to child event similar to event binding

11. What is significance of @ViewChild decorator?

- Using local variable technique parent can access the method and properties of child component but it's only can be accessed in parent's template.
- So if parent component class requires to access the method and properties of child component, we can inject the child component into parent as ViewChild.

12. How to make service as singleton in Angular ?

- Below are two ways to do it
 - Include the service in the AppModule or in a module that is only imported by the AppModule.
 - Declare that the service should be provided in the application root

13. What is DI (Dependency Injection) and How to achieve it in Angular?

- Dependency injection is a technique whereby one object supplies the dependencies of another object. Means technique of passing the dependency object to a dependent object.
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- In Angular, the DI framework provides declared dependencies to a class when that class is instantiated
- In Angular, dependencies are services which can be provided to component, directive or module as a metadata to respective decorators.

14. How to define entry Component in Angular?

- An entry component is any component that Angular loads imperatively
- There are two ways we can achieve it
 - Register the component as part of bootstrap component in ngModule decorator
 - Component for default route in route definition

15. What is interpolation in Angular ?

- Interpolation is a way to bind the data defined in class with HTML or view.
- The component property between the double curly braces which Angular replace with value