

# SPPU-TE-COMP-CONTENT – KSKA Git



Date: \_\_\_\_\_

1. What is AngularJS and what are some of its advantages?  
→ AngularJS is a JavaScript-based open source frontend framework developed by Google.
- b. AngularJS is used for building dynamic, single page web applications (SPAs)
- c. It extends HTML with additional attributes and binds data to HTML using two-way data binding
- d. It enhances the capabilities of HTML by enabling developers to create dynamic views & robust client side applications.

## \* Advantages

1. Two-Way Data Binding: Ensures realtime synchronization between the model and the view
2. Dependency Injection: Simplifies managing components & their dependencies
3. Reusable Components: Directives and components makes the code modular & reusable

2. Explain the difference between a factory & a service in AngularJS

Factory	Service
a. It returns an object in AngularJS	It returns a constructor function
b. Shared instance across the application	Shared instance across the application
c. It is preferred for complex objects and dependencies	It is used for simple objects & functionality
d. It can be configured before returning the object	The configuration is done with the constructor
e. Detailed error message during creation	Less informative error message

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3 Explain Angular JS builtin directive

→ Angular JS provides a set of builtin directive to enhance HTML by adding dynamic behavior & functionality to webapps

1) ng-app

Marks the root element of an Angular JS application and initializes the app

Eg:- `<div ng-app="MyApp"> </div>`

2) ng-model

Binds the value of form element inputs to a variable in the scope

Eg:- `<input type="text" ng-model="Username">`  
`<p> Hello, {{ Username }}! </p>`

3) ng-bind

Binds data to an HTML element & updates the content dynamically

Eg:- `<p ng-bind="message"></p>`

4) ng-repeat

Loops through an array or object & dynamically create elements

Eg:- `<ul> <li ng-repeat="Item in items"> {{ item }} </li> </ul>`

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4 How to use AngularJS filters and expression to format and display data

→ In AngularJS, filters and expressions are used to format and display data dynamically within the view

2 Filter allow you to transform data, while expression binds and display data

3 Filter format the data displayed in the view. They are used within expressions ({{}})

1 currency

Formats a number as currency

{{ price | currency : '\$' }}

2 date

Formats a date

{{ currentDate | date : 'fullDate' }}

3 uppercase / lowercase

Converts text to uppercase or lowercase

{{ name | uppercase }}

## Expressions

Expressions in AngularJS bind data to the view using syntax {{ expression }}. They can perform calculations or access scope variable

1 Basic Data Binding:

{{ firstName + ' ' + lastName }}

2 Arithmetic Operations:

{{ 10 + 20 }}

3 Using Filters with Expressions

{{ price | currency : '\$' }}

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5. What are Single Page Applications (SPA) and Routing in AngularJS

→ Single Page Applications (SPA)

- a. A SPA is a web application that loads a single HTML page and dynamically updates its content as the user interacts with the app
- b. Instead of loading separate pages from the server, SPAs fetch & display data dynamically providing a smooth app-like experience
- c. It offers fast/dynamic content updation, reduces latency
- d. Improves performance as only the data changes not the entire page.

\* Routing in AngularJS

1. Routing in AngularJS enables the creation of SPAs by defining multiple views and linking them to specific URLs without reloading the page
2. It defines the mapping between URLs & views/template
3. Based on the URL, AngularJS loads a specific template dynamically
4. The browser's URL changes without triggering full page reload