

## What is AngularJS?

- AngularJS is a **JavaScript-based open-source front-end framework**.
- Developed by **Google**, it extends HTML with **additional tags and attributes** to make it more dynamic.
- Mainly used to develop **Single Page Applications (SPA)**.

## Features of AngularJS


Feature	Description
MVC Architecture	Supports Model-View-Controller architecture.
Two-Way Data Binding	Automatically synchronizes data between model and view.
Directives	Custom HTML attributes to extend HTML capabilities.
Dependency Injection	Built-in services can be injected for modular development.
Templating	Uses expressions and HTML templates.
Routing	Allows navigation between views/pages in SPA.

## AngularJS vs JavaScript

JavaScript	AngularJS
Manual DOM manipulation	Handles DOM using directives
Logic and UI tightly coupled	MVC separates logic and UI
No built-in data binding	Supports two-way data binding

## Recommended AngularJS Frontend Extensions

a. AngularJS Snippets – by John Papa

 johnpapa.Angular1

Provides autocomplete and snippets for AngularJS code.

b. Live Server

 ritwickdey.LiveServer

Runs your AngularJS HTML page in the browser with live-reload.

## How to Include AngularJS in HTML

```
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"> </script>
```

## AngularJS Expressions

AngularJS expressions are written in `{{ }}` and are used to bind data to HTML.

```
<div ng-app="" ">
```

```
<p>{{5 + 10}}</p> <!-- Output: 15 -->
```

```
<p>{{'Hello' + ' AngularJS'}}</p> <!-- Output: Hello AngularJS -->
```

```
</div>
```

## AngularJS Directives (Basic)

Directive	Purpose
ng-app	Initializes an AngularJS application
ng-model	Binds input field to a variable
ng-bind	Binds content to a variable
ng-init	Initializes application data

## Basic AngularJS Example

### Simple Hello World Example:

```
<!DOCTYPE html>

<html ng-app="">

<head>

  <title>AngularJS First App</title>

  <script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"></script>

</head>

<body>

  <h2>AngularJS Hello World</h2>

  <div>

    Name: <input type="text" ng-model="name">

    <h3>Hello, {{name}}!</h3>

  </div>

</body>

</html>
```

**Controller** manages application data and logic, while **Directive** extends HTML with custom behavior and reusable UI components.

### Brief about above Example:

- **ng-app**: Declares the AngularJS application.
- **ng-model**: Binds the input data to the variable name.
- **{{name}}**: AngularJS expression to display dynamic content.

<!DOCTYPE html>

Declares the **HTML5 document type**.

Ensures the browser renders the page in standards-compliant mode.

---

```
<html ng-app="">
```

This is the start of the HTML document.

`ng-app=""` is an **AngularJS directive** that tells AngularJS to treat this HTML as an AngularJS application.

It **bootstraps** (initializes) the AngularJS application automatically.

---

```
<head>
```

```
<title>AngularJS First App</title>
```

`<head>` contains metadata and the page title.

`<title>` sets the title of the web page (displayed on the browser tab).

---

```
<script src="https://ajax.googleapis.com/ajax/libs/angularjs/1.8.2/angular.min.js"> </script>
```

This **includes AngularJS library** from Google's CDN (Content Delivery Network).

Without this, AngularJS features like `ng-model` and `{{ }}` will not work.

---

```
</head>
```

```
<body>
```

Marks the beginning of the **body** section where the visible content goes.

---

```
<h2>AngularJS Hello World</h2>
```

Displays a heading on the page.

This is just plain HTML, unrelated to AngularJS.

---

```
<div>
```

```
  Name: <input type="text" ng-model="name">
```

A div block that holds the input and output.

`input type="text"` is a **textbox**.

`ng-model="name"` binds the input field to a **variable named name**.

When a user types in the box, the name variable is automatically updated.

---

```
<h3>Hello, {{name}}!</h3>
```

Displays the message **Hello, [name]** using AngularJS **expression binding**.

`{{name}}` dynamically shows the value entered in the input field.

As the user types, this content is **updated in real time** (thanks to **two-way data binding**).

---

```
</div>
```

```
</body>
```

```
</html>
```

Closes the div, body, and HTML tags respectively.

---

### Summary:

This is a minimal AngularJS example demonstrating:

How to **include AngularJS**.

Use of **ng-app** to start Angular.

Use of **ng-model** for two-way data binding.

**Displaying dynamic content** with `{{ }}` expressions.

Example:

[https://www.tutorialspoint.com/angularjs/angularjs\\_todo\\_application.htm](https://www.tutorialspoint.com/angularjs/angularjs_todo_application.htm)

" HTML tha seedha-sa kabhi na tha bekabu, fir Angular ne diya jadu,  
Par jab se  
ng-model se baat ho gayi, bina reload ke sab kuch kaam ho gaya babu! "

