

# Angular Components 8 (Material, CDK)

## Material Design, Angular Material Tour, Navigation, Layout, Popups, Datatable, Flex Layout, CDK, Project

After developers get up to speed with the fundamentals of Angular and TypeScript programming, their attention turns from the basics of creating web UIs to more substantial concerns – such as the need to create visually appealing, logically organized and easily navigable applications that responsively react to the devices used by end-users.

Such modern web applications need to be competitive in the marketplace and for this consistent styling, layout and component architecture is needed – hence the need for material design (<https://material.io>) and its imple-

mentation for Angular 8, which comes in the form of the new [Angular Components](#) repo (evolution of the Angular Material repo). Hundreds of millions of users worldwide see material design everyday when using Google Search, Gmail, Youtube and Android; hence it makes sense to adopt it for your own website too.

The three main parts of Angular Components are a well crafted set of components, the flex layout engine and CDK (for building your own components). All of these are covered in this specialist course as we explore how best to create modern web UIs that look well/work well.

<b>Contents of One-Day Training Course</b>	
<p><b>Target Audience</b> Developers interested in efficiently bring material design to their Angular 8 applications</p> <p><b>Prerequisites</b> Experienced Angular developers with a flair for UI design.</p> <p>Note: This is not an introductory Angular course - so attendees must already be familiar with the Angular framework.</p> <p>All demos and labs will be in TypeScript, so attendees need to know TypeScript.</p>	<p><b>Purpose of Material Design</b> Google’s design language Style guide++ Principles of material design</p> <p><b>Tour of Material Design</b> “Material Design is a unified system that combines theory, resources, and tools for crafting digital experiences.”</p> <p><b>Angular Components Overview</b> Implements material design for Angular Exploring its capabilities What it brings to modern UI projects Review of Angular’s forms architecture</p> <p><b>Delivering UI Capabilities</b> Pagination &amp; navigation Typography Layout Useful role of schematics</p> <p><b>Form Controls</b> Autocomplete, checkbox, input, radio button, select, slider, slide toggle</p> <p><b>Navigation</b> Menu Sidenav (creation using schematics) Toolbar / tooltip</p> <p><b>Layout</b> List, Grid, Card, Tabs Virtual Scrolling - large lists &amp; fast UI Drag and Drop</p> <p><b>Buttons, Indicators &amp; Icons</b> Button, button toggle, chips, icons, ripple, tabs, stepper, slide-toggle Progress spinner, progress bar</p> <p><b>Popups And Modals</b> Dialog, Tooltip Snackbar</p> <p><b>Data Table</b> Table and its data source Paginator and sort header Creation using schematics</p> <p><b>Tree</b> Tree root and hierarchical nodes Creation using schematics Event handling</p> <p><b>Introduction to Flex layout</b> Building responsive user interfaces Flexbox usage for various screen sizes The benefit of a grid and column spans Responsive API &amp; Media query Coding custom layout How flex layout works under the hood</p> <p><b>Architecture of CDK</b> Separate Component Development Kit "general building blocks for UI components decoupled from the visuals of Material Design" New foundation for Angular Material, can also be used separately</p> <p><b>Using CDK</b> Github location: <a href="#">components/src/cdk</a> Creating your own components based on CDK for a range of capabilities without too much extra development effort CDK data table</p> <p><b>Project</b> Using Angular Material in a large project to see how to best utilize its rich capabilities</p>