Installing and Using Angular Material Components

Angular Material is a UI component library for Angular applications that provides pre-built, customizable UI components following the Material Design principles. This manual will guide you through the process of installing and using Angular Material components using its official documentation.

Prerequisites

Before proceeding, make sure you have the following prerequisites installed on your machine:

- Node.js (v12 or higher)
- Angular CLI (v12 or higher)

Step 1: Create a New Angular Project

First, create a new Angular project by running the following command in your terminal:

```
ng new my-angular-app
```

Step 2: Install Angular Material

Navigate to the project's root directory:

```
cd my-angular-app
```

Install Angular Material and its dependencies by running the following command:

```
ng add @angular/material
```

This command will add Angular Material to your project and set up the necessary configurations automatically.

Step 3: Import Angular Material Modules

Open the `src/app/app.module.ts` file in your project's code editor.

Import the necessary Angular Material modules by adding the following import statements at the top of the file:

```
import { BrowserModule } from '@angular/platform-browser';
import { NgModule } from '@angular/core';
import { BrowserAnimationsModule } from '@angular/platform-browser/animations';
import { MatButtonModule } from '@angular/material/button';
import { MatInputModule } from '@angular/material/input';
// Import other Angular Material modules as needed
```

Add the imported modules to the `imports` array in the `@NgModule` decorator:

```
@NgModule({
  declarations: [
    // ...
  ],
  imports: [
    BrowserModule,
    BrowserAnimationsModule,
    MatButtonModule,
    MatInputModule,
    // Add other Angular Material modules here
  ],
  providers: [],
  bootstrap: [AppComponent]
})
export class AppModule { }
```

Step 4: Use Angular Material Components

You can now use Angular Material components in your application. Let's take an example of using a button component.

Open the `src/app/app.component.html` file.

Replace the existing content with the following code:

```
<h1>Welcome to my Angular Material App!</h1>

<button mat-button color="primary">Primary Button</button>
<button mat-button color="accent">Accent Button</button>
<button mat-button color="warn">Warn Button</button>
```

Save the file.

Step 5: Run the Application

Finally, run your Angular application using the following command:

```
ng serve
```

Navigate to `http://localhost:4200` in your web browser. You should see the buttons rendered using Angular Material styles.

Additional Resources

To explore more Angular Material components and their usage, refer to the official Angular Material documentation: https://material.angular.io/.