Building UI components with Angular involves creating modular and reusable pieces of the user interface, such as buttons, forms, navigation menus, or other visual elements. Here's a step-by-step guide to building basic UI components:

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1. Setting Up an Angular Project

Install Angular CLI:
npm install -g @angular/cli

1.

Create a New Angular Project:
ng new my-angular-app
cd my-angular-app

2.

Serve the Application:
ng serve

3. Open your browser and navigate to `http://localhost:4200` to see the app.

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2. Create a Component

Angular components are the building blocks of the UI. Use the Angular CLI to generate a component:

ng generate component my-component

This command creates the following files:

- `my-component.component.ts`: Component logic.
- `my-component.component.html`: Component template (UI structure).
- `my-component.component.css`: Component styles.
- `my-component.component.spec.ts`: Component test file.

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3. Define a Component

Here's an example of a basic UI component: a button with dynamic text.

Component Code (`my-button.component.ts`)
import { Component } from '@angular/core';

```
@Component({
  selector: 'app-my-button',
  templateUrl: './my-button.component.html',
  styleUrls: ['./my-button.component.css']
})
export class MyButtonComponent {
  buttonText = 'Click Me';

  onClick() {
    this.buttonText = 'You Clicked!';
  }
}
```

Template (`my-button.component.html`)

```
<button (click)="onClick()">{{ buttonText }}</button>
```

Styles (`my-button.component.css`)

```
button {
  padding: 10px 20px;
  font-size: 16px;
  background-color: #007bff;
  color: white;
  border: none;
  border-radius: 5px;
  cursor: pointer;
}

button:hover {
  background-color: #0056b3;
}
```

Usage in Parent Component

To use this component in your app, include its selector (`app-my-button`) in a parent component template, such as `app.component.html`:

```
<app-my-button></app-my-button>
```

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4. Building a Form Component

Angular makes it easy to build forms using **Reactive Forms** or **Template-Driven Forms**. Here's an example of a simple form component using Reactive Forms.

Generate a Form Component

ng generate component my-form

Form Component Code (`my-form.component.ts`)

```
import { Component } from '@angular/core';
import { FormBuilder, FormGroup } from '@angular/forms';

@Component({
  selector: 'app-my-form',
  templateUrl: './my-form.component.html',
  styleUrls: ['./my-form.component.css']
})
export class MyFormComponent {
  form: FormGroup;

  constructor(private fb: FormBuilder) {
    this.form = this.fb.group({
      name: [''],
      email: ['']
    });
  }

  onSubmit() {
    console.log('Form Data:', this.form.value);
  }
}
```

Form Template (`my-form.component.html`)

```
<form [formGroup]="form" (ngSubmit)="onSubmit()">
  <label for="name">Name:</label>
  <input id="name" formControlName="name" />

  <label for="email">Email:</label>
  <input id="email" formControlName="email" />

  <button type="submit">Submit</button>
</form>
```

Styles (`my-form.component.css`)

```
form {
  display: flex;
  flex-direction: column;
  width: 300px;
  margin: 20px auto;
```

```
}

label {
  margin: 5px 0;
}

input {
  margin-bottom: 10px;
  padding: 8px;
  font-size: 14px;
}

button {
  padding: 10px;
  background-color: #28a745;
  color: white;
  border: none;
  border-radius: 5px;
  cursor: pointer;
}
```

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5. Styling and Customization

Angular allows you to style components in isolation using:

- **Scoped Styles**: The styles defined in `my-component.component.css` are scoped to that component only.
- **Global Styles**: You can define shared styles in `src/styles.css`.

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6. Organizing UI Components

- Group related components into feature modules using `ng generate module`.
- Share common UI components across the app by placing them in a **Shared Module**.

Next Steps

Once you've mastered basic UI components, explore:

- **Angular Material**: A UI library for pre-designed components.
- **Animations**: Create interactive and visually appealing components.
- **Routing**: Build navigation menus and multi-page apps.

Let me know if you’d like further guidance!