

# Forms

# Agenda

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# What are forms?



- Forms are very important to your business applications.
- As a developer we need to take care of below points:

1.Data Binding

Change  
Tracking

Validation

Visual  
Feedback

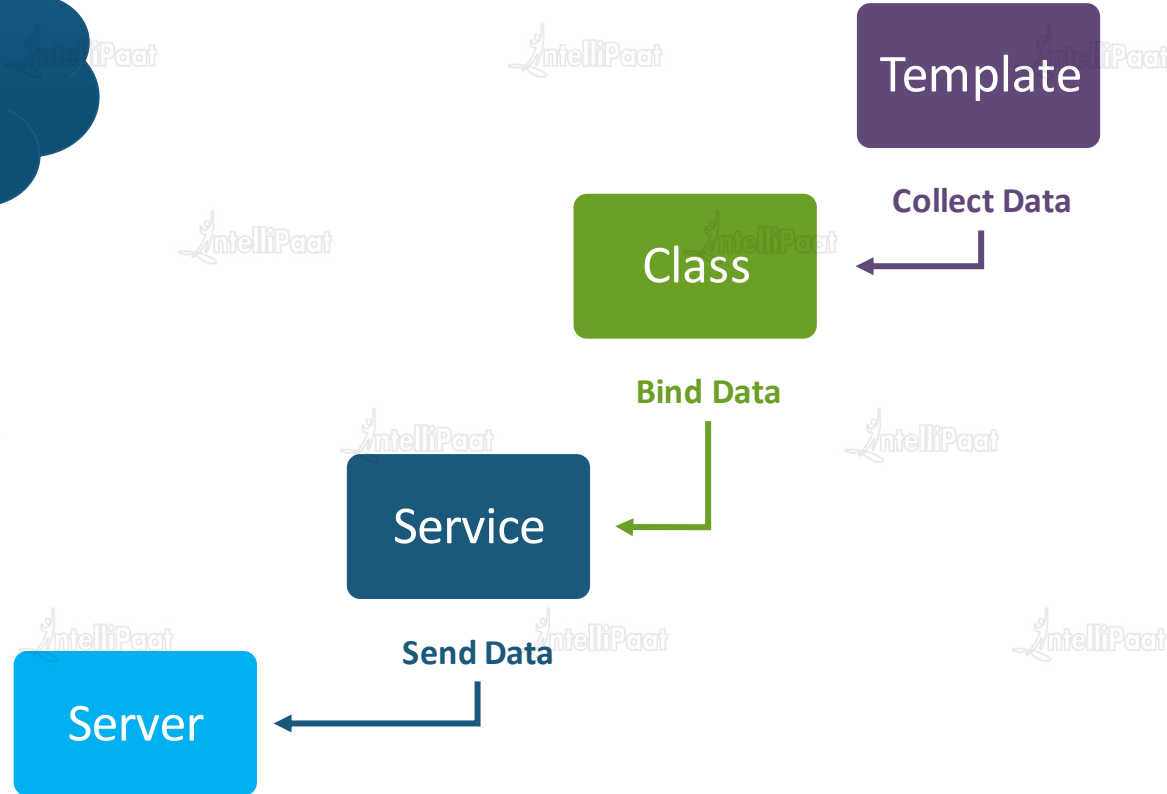
Error messages

Form  
submission

# Angular Forms



What is  
Angular  
Forms?



# Types of forms



What are  
Types of  
forms?

## Reactive Forms

(Heavy on component class)

- More robust.
- More scalable, reusable, and testable.

## Template Drive forms

(Heavy on component template)

Useful for adding a simple form to an app, such as an email list signup form.

Easy to add to an app, but they don't scale as much as reactive forms.

# Template Drive Forms (TDF)

An illustration of a woman with brown hair, wearing a dark blue business suit with a white collar and a dark blue skirt. She has her arms crossed and is looking towards the right. Above her head is a large, dark blue thought bubble containing the text "What is TDF?". Three small dark blue circles lead from her head to the thought bubble.

What is TDF?

- Easy to use and very much similar to Angular JS forms
- Rely on two way data binding with ngModel
- Heavy HTML code and minimal component code.
- Automatically tracks the form and form elements state and validity
- Drawback is the challenge in unit testing
- Readability decreases with complex forms and validation

# Model Driven Forms

An illustration of a woman with brown hair, wearing a dark blue business suit with a white collar and a dark blue skirt. She has her arms crossed and is looking towards the right. A large, dark blue thought bubble is positioned to her right, containing the text "What is Model Driven Forms?". Three small dark blue circles lead from the woman's head to the thought bubble.

**What is Model  
Driven  
Forms?**

- Code and the logic resides in the component class
- No two way data binding
- Suited for complex scenarios
- Dynamic form fields
- Custom validations
- Dynamic validation
- Unit test

# Key Differences

	Reactive	Template-Driven
<b>Setup (form model)</b>	More Explicit, created in component class	Less Explicit, created in directives
<b>Data model</b>	Structured	Unstructured
<b>Predictability</b>	Synchronous	Asynchronous
<b>Form Validation</b>	Functions	Directives
<b>Mutability</b>	Immutable	Mutable
<b>Scalability</b>	Low-level API access	Abstraction on top of APIs



# Steps for TDF



What are the  
steps  
Driven  
Forms?

- Generate a new CLI project
- Add the form HTML
- Binding data
- Tracking state and validity
- Providing visual feedback
- Displaying error messages
- Submitting data to server

# Steps for Reactive



- Generate a new CLI project

Add the form HTML

Create the form model

Manage the form control values



FormBuilder service



Validations



Dynamic Form controls



Submitting form data

# Form Controls states



State	Class if true	Class if false
The control has been visited	ng-touched	ng-untouched
The control's value has changed	ng-dirty	ng-pristine
The control's value is valid	ng-valid	ng-invalid

# Validator Functions



What are the types of validator functions?

## Types of Validator Functions

### Sync validators

Functions that take a control instance and immediately return either a set of validation errors or null. You can pass these in as the second argument when you instantiate a FormControl.

### Async validators

Functions that take a control instance and return a Promise or Observable that later emits a set of validation errors or null. You can pass these in as the third argument when you instantiate a FormControl.

Note: for performance reasons, Angular only runs async validators if all sync validators pass. Each must complete before errors are set.



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