Cheatography

Angular 2 Forms Cheat Sheet

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Introduction

A form creates a cohesive, effective, and compelling data entry experience. An Angular form coordinates a set of data-bound user controls, tracks changes, validates input, and presents errors.

Form

```
<form>
  .... tags that include all input
elements
</form>
```

All forms are placed within the HTML form tags

Standard Input Types

Text Input	<input type="text">
Email Input	<input type="email">
Password Input	<input type="password">
Dropdown Selection	<select> <option value="volvo">Volvo</option> <option value="saab">Saab</option> <option value="opel">Opel</option> <option value="audi">Audi</option> </select>
Multi Selection	<select multiple> <option value="volvo">Volvo</option> <option value="saab">Saab</option> <option value="opel">Opel</option> <option value="audi">Audi</option> </select>
Checkbox	<input type="checkbox">
Radio Control	<input type="radio">
Numeric Input	<input type="number">
Date	<input type="date">
Multiline Input	<textarea rows="4" cols="50"></textarea>

Angular 2 Form - Elements

FormGroup	A FormGroup aggregates the values of each child FormControl into one object, with each control name as the key
FormControl	Tracks the value and validation status of an individual form control. It is one of the three fundamental building blocks of Angular forms
FormArray	Tracks the value and validity state of an array of FormControl instances. A FormArray aggregates the values of each child FormControl into an array
FormBuilder	Creates an AbstractControl from a user-specified configuration. It is essentially syntactic sugar that shortens the new FormGroup(), new FormControl(), and new FormArray() boilerplate that can build up in larger form

Requires use of FormModule

Reactive Form Names

formGroupName	Used to reference a group of elements
formControlName	Similar to ngModel reference to a name but simpler from a naming convention perspective
formArray Name	Syncs a nested FormArray to a DOM element.

Requires the use of the ReactiveFormsModule Module

Handling Submission Event

```
<form (ngSubmit)="onSubmit()">
...
</form>
```

Standard Validation

Mandatory	Validators.required
Minimum Length	Validator.minLength(size)
Maximum Length	Validators.maxLength(size)
Pattern Match	Validators.pattern("regEx")

Custom Validators

```
function {name}(control :
FormControl) : {[s: string] :
boolean} {

.... function body....
pass return a null
fail return an object of type {key
: true}
}
```

Displaying Validator Failures

```
<label for="name">Name</label>
        <input type="text"
class="form-control" id="name"
               required
               [(ngModel)]="model.
name" name="name"
               #name="ngModel" >
        <div [hidden]="name.valid
|| name.pristine"
             class="alert
alert-danger">
          Name is required
        </div>
```

Workflow

Steps to creating a reactive form:
1. Create the Domain Model
2. Create the Controller with references to View
3. Create the View
4. Add Validations
5. Add Submit Validation Control
6. Add Dynamic Behaviors

Model

```
export interface {ModelName} {
   item(? : optional) : string | number | date | boolean | class | interface ([] : array);
}
```

Controller

```
let style = require('./someStyle.css');
let template = require("./someTemplate.html");
@Component({
  styles:[style],
  template: template
});
export class {Some}Form implements OnInit{

  myForm: FormGroup;
  constructor(private fb : FormBuilder) {};
  ngOnInit() {
    //Construct the form data type

   this.myForm: this.fb.group({
       'controlName' : this.fb.control(...),
       'controlArray' : this.fb.array([...]),
       'controlGroup' : this.fb.group({})
  });
  }

 onSubmit() {
```

Controller (cont)

```
   myForm.value; //returns the form values

   myModel = <MyModel>myForm.value;//Cast to object
 }
}
```

Typical additions include:

1. Http Service Submission (delegate normally injected)
2. Pipes for Display customization
3. Model based Validators

View

```
<form [formGroup]='myForm' (ngSubmit)='onSubmit()'>
  <input formControlName=''>
  <div formGroupName=''>
      <input formControlName=''>
  </div>
  <div formArrayName=''>
      <input formControlName='{{index}}'
        *ngFor='let item of items; index = index'>
  </div>
</form>
```

Useful Blocks

```
-- Get Form Items
JSON.stringify(myForm.value)
```

Useful Links

Angular Forms
TypeScript Basic Types
HTML Inputs