ANGULAR 2

FORMS
DIRECTIVES

FORM WITH VALIDATION

```
<form #heroForm ="ngForm"  *ngIf="active"  (ngSubmit)="onSubmit()">
  <div class="form-group”> <label for="power">Hero Power</label>
    <select #power ="ngModel" class="form-control” name="power"
        [(ngModel)]="hero.power" required >
      <option *ngFor="let p of powers" [value]="p">{{p}}</option>
    </select>
    <div *ngIf="power.errors && power.touched" class="alert alert-danger">
      <div [hidden]="!power.errors.required">Power is required</div>
    </div>
  </div>
  <button type="submit" class="btn btn-default"
      [disabled]="!heroForm.form.valid">Submit</button>
</form>
```

```
@Component({selector: 'hero-form', templateUrl: 'hero-form.html'})
export class HeroFormComponent {
  powers = ['Really Smart', 'Super Flexible', 'Weather Changer'];
  hero = new Hero(18, 'Dr. WhatIsHisWayTooLongName', this.powers[0], 'Dr. What');
  onSubmit() {
            this.heroService.saveHero(this.hero).subscribe(res=>
                  router.navigateByUrl("/"))
  }
}
```

VALIDATION: BUILT IN VALIDATORS

- **required** - Requires a form control to have a non-empty value
- **minlength** - Requires a form control to have a value of a minimum length
- **maxlength** - Requires a form control to have a value of a maximum length
- **pattern** - Requires a form control’s value to match a given regex

```
<form novalidate>
   <input type="text" name="name" ngModel required>
   <input type="text" name="street" ngModel minlength="3">
   <input type="text" name="city" ngModel maxlength="10">
   <input type="text" name="zip" ngModel pattern="[A-Za-z]{5}">
</form>
```

FORM VALIDATION RESULTS

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

```
.ng-valid[required] {
  border-left: 5px solid #42A948; /* green */
}
.ng-invalid.ng-touched {
  border-left: 5px solid #a94442; /* red */
}
```

INPUT FIELD AND VALIDATION MESSAGES

```
<input type="text" id="name" class="form-control"
      required minlength="4" maxlength="24“
      name="name" [(ngModel)]="hero.name"
      #name="ngModel" >

<div *ngIf="name.errors && (name.dirty || name.touched)"
     class="alert alert-danger">
   <div [hidden]="!name.errors.required">
      Name is required
   </div>
   <div [hidden]="!name.errors.minlength">
      Name must be at least 4 characters long.
   </div>
   <div [hidden]="!name.errors.maxlength">
      Name cannot be more than 24 characters long.
   </div>
</div>
```

CUSTOM VALIDATOR DIRECTIVE

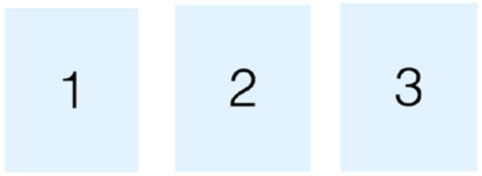
```
@Directive({
  selector: '[startWith]',
  providers: [{provide: NG_VALIDATORS, useExisting: CustomValidatorDirective,
     multi: true}]
})
export class CustomValidatorDirective implements Validator{
  @Input('startWith') expr: string;

  validate(control: AbstractControl) {
    if(control.value && !control.value.startsWith(this.expr)){
      return {'startWith': control.value};
    }
    return null;
  }
}

<input [startWith]="a" ngModel name="name">
```

ATTRIBUTE DIRECTIVE

```
<p myHighlight>Highlight me red</p>

<p [myHighlight]="color“ [size]=2>Highlight
me!</p>
```

```
@Directive({
   selector: '[myHighlight]'
})
export class HighlightDirective {
   private _defaultColor = 'red';
   constructor(private el: ElementRef) { }
   @Input('myHighlight') highlightColor: string;
   @Input('size') size: number;

   @HostListener('mouseenter') onMouseEnter() {
      this.highlight(this.highlightColor || this._defaultColor);
   }
   @HostListener('mouseleave') onMouseLeave() {
      this.highlight(null);
   }

   private highlight(color: string) {
      this.el.nativeElement.style.backgroundColor = color;
   }
}
```

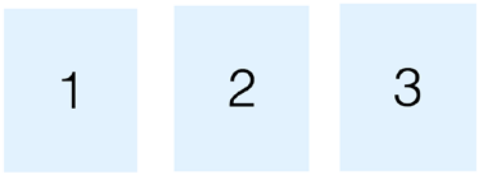
STRUCTURAL DIRECTIVE



```
@Directive({
  selector: '[delay]'
})
export class DelayDirective {
  constructor(
    private templateRef: TemplateRef<any>,
    private viewContainerRef: ViewContainerRef
  ) { }

  @Input('delay')
  set delayTime(time: number): void {
    setTimeout(()=>{
      this.viewContainerRef
        .createEmbeddedView(
          this.templateRef);
    }, time);
  }
```

```
@Component({
  selector: 'app',
  template: `
  <div *ngFor="let item of [1,2,3]">
     <card *delay="500 * item">
            {{item}}
     </card>
   </template>
  </div>
 `
})
export class AppComponent {
}
@Component({
  selector: 'card',
  template: `
     <ng-content></ng-content>`})
export class CardComponent {}
```

STRUCTURAL DIRECTIVE



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