Validation



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Module Overview

Setting Built-in Validation Rules

Adjusting Validation Rules at Runtime

Custom Validators

Custom Validators with Parameters

Cross-field Validation

Creating the Root FormGroup

```
ngOnInit(): void {
   this.customerForm = this.fb.group({
        firstName: '',
        lastName: '',
        email: '',
        sendCatalog: true
   });
}
```

Creating the FormControls

```
this.customerForm = this.fb.group({
    firstName: '',
    sendCatalog: true
});
```

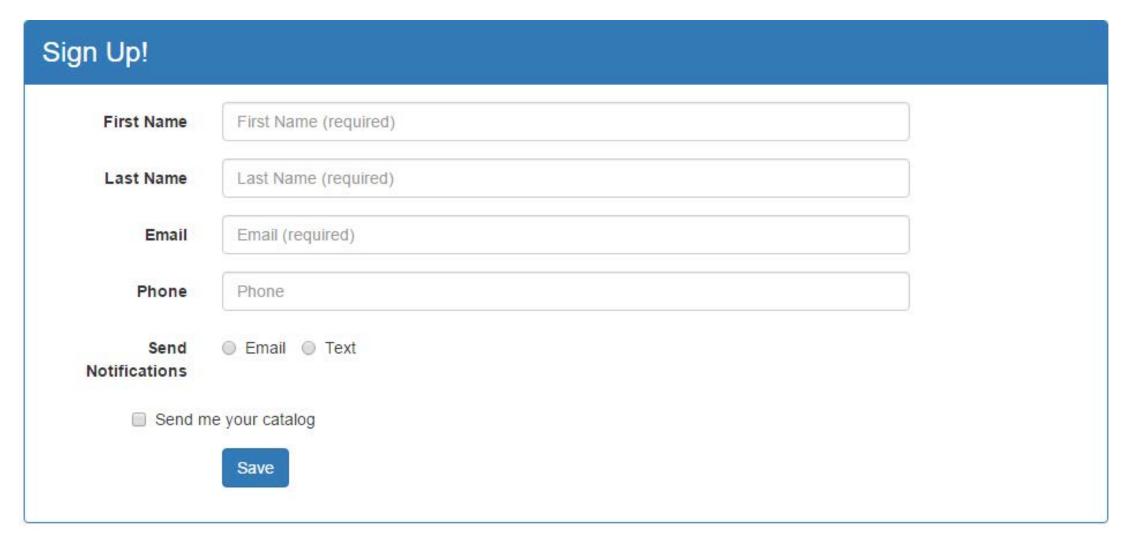
```
this.customerForm = this.fb.group({
    firstName: {value: 'n/a', disabled: true},
        sendCatalog: {value: true, disabled: false}
});
```

```
this.customerForm = this.fb.group({
    firstName: [''],
    sendCatalog: [true]
});
```

Setting Built-in Validation Rules

```
this.customerForm = this.fb.group({
    firstName: ['', Validators.required],
    sendCatalog: true
});
```

Adjusting Validation Rules at Runtime

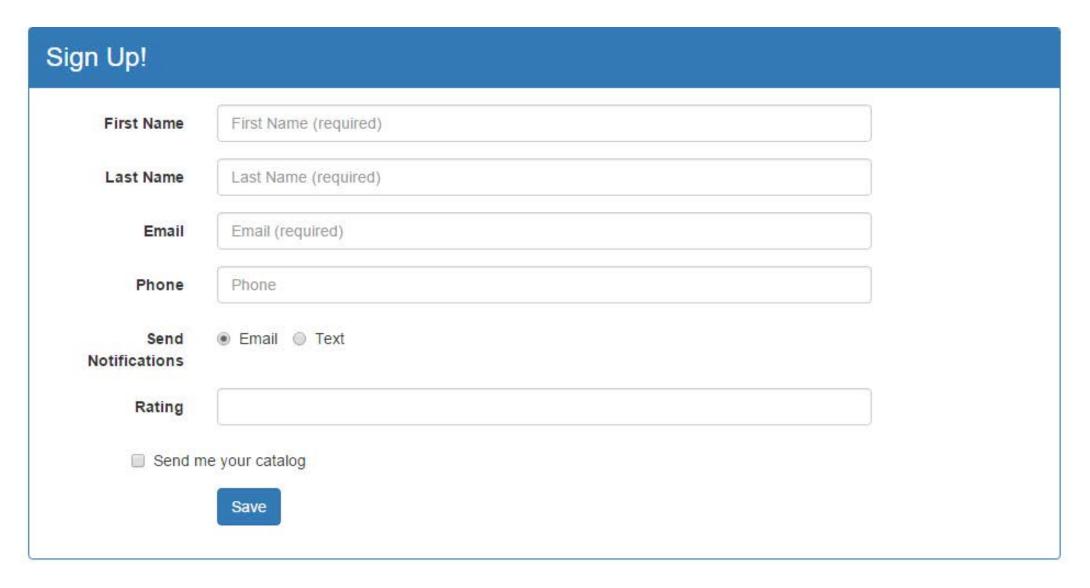




Adjusting Validation Rules at Runtime

Custom Validator

Custom Validator





Custom Validator

Custom Validator with Parameters

Cross-field Validation

Sign Up!		.8
First Name	First Name (required)	
Last Name	Last Name (required)	
Email	Email (required)	
Confirm Email	Confirm Email (required)	
Phone	Phone	
Send Notifications	⊚ Email ⊚ Text	
Rating		
☐ Send m	e your catalog	
	Save	



Cross-field Validation: Nested FormGroup

```
<div formGroupName="availability">
    ...
    <input formControlName="start"/>
    ...
    <input formControlName="end"/>
    </div>
```

Cross-field Validation

Sign Up!		.8
First Name	First Name (required)	
Last Name	Last Name (required)	
Email	Email (required)	
Confirm Email	Confirm Email (required)	
Phone	Phone	
Send Notifications	⊚ Email ⊚ Text	
Rating		
☐ Send m	e your catalog	
	Save	



Cross-field Validation: Custom Validator

Checklist: Setting Built-in Validation Rules



Import Validators

Pass in the validator or array of validators

Checklist: Adjusting Validation Rules



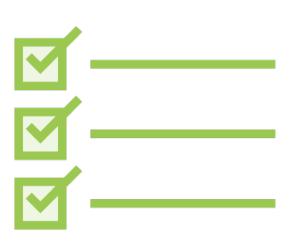
Determine when to make the change

Use setValidators or clearValidators

Call updateValueAndValidity

```
setNotification(notifyVia: string): void {
  const p = this.myForm.get('phone');
  if (notifyVia === 'text') {
    p.setValidators(Validators.required);
  } else {
    p.clearValidators();
  }
    p.updateValueAndValidity();
}
```

Checklist: Custom Validators



Build a validator function

Use it like any other validator

```
this.customerForm = this.fb.group({
   firstName: ['', myValidator],
   sendCatalog: true
});
```

Checklist: Custom Validators with Parameters



Wrap the validator function in a factory function

Use it like any other validator

```
this.customerForm = this.fb.group({
   firstName: ['', myValidator('test')]
});
```



Checklist: Cross-field Validation: FormGroup



Create a nested FormGroup

Add FormControls to that FormGroup

```
this.customerForm = this.fb.group({
   name: ['', Validators.required],
   availability: this.fb.group({
        start: ['', Validators.required],
        end: ['', Validators.required]
   })
});
```

Update the HTML

```
<div formGroupName="availability">
    <input formControlName="start"/>
        <input formControlName="end"/>
        </div>
```



Checklist: Cross-field Validation: Validator



Build a custom validator

```
function dateCompare(c: AbstractControl) {
   if (c.get('start').value !==
       c.get('end').value) {
       return { 'match': true };
   }
  return null;
}
```

Use the validator

```
this.customerForm = this.fb.group({
  name: ['', Validators.required],
  availability: this.fb.group({
      start: [null, Validators.required],
      end: [null, Validators.required]
  }, { validator: dateCompare })
});
```



Summary

Setting Built-in Validation Rules

Adjusting Validation Rules at Runtime

Custom Validators

Custom Validators with Parameters

Cross-field Validation