

# ANGULAR.JS INPUT

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*“I’m so happy I get to program form validation  
for our new product! This is going to be lots of  
fun!”*

– NO DEVELOPER EVER

```
<form id="payment-form">

  Card Type:
  <select>
    <option></option>
    <option>Visa</option>
    <option>Mastercard</option>
    <option>American Express</option>
    <option>Discover</option>
  </select>

  CCN:
  <input type="text" name="ccn" />

  Expiration Date:
  <input type="text" name="expiration-month" />
  <input type="text" name="expiration-year" />

  CCV:
  <input type="text" name="ccv" />

</form>
```

```
var $paymentForm = $('#payment-form');

$paymentForm.on('submit', function () {

  var cardType = $paymentForm.children('select').val();
  var ccn = $paymentForm.children('[name="ccn"]').val();
  var expirationMonth = $paymentForm.children('[name="expiration-month"]').val();
  var expirationYear = $paymentForm.children('[name="expiration-year"]').val();
  var cvv = $paymentForm.children('[name="ccv"]').val();

});
```

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  var ccn = $paymentForm.children('[name="ccn"]').val();
  var expirationMonth = $paymentForm.children('[name="expiration-month"]').val();
  var expirationYear = $paymentForm.children('[name="expiration-year"]').val();
  var ccv = $paymentForm.children('[name="ccv"]').val();

  if (!cardType || !ccn || !expirationMonth || !expirationYear || !ccv) {
    return false;
  }

});
```

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$paymentForm.on('submit', function () {

  var cardType = $paymentForm.children('select').val();
  var ccn = $paymentForm.children('[name="ccn"]').val();
  var expirationMonth = $paymentForm.children('[name="expiration-month"]').val();
  var expirationYear = $paymentForm.children('[name="expiration-year"]').val();
  var ccv = $paymentForm.children('[name="ccv"]').val();

  var allStuffFilledIn = true;

  [cardType, ccn, expirationMonth, expirationYear, ccv].forEach(function (v) {
    if (!v) allStuffFilledIn = false;
  });

  if (!allStuffFilledIn) {
    return false;
  }

});
```

```
var $paymentForm = $('#payment-form');

$paymentForm.on('submit', function (event) {

  event.preventDefault();

  var cardType = $paymentForm.children('select').val();
  var ccn = $paymentForm.children('[name="ccn"]').val();
  var expirationMonth = $paymentForm.children('[name="expiration-month"]').val();
  var expirationYear = $paymentForm.children('[name="expiration-year"]').val();
  var ccv = $paymentForm.children('[name="ccv"]').val();

  var allStuffFilledIn = true;

  [cardType, ccn, expirationMonth, expirationYear, ccv].forEach(function (v) {
    if (!v) allStuffFilledIn = false;
  });

  if (!allStuffFilledIn) {
    return false;
  }

});
```

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var $paymentForm = $('#payment-form');

$paymentForm.on('submit', function (event) {

  event.preventDefault();

  var cardType = $paymentForm.children('select').val();
  var ccn = $paymentForm.children('[name="ccn"]').val();
  var expirationMonth = $paymentForm.children('[name="expiration-month"]').val();
  var expirationYear = $paymentForm.children('[name="expiration-year"]').val();
  var ccv = $paymentForm.children('[name="ccv"]').val();

  var allStuffFilledIn = true;

  [cardType, ccn, expirationMonth, expirationYear, ccv].forEach(function (v) {
    if (!v) allStuffFilledIn = false;
  });

  if (!allStuffFilledIn) {
    return false;
  }

  if (!verifyCCNMatchesCardType(ccn, cardType)) {
    return false;
  }

});
```

```
var $paymentForm = $('#payment-form');

$paymentForm.on('submit', function (event) {

  event.preventDefault();

  var cardType = $paymentForm.children('select').val();
  var ccn = $paymentForm.children('[name="ccn"]').val();
  var expirationMonth = $paymentForm.children('[name="expiration-month"]').val();
  var expirationYear = $paymentForm.children('[name="expiration-year"]').val();
  var ccv = $paymentForm.children('[name="ccv"]').val();

  var allStuffFilledIn = true;

  [cardType, ccn, expirationMonth, expirationYear, ccv].forEach(function (v) {
    if (!v) allStuffFilledIn = false;
  });

  if (!allStuffFilledIn) {
    return false;
  }

  if (!verifyCCNMatchesCardType(ccn, cardType)) {
    handleError('Credit card number does not match card type.');
  }
});
```

```
var $paymentForm = $('#payment-form');

$paymentForm.on('submit', function (event) {

    event.preventDefault();

    var cardType = $paymentForm.children('select').val();
    var ccn = $paymentForm.children('[name="ccn"]').val();
    var expirationMonth = $paymentForm.children('[name="expiration-month"]').val();
    var expirationYear = $paymentForm.children('[name="expiration-year"]').val();
    var ccv = $paymentForm.children('[name="ccv"]').val();

    var allStuffFilledIn = true;
    [cardType, ccn, expirationMonth, expirationYear, ccv].forEach(function (v) {
        if (!v) allStuffFilledIn = false;
    });

    if (!allStuffFilledIn) {
        handleError('Something is not filled in.');
    }

    if (!verifyCCNMatchesCardType(ccn, cardType)) {
        handleError('Credit card number does not match card type.');
    }
});
```

KILL ME NOW

**INPUT VALUING AND FORM  
VALIDATION IS WROUGHT  
WITH BUSINESS LOGIC AND  
EXTREMELY VERBOSE MUCH  
LIKE THIS SLIDE HAHA GET IT  
THERE ARE MANY WORDS  
HERE**



# ANGULAR IS QUITE GOOD AT FORMS

- Flexible pattern for handling input values

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- Flexible pattern for handling input values
- Powerful, declarative input validation inside templates
- Composing inputs together using forms
- Building custom, reusable validation

# ng-model

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# ng-model

- **Built-in attribute directive**
- **Based on type of input element attached will convey the value of that input to a target on the scope**
- **Standard way for reading input values which ultimately allows for reusability of validation logic**

```
<input type="text" ng-model="creditCardNumber" />
```

```
<select ng-model="card.type">
  <option>Visa</option>
  <option>Mastercard</option>
</select>
<input type="text" ng-model="card.number" />
```

# ngModelController

# BUILT-IN VALIDATION DIRECTIVES

- **ng-required** - value must not be empty
- **ng-minlength** - value must be this long or longer
- **ng-maxlength** - value must be this short or shorter
- **ng-pattern** - value must pass regular expression test
- **type=“email”** - value must be a passable email
- **type=“number”** - value must be numeric
- **type=“url”** - value must represent a valid url

# <FORM>

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*Technically a directive; technically super awesome*

# USING THE FORM DIRECTIVE

- ④ `<form name="paymentForm"></form>`

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- `<form name="paymentForm"></form>`
- Creates an `ngModelController` that is the composition of all the `ng-model` elements inside
- Allows for establishing validity of entire form based on all `ng-models`

```
<select ng-model="card.type">
  <option>Visa</option>
  <option>MasterCard</option>
</select>

<input type="text" ng-model="card.number" />

<input type="text" ng-model="card.expMonth" />
<input type="text" ng-model="card.expYear" />

<input type="text" ng-model="card.cvv" />

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

```
<form name="paymentForm">

    <select ng-model="card.type">
        <option>Visa</option>
        <option>MasterCard</option>
    </select>

    <input type="text" ng-model="card.number" />

    <input type="text" ng-model="card.expMonth" />
    <input type="text" ng-model="card.expYear" />

    <input type="text" ng-model="card.cvv" />

    <button type="submit">Submit Payment</button>

</form>
```

```
<form name="paymentForm">

  <select ng-model="card.type">
    <option>Visa</option>
    <option>MasterCard</option>
  </select>

  <input type="text" ng-model="card.number" />

  <input type="text" ng-model="card.expMonth" />
  <input type="text" ng-model="card.expYear" />

  <input type="text" ng-model="card.cvv" />

  <button type="submit">Submit Payment</button>

</form>
```

```
<form name="paymentForm">

  <select name="cardType" ng-model="card.type">
    <option>Visa</option>
    <option>MasterCard</option>
  </select>

  <input name="cardNumber" type="text" ng-model="card.number" />

  <input name="expMonth" type="text" ng-model="card.expMonth" />
  <input name="expYear" type="text" ng-model="card.expYear" />

  <input name="cardCVV" type="text" ng-model="card.cvv" />

  <button type="submit">Submit Payment</button>

</form>
```