

ANGULAR.JS INPUT

*“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 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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$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();
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  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;
  }

});
```

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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();
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  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.');
  }
});
```

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

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

});
```

AAAAGGGHHH!

**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
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- Composing inputs together using forms
- **Building custom, reusable validation**

ng-model

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- 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>

Technically a directive; technically super awesome

USING THE FORM DIRECTIVE

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

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- Creates an ngModelController that is the composition of all the ng-model elements inside

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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>
```