Testing AngularJS Controllers

beforeEach Setup

```
describe("tests", function() {

  beforeEach(module('myApp'));

...
});
```

Alias for
angular.mock.module

beforeEach Setup

```javascript
describe("tests", function() {

  beforeEach(function () {
    module('myApp');


    setupMock();
  });
...
});
```

Set up module *and* set up a mock object

Let's see what goes here in the next slide

beforeEach Setup

```
var $controller;
var mockService;
var myCtrl;

beforeEach(inject(function (_$controller_) {
  $controller = _$controller_;

  mockService = {};
  mockService.aMethod = function () {
    return 'fake-value';
  };

  myCtrl = $controller('MyCtrl', { MyService: mockService });
}));
...
```

Alias for
angular.mock.inject

beforeEach Setup

```javascript
var $controller;
var mockService;
var myCtrl;

beforeEach(inject(function (_$controller_) {
  $controller = _$controller_;

  mockService = {};
  mockService.aMethod = function () {
    return 'fake-value';
  };

  myCtrl = $controller('MyCtrl', { MyService: mockService });
}));
...
```

Angular mock injector strips off the '_'

beforeEach Setup

```
var $controller;
var mockService;
var myCtrl;

beforeEach(inject(function (_$controller_) {
  $controller = _$controller_;

  mockService = {};
  mockService.aMethod = function () {
    return 'fake-value';
  };

  myCtrl = $controller('MyCtrl', { MyService: mockService });
}));
...
```

Setting up a mock (fake) service

What goes below the beforeEach: next slide

Test Method

```
...
it("should update init value on item add", function() {
  myCtrl.addItem();
  expect(myCtrl.value).toBe("fake-value");
});
}); // end of describe
```

Include JS Files in SpecRunner.html

```html
<!-- include source files here... -->
<script src="lib/angular.min.js"></script>
<script src="lib/angular-mocks.js"></script>
<script src="app.js"></script>

<!-- include spec files here... -->
<script src="spec/MyCtrl.spec.js"></script>
```

beforeEach Setup – version 2

```
beforeEach(function () {
  module(function ($provide) {
    $provide.service('MockService', function () {
      var service = this;
      service.aMethod = function () {
        return 'fake-value';
      };
    });
  });

  module('MyApp');
});
```

beforeEach Setup – version 2

```javascript
var $controller;
var myCtrl;

beforeEach(inject(function (_$controller_, MockService)
{
    $controller = _$controller_;

    myCtrl = $controller('MyCtrl',
                            { MyService: MockService });

}));
```

Test Method – (version 2 same as 1)

```
...
it("should update init value on item add", function() {
    myCtrl.addItem();
    expect(myCtrl.value).toBe("fake-value");
});
}); // end of describe
```

Summary

- Angular provides ngMock module to help with unit testing
- To test a controller you need:
  - Load module controller is in with angular.mock.module('name')
  - Use $controller to instantiate the controller you want to test
  - Use controller instance to invoke methods, access props, etc.
- Do most of the setup in beforeEach
  - At least module('name') loading, but maybe more
- $provide service can be injected only into module('name')
- For other services, use angular.mock.inject method