

# 305CDE Worksheet 7

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## About

This is the second of a series of 6 labs on AngularJS. In the first week, I introduced you some basic AngularJS concepts for example modules and controllers. I also briefly demonstrated some simple directives such as ng-repeat. The aim of the current lab is

1. Forms in AngularJS, including various controls and validations.
2. Introduction of AngularJS services.

## Resources

You should always remember to check out the manual, as that gives us the most accurate explanation.

- [Official AngularJS guide on forms](#)
- [Official AngularJS guide on services](#)
- [Try, Catch, Fail: Angular JS: Form Validation](#)

## Task List

1. Setup basic forms and perform two-way data binding
2. Simple form validation, accessing form states
3. Using different controls within a form
4. Using AngularJS services

The first three tasks are today's main focus; while the last will take a while to understand, but it's also quite important.

## Step-by-Step

### 1. Setting up basic forms

Open file `form_intro.html`, get yourself familiar with the syntax of setting up forms in AngularJS. You should be familiar with HTML forms already. If not, try to find a good tutorial online. Try to answer the following questions:

1. Note the use of “ng-submit” attribute. Can we use an `onClick` listener instead?
2. “user” is not initialized in the controller. What advantages do we have doing it this way?

#### Test your understanding

Set up an array to host all submitted names and display back in the HTML.

### 2. Form validation

The next file you will look at is `validation.html`. There are some new attributes introduced here, for example `ng-disabled` and `ng-minlength`. Try to input to the `firstname` textbox, and notice how the submit button becomes enabled.

In fact, the form and each of its control have five states, which we’ll cover shortly in the theoretical section. Have a look at the online tutorial at [Try, Catch, Fail: Angular JS: Form Validation](#) and see how each state changes after your click.

#### Test your understanding

Modify `validation.html` to display back the state of the two input textboxes in the html in a way similar to the online tutorial.

### 3. Drop-down list

Apart from textbox, there’re quite a number of form UIs that are supported by AngularJS. Some are listed below for your convenience:

- [input](#)
- [select](#)

In `select.html` you’ll see an example of a drop-down list. Once you understand this file, go to the online manual at <https://docs.angularjs.org/api/ng/directive/select> and make sure you understand the example shown there.

**Test your understanding**

Use a text box to build a drop-down list in a accumulative manner.

**4. AngularJS services**

AngularJS services are very important. It allows controllers to exchange info with each other, and to use system-wide 'services' for example the browser window. The example service.html is adapted from the online guide at <https://docs.angularjs.org/guide/services>. Note the syntax changes between the two versions, and try to answer the following:

In service.html, what is 'win', that argument passed into the anonymous function in line 26?

**Test your understanding**

Give the user a warning message only if the number of errors in a form is more than 3.