Angular $scope and Events

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Publish-subscribe Pattern

- In software architecture, publish–subscribe is a messaging pattern where
  - Senders of messages, called *publishers*, do not program the messages to be sent directly to specific receivers, called subscribers, but instead characterize published messages into classes without knowledge of which subscribers, if any, there may be
  - Similarly, *subscribers* express interest in one or more classes and only receive messages that are of interest, without knowledge of which publishers, if any, there are.

https://en.wikipedia.org/wiki/Publish%E2%80%93subscribe_pattern

Angular Event System

- Supported on the $scope
- $scope.$emit: fires an event up the $scope
- $scope.$broadcast: fires an event down the $scope
- $scope.$on: listen for the events

Angular Event System

- $rootScope.$emit: fires event for all $rootScope.$on listeners only
- $rootScope.$broadcast: reaches all $rootScope.$on and $scope.$on listeners

Angular ui-router Events

- ui-router fires some events of interest:
  - $stateChangeStart: fires when the transition begins
  - $stateNotFound: fires when state cannot be found
  - $stateChangeSuccess: fires once state change is successful
  - $stateChangeError: fires when error occurs during transition

Example: Loading Messages

```
$rootScope.$on('loading:show', function () {
        $ionicLoading.show({
            template: '<ion-spinner></ion-spinner> Loading ...'
        })
});

$rootScope.$on('loading:hide', function () {
        $ionicLoading.hide();
});
```

Example: Loading Message

```
$rootScope.$on('$stateChangeStart', function () {
        console.log('Loading ...');
        $rootScope.$broadcast('loading:show');
});

$rootScope.$on('$stateChangeSuccess', function () {
        console.log('done');
        $rootScope.$broadcast('loading:hide');
});
```

Exercise: Displaying Loading Message During State Transition

- Use $rootScope to create a mechanism to display and hide loading message
- Use the ui-router events to show and hide the loading message