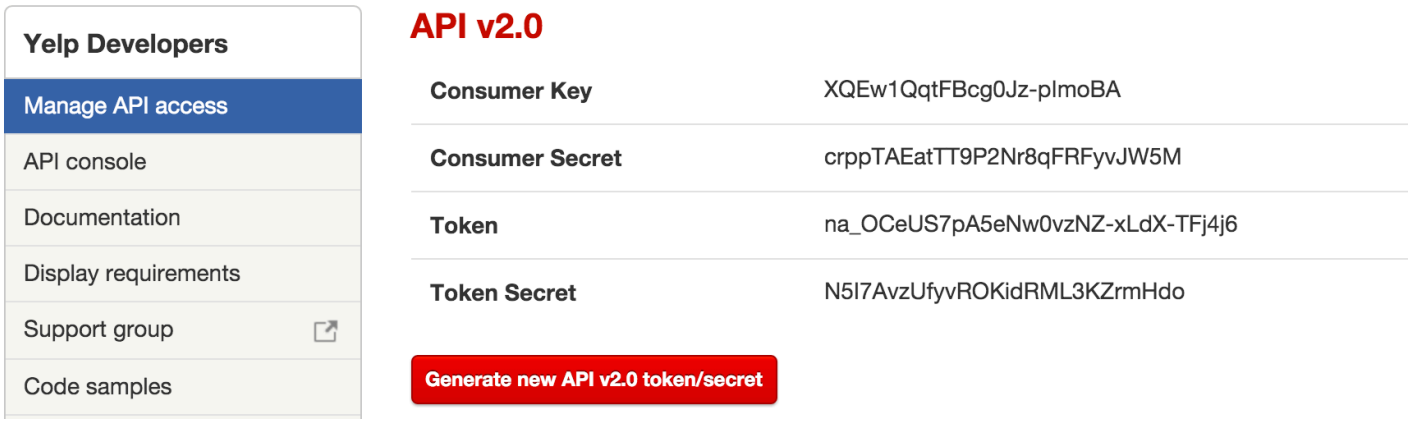
Obtaining data through the YelpAPI

In this lab, we will be using the $http Angular built-in service to load data from an external website. Here, we will be using the Yelp API (which uses OAuth). We will also complete some functionality of the app such as the news feed, and implementing the search function.

Registering for YelpAPI

We will need to register on the Yelp Developer's page to obtain our OAuth keys. Head to https://www.yelp.com/developers/api_console and register for an account to obtain your OAuth keys.

Then, head to `Manage API access` to obtain your API keys. Note them down. (You can keep your browser's tab open.)



We will be using the Search API (https://www.yelp.com/developers/documentation/v2/search_api) for our News Feed and the Search feature. When you click on the businesses to display the location, we will be using the Business API instead (https://www.yelp.com/developers/documentation/v2/business).

Setting up OAuth

Now, head to https://gist.github.com/imjching/831f4d85751257049632 and download the file. Save it as `oauth-signature.min.js` in your `js` folder.

Technically, we can use bower to install this as an external dependency since Ionic already comes with bower. However, *to avoid proxy issues* that your network has, you may download this manually and add it.

> Alternative: To install with bower, do `bower install oauth-signature`.

Next, head to `index.html` and include the js file **before** app.js.

```
...
<script src="js/oauth-signature.min.js"></script>
<script src="js/app.js"></script>
...
```

Next, replace your `services.js` with this:

```
(function() {
  'use strict';

  angular.module('yulpApp')
    .factory('YelpAPI', ['$http', YelpAPI]);
    //.factory('anotherService', [anotherService])

  function YelpAPI($http) {
    function randomString(length, chars) {
      var result = '';
      for (var i = length; i > 0; --i) {
        result += chars[Math.round(Math.random() * (chars.length - 1))];
      }
      return result;
    }

    function searchAPI(location, limit, callback) {
      var method = 'GET';
      var url = 'http://api.yelp.com/v2/search';
      var params = {
        location: location,
        oauth_consumer_key: 'CONSUMER_KEY_HERE', //Consumer Key
        oauth_token: 'TOKEN_HERE', //Token
        oauth_signature_method: "HMAC-SHA1",
        oauth_timestamp: new Date().getTime(),
        oauth_nonce: randomString(32, '0123456789abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLM
NOPQRSTUVWXYZ'),
        limit: limit,
        cc: 'MY'
      };
      var consumerSecret = 'CONSUMER_SECRET_HERE'; //Consumer Secret
      var tokenSecret = 'TOKEN_SECRET_HERE'; //Token Secret
      var signature = oauthSignature.generate(method, url, params, consumerSecret, token
Secret, { encodeSignature: false});
      params['oauth_signature'] = signature;

      $http.get(url, { params : params }).then(function (res) {
        callback(res.data);
      });
```

```
    }

    function getData(callback) {
      return searchAPI('Kuala Lumpur', 10, callback);
    }

    return {
      getData: getData
    };
  }
})();
```

> Remember to replace your **CONSUMER_KEY_HERE**, **TOKEN_HERE**, **CONSUMER_SECRET_HERE**, and **TOKEN_SECRET_HERE** with your respective secret keys.

When you are done, replace your `controllers.js` with this:

```
(function() {
  'use strict';

  angular.module('yulpApp')
    .controller('FeedCtrl', ['YelpAPI', FeedCtrl])
    .controller('FeedDetailsCtrl', ['$stateParams', 'YelpAPI', FeedDetailsCtrl]);

  function FeedCtrl(YelpAPI) {
    var vm = this; // view model (vm)

    YelpAPI.getData(function(data) {
      vm.total = data.total;
      vm.businesses = data.businesses;

      console.log(vm.businesses);
    });
  }

  function FeedDetailsCtrl($stateParams, YelpAPI) {
    var vm = this; // view model (vm)

    vm.businessId = $stateParams.businessId;
    console.log(vm.businessId);

    // load the first data first, temporary
    YelpAPI.getData(function(data) {
      vm.businesses = data.businesses;

      vm.business = vm.businesses[0]; // temporary
    });
  }
})();
```

Your app's feed should now work dynamically. If you don't see anything, seek a mentor for help.

Implementing the Search feature

Let's add a `SearchCtrl` in controllers.js:

```
...
  .controller('FeedDetailsCtrl', ['$stateParams', 'YelpAPI', FeedDetailsCtrl])
  .controller('SearchCtrl', ['YelpAPI', '$scope', SearchCtrl]);

...

function SearchCtrl(YelpAPI, $scope) {
  var vm = this; // view model

  vm.toSearch = '';

  vm.search = function() {
    YelpAPI.searchData(vm.toSearch, function(data) {
      vm.businesses = data.businesses;
    });
  }
}
```

Here, we have added the `toSearch` model as well as the `search` function.

Now add the searchData function into `services.js`:

```
...
function searchData(toSearch, callback) {
  return searchAPI(toSearch, 10, callback);
}

return {
  getData: getData, // the comma
  searchData: searchData // this line
};
...
```

Remember to return the new searchData function.

We will then bind the controller to the `search.html` view. Replace it with this:

```
<ion-view view-title="Search" ng-controller="SearchCtrl as vm">
  <ion-content>
    <div class="bar bar-header item-input-inset">
      <label class="item-input-wrapper">
        <i class="icon ion-ios-search placeholder-icon"></i>
        <input type="search" placeholder="Input location here" ng-model="vm.toSearch">
      </label>
      <button class="button button-outline button-positive" ng-click="vm.search()">
        Search
      </button>
    </div>

    <div class="list list-inset">
      <a class="item item-thumbnail-left item-icon-right" ng-repeat="business in vm.busi
nesses" ui-sref="home.feed-details({ businessId: business.id })">
        <img ng-src="{{ business.image_url }}">
        <h4>{{ business.name }}</h4>
        <img ng-src="{{ business.rating_img_url }}">
        <h5><i class="ion-ios-telephone"></i> {{ business.display_phone }}</h5>

        <i class="icon ion-chevron-right icon-accessory"></i>
      </a>
    </div>

  </ion-content>
</ion-view>
```

> We added `ng-model`, `ng-click`, and `ng-repeat`.

You can now test out your search feature. Try searching for location terms like `Perak`, `Selangor`, `Sarawak`, etc.

Implementing the Business API

We have implemented the Search API, now we will implement the Business API to load the business details when we click on the business name.

In `services.js`, add the following functions in **YelpAPI**.

```
...
function businessAPI(id, callback) {
  var method = 'GET';
  var url = 'http://api.yelp.com/v2/business/' + id;
  var params = {
    oauth_consumer_key: 'CONSUMER_KEY_HERE', //Consumer Key
    oauth_token: 'TOKEN_HERE', //Token
    oauth_signature_method: "HMAC-SHA1",
    oauth_timestamp: new Date().getTime(),
    oauth_nonce: randomString(32, '0123456789abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQ
RSTUVWXYZ'),
    cc: 'MY'
  };
  var consumerSecret = 'CONSUMER_SECRET_HERE'; //Consumer Secret
  var tokenSecret = 'TOKEN_SECRET_HERE'; //Token Secret
  var signature = oauthSignature.generate(method, url, params, consumerSecret, tokenSecr
et, { encodeSignature: false});
  params['oauth_signature'] = signature;

  $http.get(url, { params : params }).then(function (res) {
    callback(res.data);
  });
}

function searchBusiness(id, callback) {
  return businessAPI(id, callback);
}

return {
  getData: getData,
  searchData: searchData, // a comma
  searchBusiness: searchBusiness // this line
};
...
```

Again, remember to make your function public by returning it in the object. Don't forget to *insert your keys* as well.

Finally, in your `controllers.js`, replace your `FeedDetailsCtrl` with this:

```
function FeedDetailsCtrl($stateParams, YelpAPI) {
  var vm = this; // view model (vm)

  YelpAPI.searchBusiness($stateParams.businessId, function(data) {
    vm.business = data;
  });
}
```

Now, try clicking on the individual businesses, their address should be displayed appropriately.

$ionicLoading

As you can see, it takes some time to load when you search or click on the individual business. As a result, a blink can be seen on the data.

Let's make use of $ionicLoading.

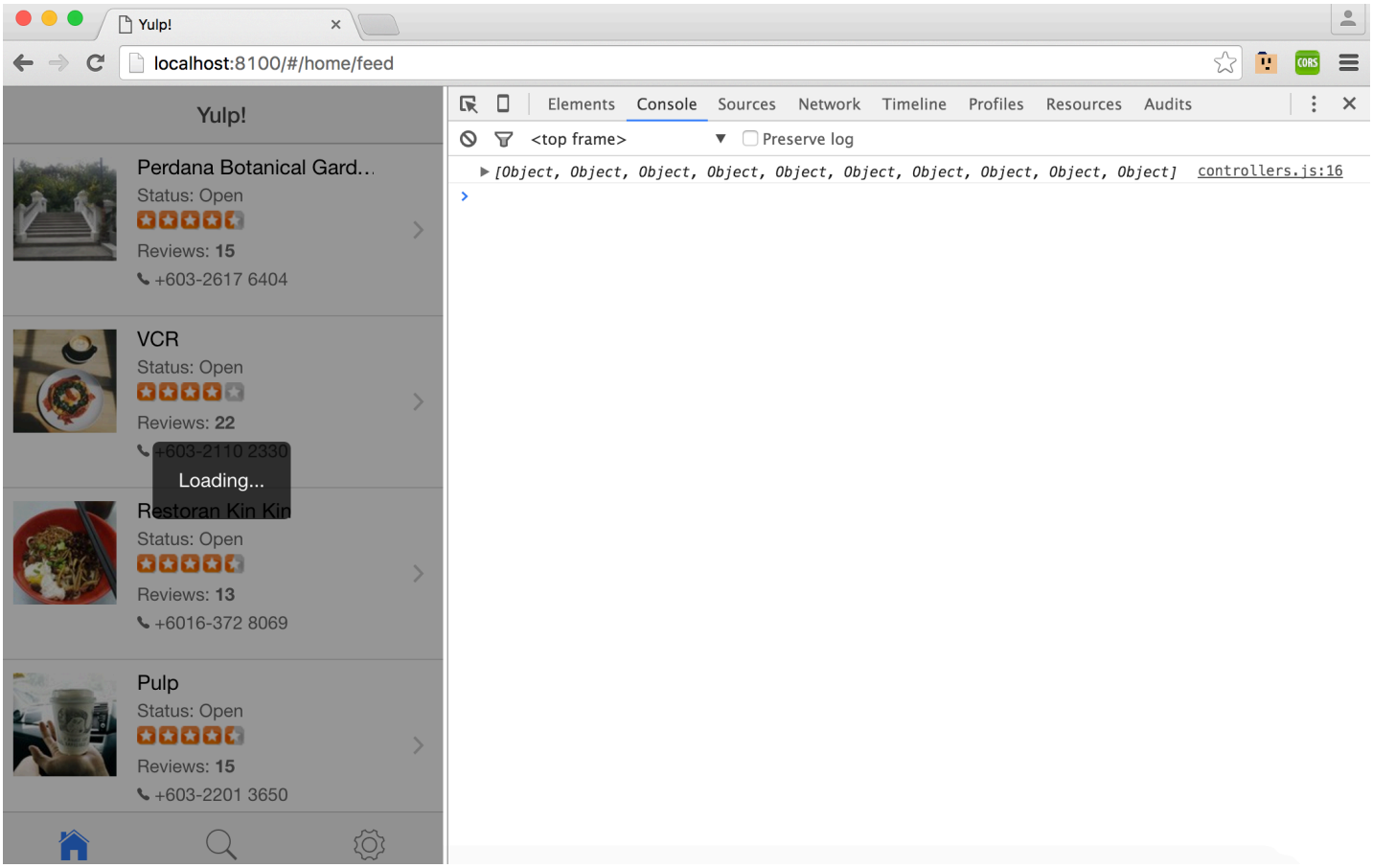
In your `services.js`, inject your `$ionicLoading` into the YelpAPI so that it looks like this:

```
...
angular.module('yulpApp')
  .factory('YelpAPI', ['$http', '$ionicLoading', YelpAPI]);

  function YelpAPI($http, $ionicLoading) {
...
```

Also, in **both** your `searchAPI` and `businessAPI` function, modify the bottom part of the function so that it looks like this:

```
$ionicLoading.show( { template: 'Loading...' } ); // add this
$http.get(url, { params : params }).then(function (res) {
  $ionicLoading.hide(); // and add this
  callback(res.data);
});
```



You are done for now!