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**Landmark Remarker**

**The approach:**

I have started by creating a visual studio 2015 solution then I added a Web Api project.

I used an mdf file in App\_Data folder for the database. There are two tables in it. A user table, which holds the user records, and a landmarks table, which holds landmark information, saved for a location (userId, note, latitude and longitude). Records in those two tables are joined via the userId as a foreign key in the landmarks table. This means that a user can have multiple locations. Then I used Entity framework to generate the database model and the objects needed (User and landmark). I also used visual studio scaffolding to generate CRUD Api controllers for both of the objects. Few tweaks had to be made to fix up routing and enable cors for later use. Mainly to allow other projects to communicate with the api freely. At this stage the Api is ready but few modifications have to be done later on.

I am very new to angular 2 so I had a quick look initially trying to figure where to start and especially when it comes how to integrate it with Google maps. I found that there is a an angular 2 Google maps package that I can use but I have tried for few hours to get it run but it did not compile. I ended up going back to what Google map’s official website suggests.

Initially I followed instructions on Angular2 official website to create an app on visual studio but I didn’t like the quick start files. There were a lot of unneeded folders and files. So I ended up removing this project and go via NodeJs instructions to create a basic Angular 2 app via Nodejs and angular command line. From here I stayed with NodeJs to deliver the app and building it via **ng build** and use **ng serve** to host it on [**http://localhost:4200/**](http://localhost:4200/)

The command window listen to changes on files and throws errors I as I keep changing files which is great.

I have tried to implement angular 2 to run within Visual studio but I had no luck with that.

**Components:**

I went through the user stories from top to bottom to build the system as follow:

1- Preparation of Development environment by installing NodeJs and typescript for both visual studio and NodeJs. This would have taken a good 2 hours to figure out.

2- Figure out Angular 2 file structure and to build a functional app. Lots of reading via the main website and various YouTube videos. About 3-4 hours.

3- Figure out how to incorporate Google maps within angular 2 app and display current location.

I have wasted a lot of time trying to get angular 2 Google maps package to compile and run then I went back to basic javascript example from Google maps website. About 2 hours.

4- Api set up and database model preparation plus the creation of data seeding store procedure. 2 hours

5- Build a basic form to post data about current location.

I started by getting a list of users from the api then the next mission is to pass and save a landmark data back to the api. About 3 hours

6- Get user saved landmarks when a user selected from drop down list. About 1-2 hours.

7- Get and display landmarks list along with username. About 1 hour

8- Input search for notes and username on landmark list . About 1 hour.

9- Tidy up and comments. About 1 hour.

Resources:

<https://developers.google.com/maps/documentation/javascript/tutorial>

<http://www.c-sharpcorner.com/article/asp-net-core-getting-started-with-angularjs-2/>

[https://angular.io/docs/ts/latest/guide/server-communication.html#!#fetch-data](https://angular.io/docs/ts/latest/guide/server-communication.html#fetch-data)

<http://www.syntaxsuccess.com/viewarticle/angular-2.0-and-http>

<https://angular.io/docs/ts/latest/guide/forms.html>

<https://www.youtube.com/watch?v=0RIrdFfy9t4>

<http://www.stackoverflow.com>