

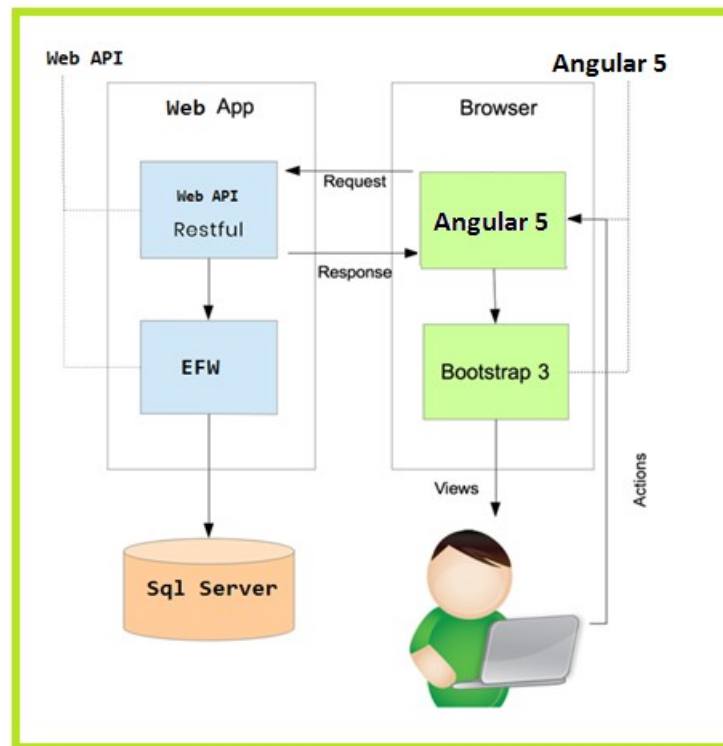
ARCHITECTURE AND DESIGN NOTE ON SKILLS TRACKER

.Net FSD Architecture and Design Notes

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Project Architecture:



Presentation Tier: -

Presentation layer is in Angular 5 Base with CSS3, Bootstrap, HTML 5. It will consume the REST API (ASP.Net Web API).

Business Tier: -

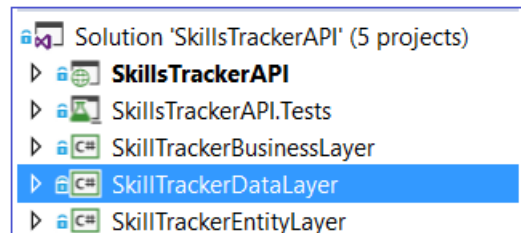
It works as a main channel between the data tier and presentation tier. Business Tier is the sum of Business Logic Layer, Data Access Layer and Value Object and other components used to add business logic. It exposes Rest API which can be called by Presentation Tier to display content to the user. It will also send the data from Presentation tier to Data Tier using Rest API.

Data Tier: -

Data tier consists of SQL server Database Tables. It serves data to business tier to serve to the presentation layer.

Project Structure:

The Skills Tracker Project implements a “Separation of Concerns” pattern for maintainability of the code to ease the development. The following sections details each concern’s functionality.



1. SkillsTrackerAPI:

This is a ASP.NET Web API project which performs as an associate between the Single Page Application (Developed in Angular 5) and the SQL Server database. The request is in the form of Data Transfer Objects (DTO) in JSON Format which is sent to the next layer which is the Business Layer.

2. SkillTrackerBusinessLayer (Business Access Layer):

This is a class library which contains all the business logic of the Skills Tracker Functionality. The incoming data from the API request is transformed into the Database entities and sent to the next layer which is the Data Layer.

3. SkillTrackerDataLayer (Data Access Layer):

This is a class library which contains all the data access logic and mapping logic of the Skills Tracker. The layer implements Repository pattern to access the data via the Entity Framework.

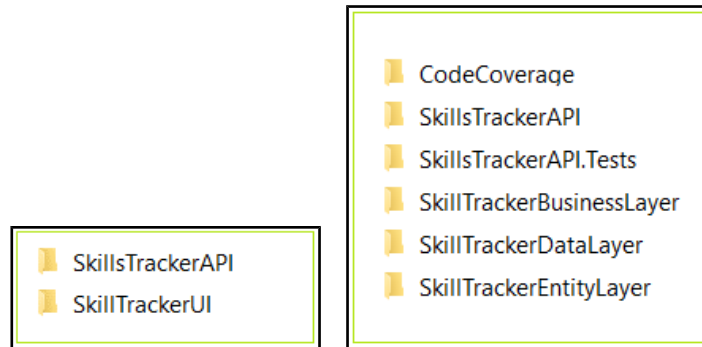
4. SkillTrackerEntityLayer:

This is a class library containing POCOs which are used as entities (for Entity Framework Database First approach) in the Data Access Layer and the Data Transfer Objects for APIs layer.

5. SkillsTracker.Tests:

This is a class library containing unit tests implemented using MSTest.

Other Project Deliverables:



1. SkillTrackerUI:

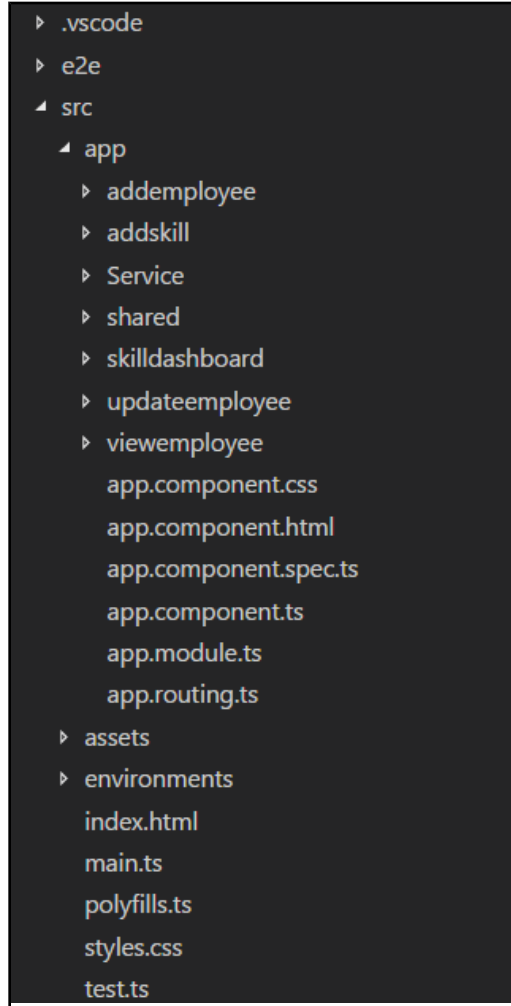
This is an Angular 5 project built with Angular CLI and node js.

2. SkillsTracker.CodeCoverage:

This contains the script for running Code Coverage. The Code Coverage report for Skills Tracker has been copied in the folder. The folder also contains a Readme.txt file containing the guidelines.

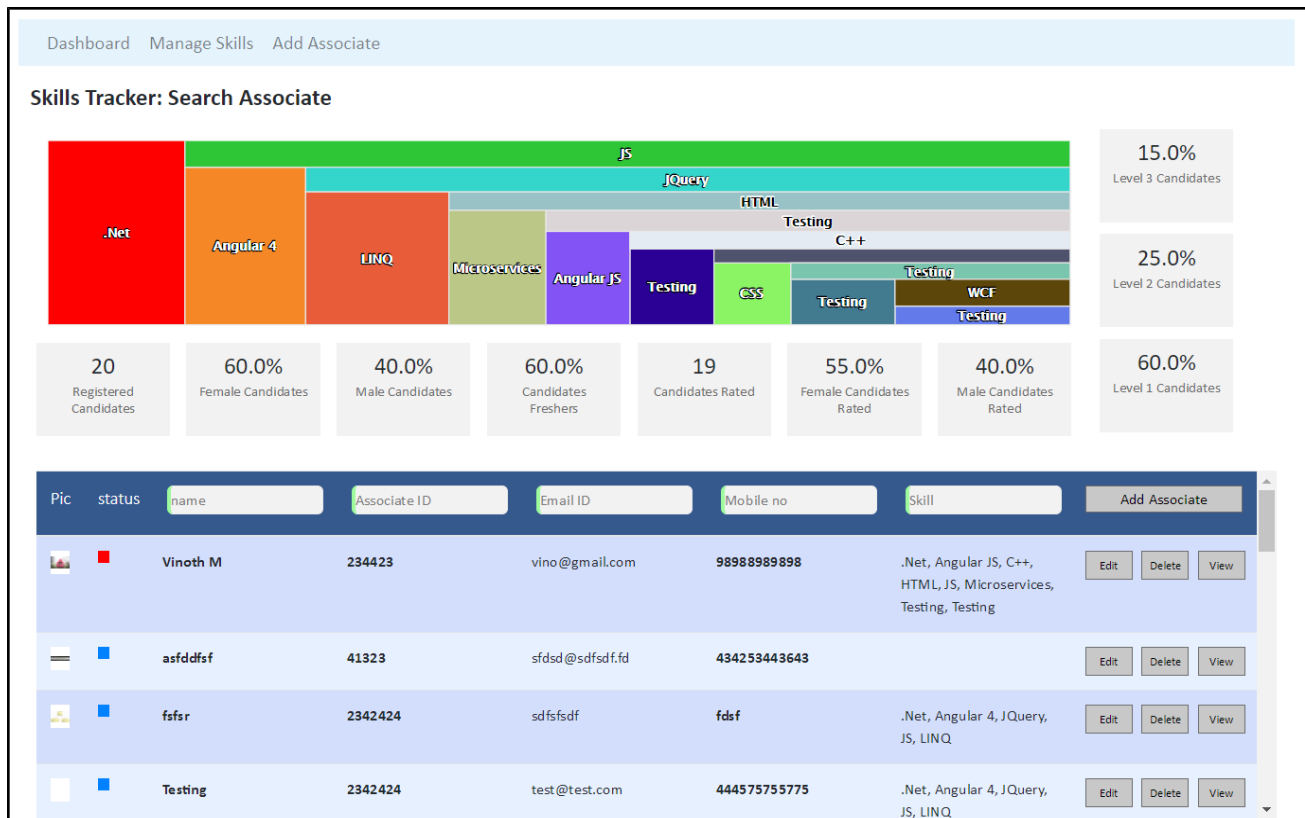
Skills Tracker UI - SPA:

Skills Tracker is a Single Page Application built with Angular 5 and Bootstrap. Developed the ui adhere to the coding standards, structuring it into different modules (shown below).

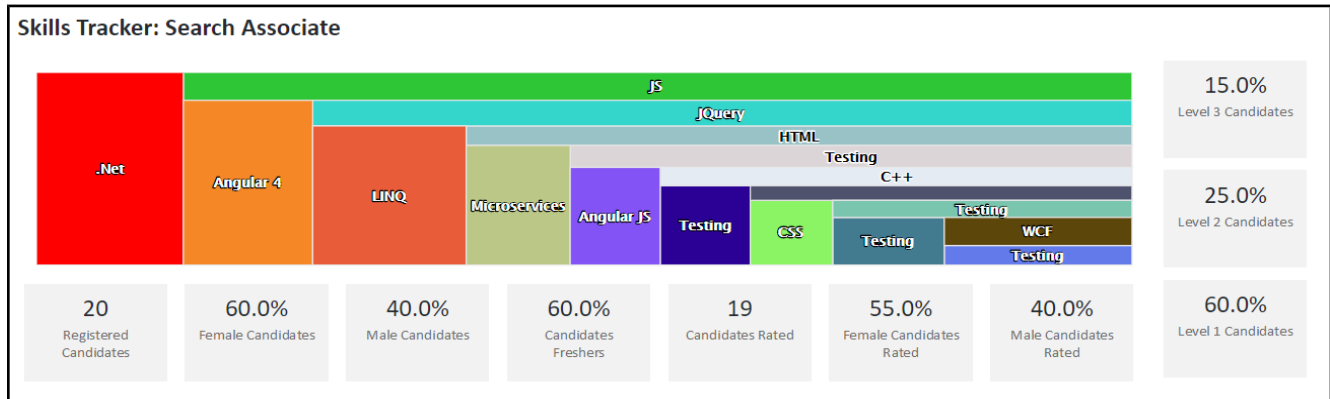


Screenshots of Skills Tracker Modules:

Dashboard/Home Screen



Report - Dashboard



Search/Manage Associate - Datashboard

Pic	status	name	Associate ID	Email ID	Mobile no	Skill	Add Associate
	■	Vinoth M	234423	vino@gmail.com	98988989898	.Net, Angular JS, C++, HTML, JS, Microservices, Testing, Testing	<button>Edit</button> <button>Delete</button> <button>View</button>
	■	asddfsf	41323	sfdsd@sdfsdf.fid	434253443643		<button>Edit</button> <button>Delete</button> <button>View</button>
	■	fsfsr	2342424	sdfsfsdf	fdsf	.Net, Angular 4, JQuery, JS, LINQ	<button>Edit</button> <button>Delete</button> <button>View</button>
	■	Testing	2342424	test@test.com	44457575775	.Net, Angular 4, JQuery, JS, LINQ	<button>Edit</button> <button>Delete</button> <button>View</button>

Manage Skills Screen

DashboardManage SkillsAdd Associate

Skills Tracker: Add Skill Page

Add Skill:

Skill Name

Add

.Net	Edit	Delete
Angular 4	Edit	Delete
Angular JS	Edit	Delete
Azure	Edit	Delete
C++	Edit	Delete
CSS	Edit	Delete
HTML	Edit	Delete
JQuery	Edit	Delete
JS	Edit	Delete
LINQ	Edit	Delete
Microservices	Edit	Delete

Add New Associate Screen

[Dashboard](#) [Manage Skills](#) [Add Associate](#)

Skills Tracker: Add New Employee Skills

Name

Associate ID

Email

Mobile

Gender

Name

Associate ID

Email Address

Mobile no.

Male

Female

Upload Pic

Status Green

Status Blue

Status Red

L1

L2

L3

Remarks:

Remarks

Skills

.Net	0		20	Angular 4	0		20	Angular JS	0		20
Azure	0		20	C++	0		20	CSS	0		20
HTML	0		20	JQuery	0		20	JS	0		20
LINQ	0		20	Microservices	0		20	Testing	0		20
Testing	0		20	Testing	0		20	Testing	0		20
Testing	0		20	Testing	0		20	Testing	0		20
WCF	0		20								
Others											

Strength

Strength

Weakness

Weakness

Reset

Cancel

Save

Update Associate Screen

[Dashboard](#) [Manage Skills](#) [Add Associate](#)

Skills Tracker: Update Employee Skills

Name

Vinoth M

Associate ID

234423

Email

vino@gmail.com

Mobile


98988989898

Gender

Male

Female

Upload Pic



Status

Green

Status

Blue

Status

Red

L1

L2

L3

Remarks:

Allocation is in process

Strength

Strength

Weakness

no weakness

Delete

Cancel

Update

View Associate Screen

[Dashboard](#) [Manage Skills](#) [Add Associate](#)

Skills Tracker: View Employee Skills


Name : Vinoth M

Associate ID : 234423

Email : vino@gmail.com

Mobile : 98988989898

Gender : Male



Associate Status : Red

Associate Level : Level 3

Remarks : Allocation is in process

Skills

.Net :	14	Angular 4 :	0	Angular JS :	13	Azure :	0
C++ :	10	CSS :	0	HTML :	10	JQuery :	0
JS :	12	LINQ :	0	Microservices :	12	Testing :	0
Testing :	13	Testing :	0	Testing :	0	Testing :	13
Testing :	0	Testing :	0	WCF :	0		
Others :	Other skills						

Strength : Strength

Weakness : no weakness

DeleteCancel