

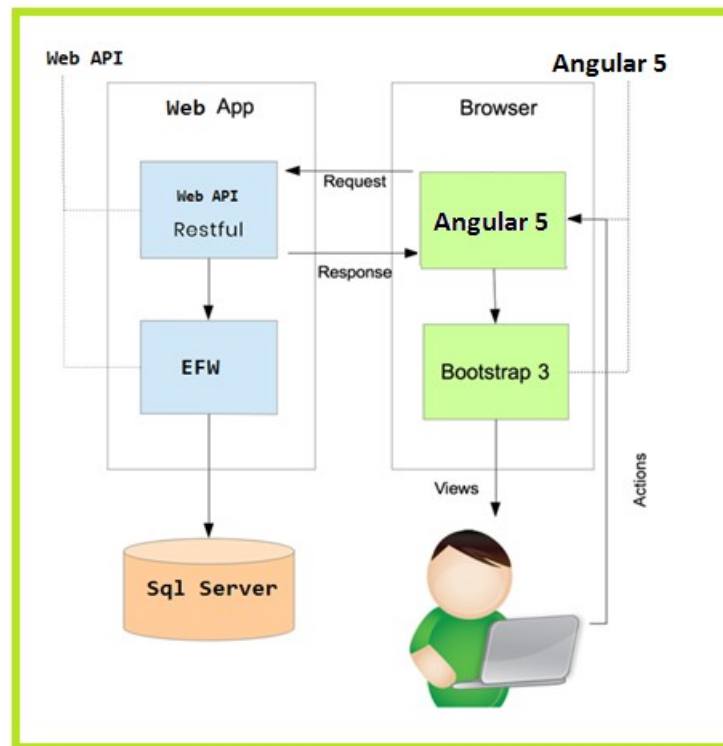
ARCHITECTURE AND DESIGN NOTE ON SKILLS TRACKER

.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: -

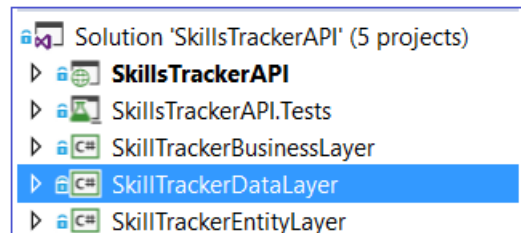
It works as a main channel between the data tier and presentation tier. Business Tier is the sum of Business Logic Layer, Data Access Layer and Value Object and other components used to add business logic. It exposes Rest API which can be called by Presentation Tier to display content to the user. It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

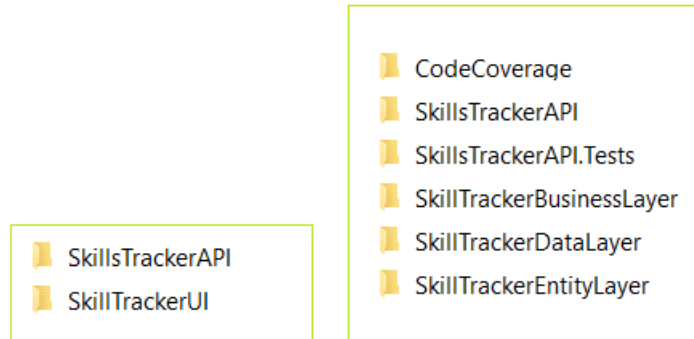
4. SkillTrackerEntityLayer:

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:

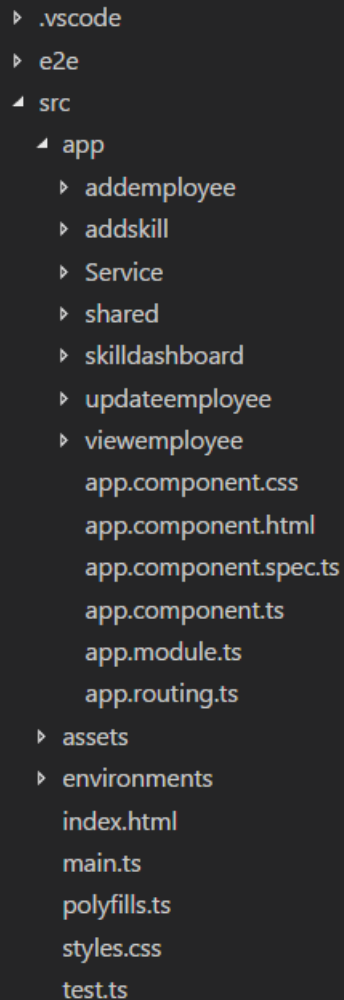
This is an Angular 5 project built with Angular CLI and node js.

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).



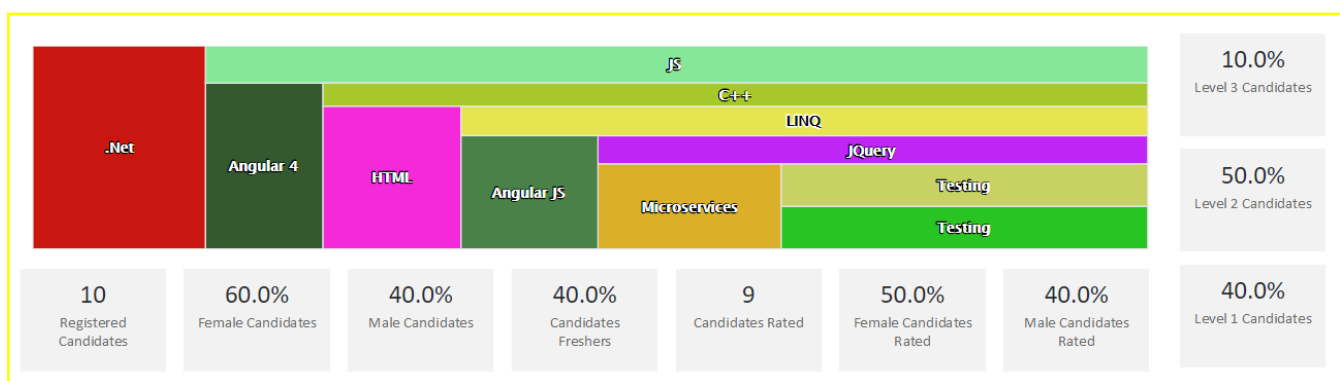
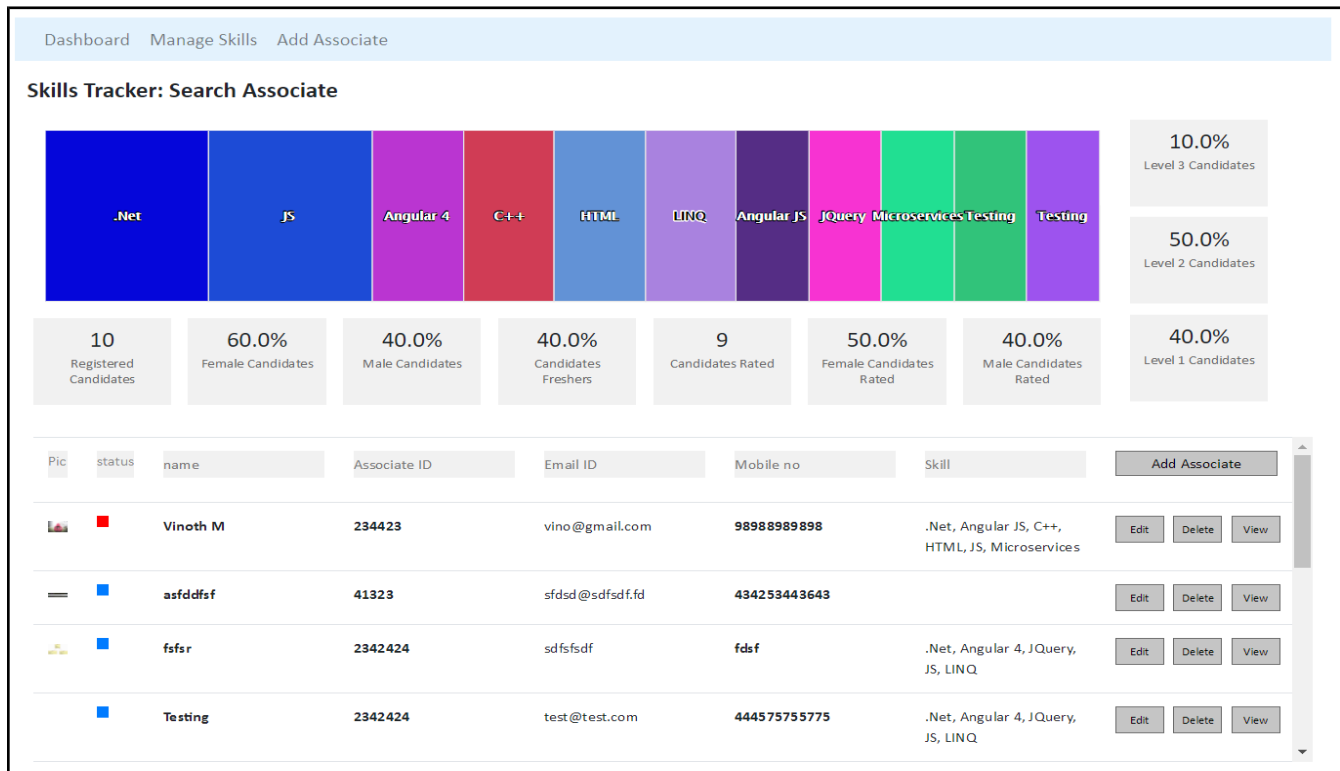
```

└─ .vscode
└─ e2e
└─ src
  └─ app
    └─ addemployee
    └─ addskill
    └─ Service
    └─ shared
    └─ skilldashboard
    └─ updateemployee
    └─ viewemployee
    app.component.css
    app.component.html
    app.component.spec.ts
    app.component.ts
    app.module.ts
    app.routing.ts
  └─ assets
  └─ environments
  index.html
  main.ts
  polyfills.ts
  styles.css
  test.ts

```

Screenshots of Skills Tracker Modules:

Dashboard/Home Screen



Manage Skills Screen

DashboardManage SkillsAdd Associate

Skills Tracker: Add Skill Page

Add Skill:

Skill Name

Add

.Net

EditDelete

Angular 4

EditDelete

Angular JS

EditDelete

Azure

EditDelete

C++

EditDelete

CSS

EditDelete

HTML

EditDelete

JQuery

EditDelete

JS

EditDelete

LINQ

EditDelete

Add New Associate Screen

Dashboard

Manage Skills

Add Associate

Skills Tracker: Add New Employee Skills

Name

Associate ID

Email

Mobile

Gender

Male

Female

Upload Pic

Status Green

Status Blue

Status Red

L1

L2

L3

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

WCF

0

20

Others

Strength

Weakness

Reset


Cancel

Save













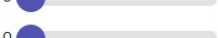
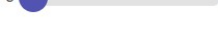
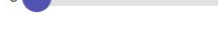
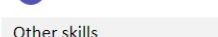
Update Associate Screen

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

Skills Tracker: Update Employee Skills

Name	Vinoth M		<div>Status Green</div>	<div>L1</div>	<div>Remarks:</div> <div>Allocation is in process</div>
Associate ID	234423		<div>Status Blue</div>	<div>L2</div>	
Email	vino@gmail.com		<div>Status Red</div>	<div>L3</div>	
Mobile	98988989898				
Gender	<div>Male</div> <div>Female</div>				

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
WCF	0  20				
Others	<div>Other skills</div>				

Strength	<div>Strength</div>	Weakness	<div>no weakness</div>
<div><div>Delete</div><div>Cancel</div><div>Update</div></div>			

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 :	0	Testing :	0	Testing :	0	WCF :	0
Others :	Other skills						

Strength :

Strength

Weakness :

no weakness

Delete

Cancel