Skill Tracker Application

CONTENTS

1 PROBLEM STATEMENT

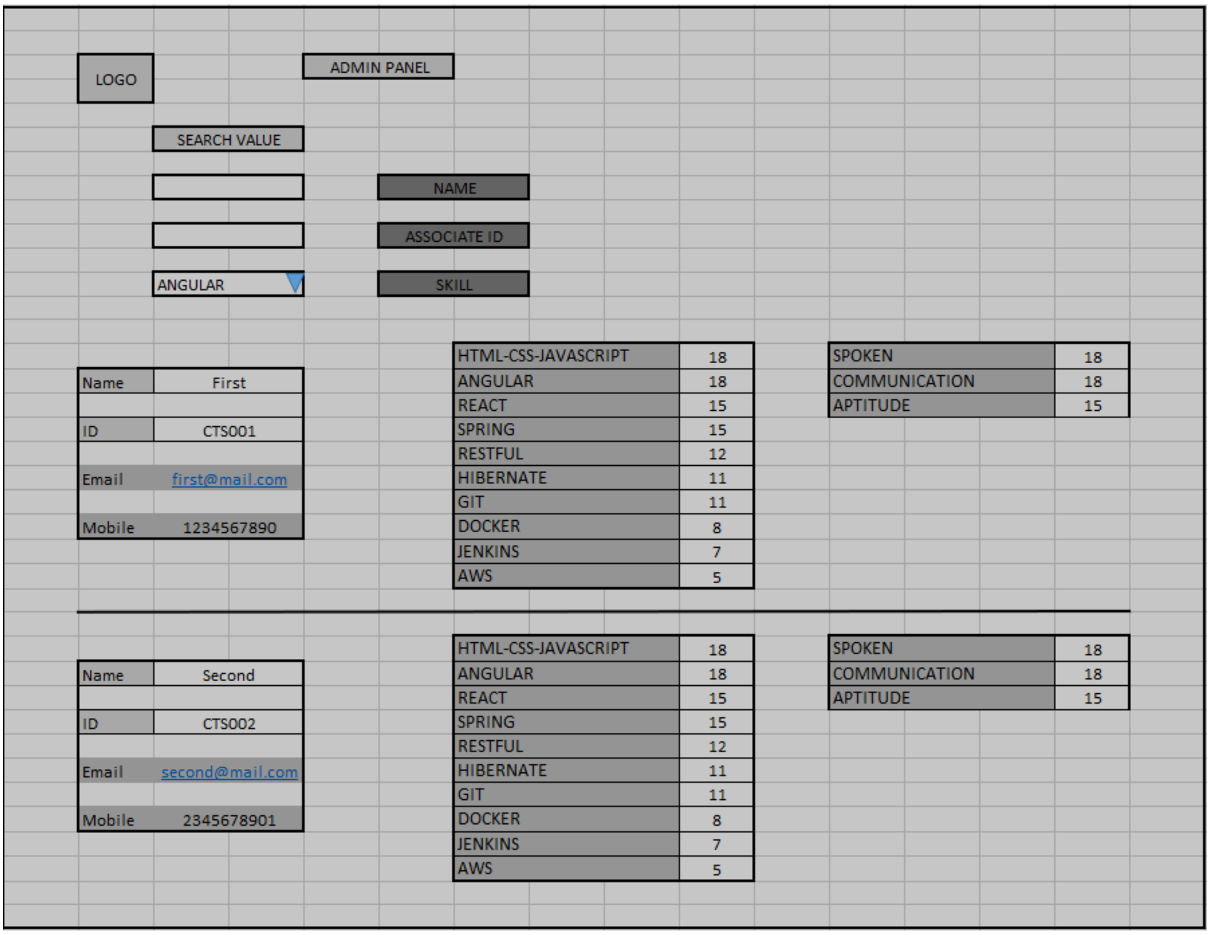
Skill Tracker Application is microservice based Cloud Native Application. The Main purpose of **Skill Tracker** is to keeping track of skill of individual Full Stack Engineers. The core modules of Skill Tracker app are:

- ✓ Full Stack Engineer would add their profile with skill set (skill set detailed in User stories)
- ✓ Full Stack Engineer would be able to update their skill set.
- ✓ Admin would be able to search profiles based on certain criteria (criteria are detailed in User Stories)
- ✓ Use Flutter to implement Mobile application

The scope includes developing the application using tool chain mentioned below.

2 PROPOSED SKILL TRACKER APPLICATON WIREFRAME

Below is the wireframe for reference.



ANGULAR

Name	First
ID	CTS001
Email	first@mail.com
Mobile	1234567890

HTML-CSS-JAVASCRIPT	18
ANGULAR	18
REACT	15
SPRING	15
RESTFUL	12
HIBERNATE	11
GIT	11
DOCKER	8
JENKINS	7
AWS	5

SPOKEN	18
COMMUNICATION	18
APTITUDE	15

Name	Second
ID	CTS002
Email	second@mail.com
Mobile	2345678901

HTML-CSS-JAVASCRIPT	18
ANGULAR	18
REACT	15
SPRING	15
RESTFUL	12
HIBERNATE	11
GIT	11
DOCKER	8
JENKINS	7
AWS	5

SPOKEN	18
COMMUNICATION	18
APTITUDE	15

3 BUSINESS REQUIREMENTS:

Below are the user stories for the given problem statement

User Story #	User Story Name	User Story	Development
US_01	Full Stack Engineer Functionalities	As a Full Stack Engineer, I can add my profile *While adding a profile, following personal information is required.* ➢ Name ➢ Associate Id ➢ Mobile ➢ Email It also requires expertise level on following technical skills (Use these static list of skill set): ➢ HTML-CSS-JAVASCRIPT ➢ ANGULAR ➢ REACT ➢ Asp.Net Core ➢ RESTFUL ➢ Entity Framework ➢ GIT ➢ DOCKER ➢ JENKINS ➢ Azure It also requires expertise level on following non-technical skills: ➢ SPOKEN ➢ COMMUNICATION ➢ APTITUDE Constraints: 1. Expertise level for each skill must range between 0-20, else throw a custom exception 2. Expertise level must not be empty or a non-numeric value, else throw a custom exception Validations: 1. Name is not null, min 5 and max 30 characters. 2. AssociateID is not null, min 5 and max 30 characters, and must start with “CTS”	Only API to be developed

		3. email is not null, and it should be valid email pattern, containing a single @. 4. mobile is not null, min 10 and max 10 character and all must be numeric. Post Condition: 1. After successfully adding a new profile in Database a unique userId is to be generated. 2. Maintain date of adding the profile in database	
US_02	Full Stack Engineer Functionalities	As a Full Stack Engineer, I am able to edit my profile by providing my userid *While updating the profile, I am allowed to update only expertise level of my skills. Update on personal information is not allowed* Constraints: 1. Update of profile must be allowed only after 10 days of adding profile or last change, else throw a custom exception 2. Expertise level for each skill must range between 0-20 3. If Invalid userid is provided, it must throw a custom exception Post Condition: 1. Maintain date of last update in database	Only API to be developed
US_03	Admin functionality	As an admin I can search for profile based on following criteria: 1. Name: Initial characters of name can be provided 2. Associate Id 3. Skill: Skill name must be provided from above list (user-story 1), and only those records shall be returned which has expertise level greater than 10 on that skill. Considerations:	API and Frontend to be developed

		1. While fetching the above details the API must return the personal information along with all skills and their respective expertise level. 2. Skill details must be in descending order of expertise level. 3. If any other criteria is provided for searching other than above mentions, application must throw a custom exception.	

4 Proposed Rest Endpoints to be exposed

4.1 Rest APIs:

URL Exposed	Purpose
/skill-tracker/api/v1/engineer/add-profile	Adds a new profile
/ skill-tracker/api/v1/engineer/update-profile/{userId}	Update the skill details of engineer with provided userId

URL Exposed	Purpose
/skill-tracker/api/v1/admin/{criteria}/{criteriaValue}	Searches for profile based on provided criteria

5 Expected Deliverables

5.1 Engineering Concepts (Security & Identity):

1. As an Application Developer:
   a. Restrict the access over all write operation (secured operations) by adding authentication
   b. Secure all Rest EndPoints by configuring SSL Certificate for Cloud

5.2 Products & Framework (Database & Storage):

1. As an application developer:
   a. Ensure Application is implementing ORM with .Net Core
   b. Use SQL SERVER for maintaining

6 PLATFORM

Use above Business Requirements to implement the below.

1. Use Azure to deploy application on cloud.
2. Use Azure SQL Server as a database for the Application.
3. Use Azure Functions and DB to build a backend process for handling requests for E-Stock Market App.
4. Use Azure Service to send email to company after stock is listed.

Note: Minimum 2APIs (UI+Backend) to be hosted in cloud