# Architecture diagram

Web App

Angular SPA

SQL Server DB

Web API (.net core 3.1)

# Components

1. Angular SPA web app

Web app developed in Angular8 using bootstrap and angular material.

* Angular reactive forms are used to handle user inputs. Validations are performed at client side using form validators.
* HttpInterceptor for handling any exceptions in any http requests.
* Basic Unit testing implemented using Karma libraries.

1. WebAPI developed in .net core 3.1

Web api developed in .net core 3.1 which uses entity core ORM in the persistency layer.

* Repository pattern is used in the persistency layer.
* Middleware used for handling global exceptions
* Serilog used for logging information to DB.
* Automapper used for mapping entities to API model.

1. SQL database

Simple SQL database with 2 tables storing the occupation and rating details. It also has the Log table used by Serilog

1. Unit testing and Integration testing

* Unit testing is implemented at the API and repository layer using NUnit libraries
* Integration testing implemented for API using xUnit libraries.

1. Deployment.

This app can be deployed to Azure web app, preferably into 2 webapps one for web api and another for angular app. The build yaml file that can be used to build the app in Azure pipeline is included. It can be found in builds/build.yaml.

The build pipeline is trigged on any commit made to the git branch.

The build pipeline executes the unit test cases and packages the binaries. Release pipeline can be included in next version.

Below is a screenshot of the build pipeline execution.

