**Docker Hosting for Ado.net Project with PostgreSQL Db.**

1. Need to create Asp.net Web API Project with Database PostgreSQL

--> Change the connection string host name as below

"Host=host.docker.internal;Port=5432;User ID=postgres; Password=Sa123;Database=postgres;Pooling=true;"

1. Add CorsPolicy of both application and db docker urls

"http://localhost:8080", "http://localhost:5432"

1. Need to add docker file into a project solution manually or in Api ->Add-> Docker Support
2. DockerFile Example

**For .net 3.1**

# Stage 1

FROM mcr.microsoft.com/dotnet/core/sdk:3.1 AS build

WORKDIR /build

COPY . .

RUN dotnet restore

RUN dotnet publish -c Release -o /app

# Stage 2

FROM mcr.microsoft.com/dotnet/core/aspnet:3.1 AS final

WORKDIR /app

COPY --from=build /app .

ENTRYPOINT ["dotnet", "Dapper\_CRUD\_Api.dll"]

**For .net 6**

FROM mcr.microsoft.com/dotnet/sdk:6.0 AS build-env

WORKDIR /App

# Copy everything

COPY . ./

# Restore as distinct layers

RUN dotnet nuget add source https://edgedev.myget.org/F/edgenuity/auth/69af20c8-a4c1-4dfb-a5dc-10c17017143a/api/v3/index.json -n Edgenuity

RUN dotnet restore

# Build and publish a release

RUN dotnet publish -c Release -o out

# Build runtime image

FROM mcr.microsoft.com/dotnet/aspnet:6.0

WORKDIR /App

COPY --from=build-env /App/out .

ENTRYPOINT ["dotnet", "Edgenuity.Armstrong.ALA.User.API.dll","--environment=Local"]

1. Need to Build Docker file to create image in docker app in Project docker file path

docker build -t user-api -f Dockerfile .

1. Need to pull postgres Docker image from docker hub

<https://hub.docker.com/_/postgres>

1. Need to run postgres image in a container by using below command(use your existing local postgres db credentials)

docker run --name db -p 5432:5432 -d -e POSTGRES\_PASSWORD=Sa123 -e POSTGRES\_USER=postgres -e POSTGRES\_DB=postgres -v dbdata:/var/lib/postgresql/data postgres

1. After running the postgres in continer, Need to run application with created image name as below command

docker run --rm -it -p 8080:80 user-api

1. Now both the postgres and our application images running in container, we can check by searching url: http://localhost:8080/index.html
2. Below are some basic knowledge about Docker and some useful videos

<https://www.c-sharpcorner.com/article/building-and-running-asp-net-core-application-in-docker-container/>

https://www.guru99.com/docker-tutorial.html#9

Docker Commands:

<https://docs.docker.com/engine/reference/commandline/rm/>

Docker compose in VS2022:

<https://www.youtube.com/watch?v=YWXdl68XY7U&list=PL7a_NAeOSfI8daltCtPiov7vJXfvaZgRi&index=18&ab_channel=BiswaRanjan>

To create public repository:

<https://www.youtube.com/watch?v=r_tGl4zF1ZQ&ab_channel=MicrosoftAzure>