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| .NET API with SQL server Containerization |
| Docker File |
| FROM mcr.microsoft.com/dotnet/sdk:8.0 AS build-env  ENV DOTNET\_URLS=http://+:5000  WORKDIR /app  # Ensure we listen on any IP Address  # Copy everything  COPY . ./  # Restore and publish for MsgProcessor project  WORKDIR /app/Backend.Api  RUN dotnet publish -c Release -o out  RUN dotnet restore ./Backend.Api.csproj  # Build runtime image  FROM mcr.microsoft.com/dotnet/aspnet:8.0  WORKDIR /app  COPY --from=build-env /app/Backend.Api/out .  ENTRYPOINT ["dotnet", "Backend.Api.dll"] |
| Compose file for Api And Sql server |
| version: '3.4'  services:      SqlServerDb:          container\_name: SqlServerContainer          image: mcr.microsoft.com/mssql/server:2019-latest          ports:              - 8002:1433          environment:              - ACCEPT\_EULA=Y              - MSSQL\_SA\_PASSWORD=myStong\_Password123#      WebApi:          container\_name: BackendContainer          image: backend\_api          ports:              - 8000:5000          environment:            - ConnectionStrings\_\_DefaultConnection=Data Source=SqlServerContainer;Initial Catalog=BackendDB;Persist Security Info=True;User ID=sa;Password=myStong\_Password123#            - DOTNET\_URLS=http://+:5000            build:            context: .            dockerfile: Dockerfile          depends\_on:              - SqlServerDb |
| After containerization the api can not use Localhost sql server that’s why we need sql server containerization            - ConnectionStrings\_\_DefaultConnection=Data Source=SqlServerContainer;Initial Catalog=BackendDB;Persist Security Info=True;User ID=sa;Password=myStong\_Password123#  It means runtime connection string that will not override appsettings file but runtime it will use this connection string  Do not use double “” in connection string |
| Envionrment variable store here |
| PS D:\Talukder\_GitHub\ApiTemplate\Backend> docker exec 252e3ef18cee printenv  PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin  HOSTNAME=252e3ef18cee  DOTNET\_URLS=http://+:5000  ConnectionStrings\_\_DefaultConnection=Data Source=SqlServerContainer;Initial Catalog=BackendDB;Persist Security Info=True;User ID=sa;Password=myStong\_Password123#  APP\_UID=1654  ASPNETCORE\_HTTP\_PORTS=8080  DOTNET\_RUNNING\_IN\_CONTAINER=true  DOTNET\_VERSION=8.0.8  ASPNET\_VERSION=8.0.8  HOME=/root |
| To see containerized sql server database in local sql server management  Use the below credential and server name  but in the environment it will be the Container name not localhost |