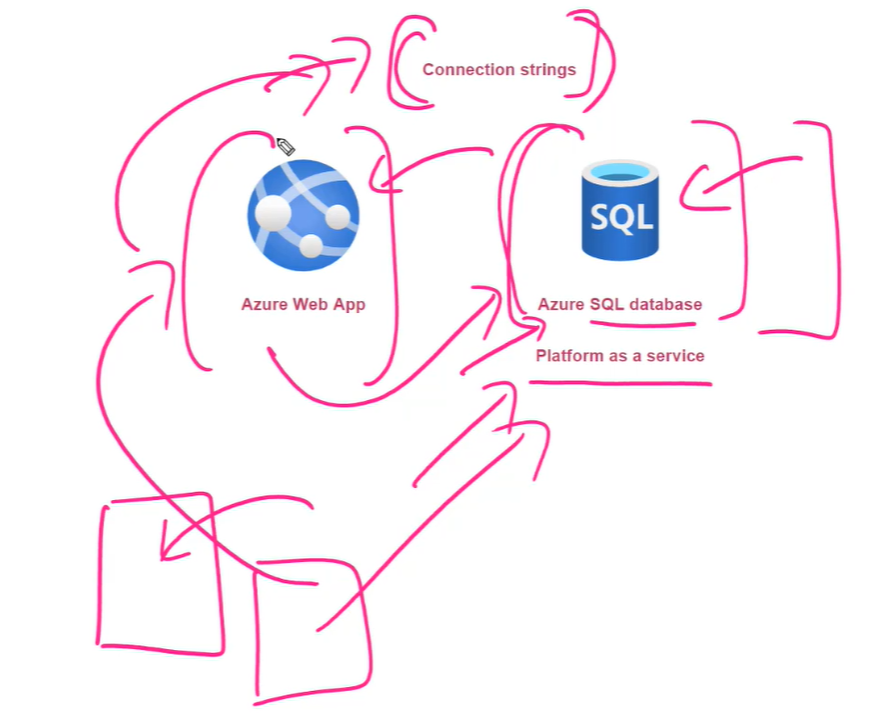
**Lesson11 Azure SQL database**

**Notes: -**

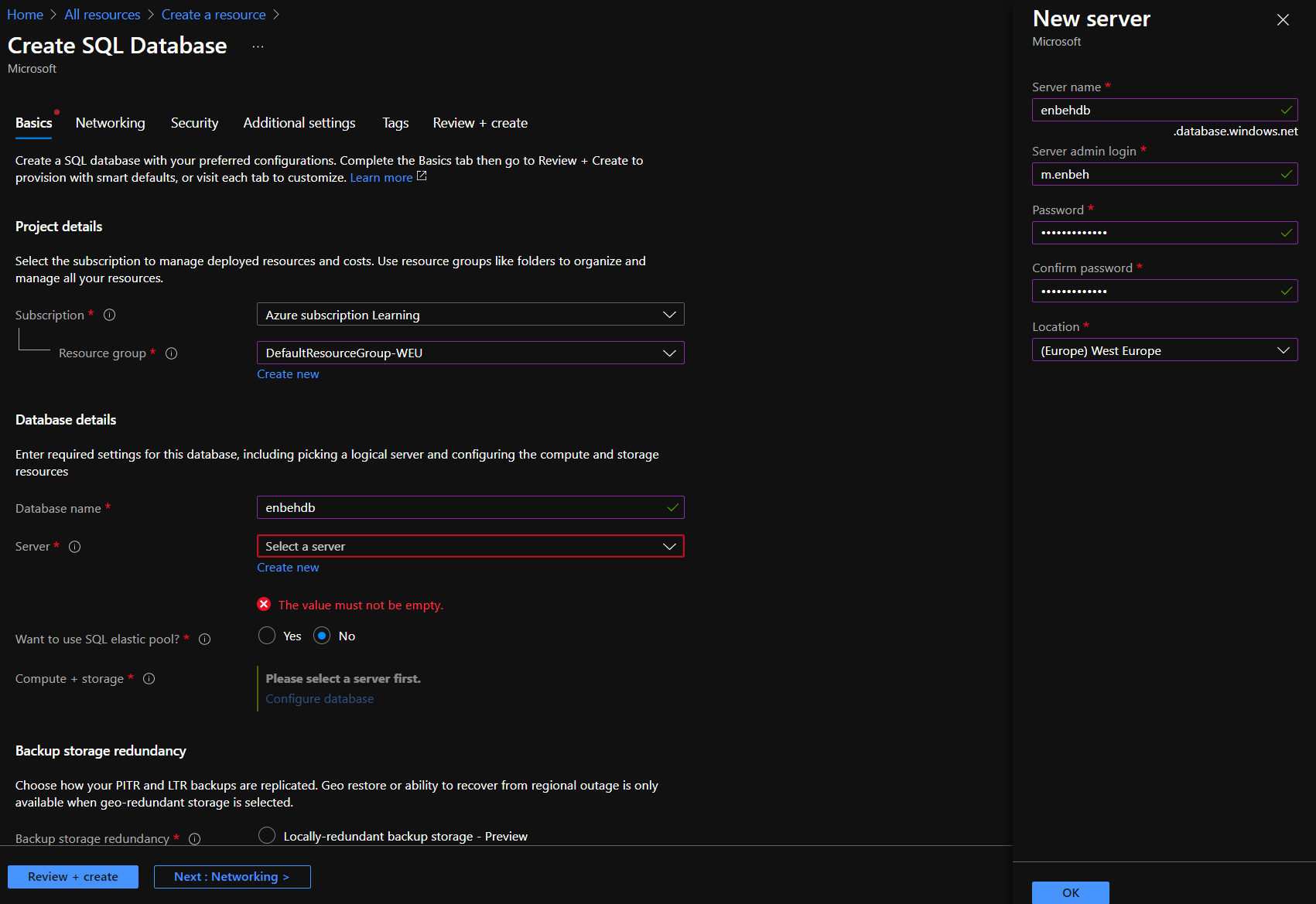
**1-we will to cover to connect Azure web app to Azure SQL database**

**(Which Azure SQL database platform as service which is completely controlled by Azure)**

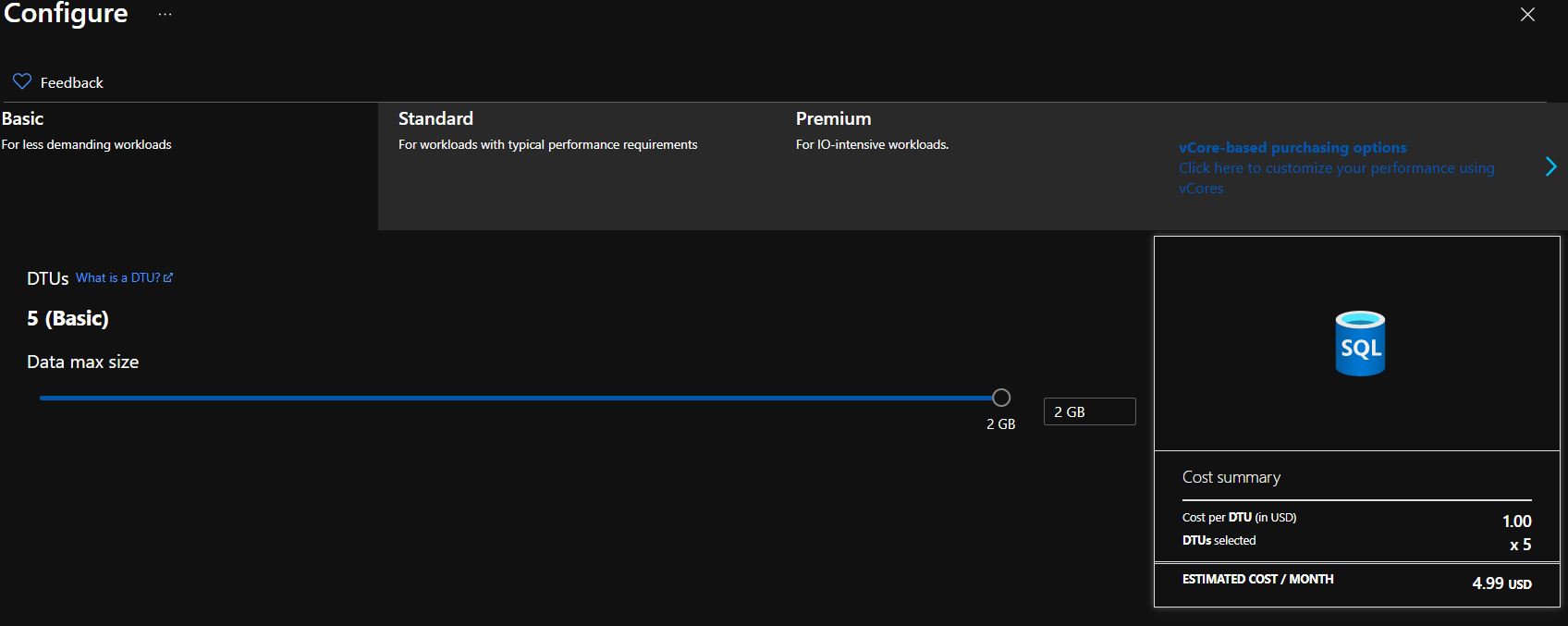


**Steps: -**

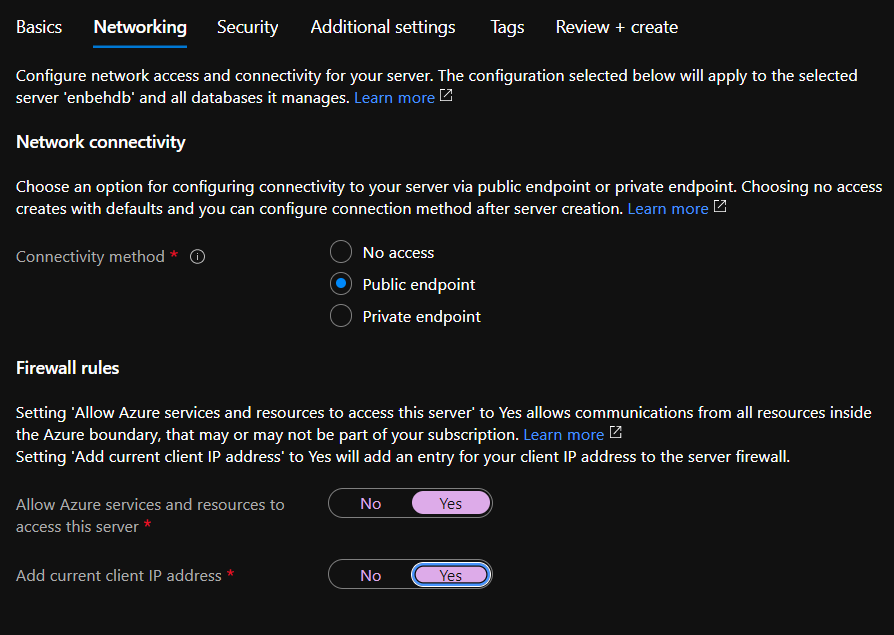
**1-on Azure > SQL database > we set the database name and username and password**



**And then choose basic platform service**



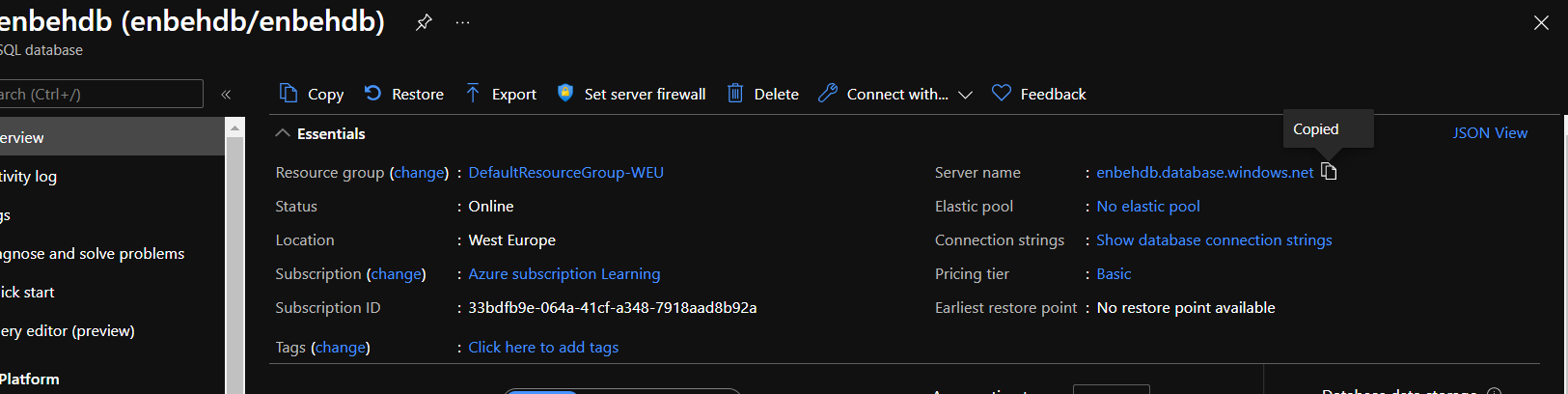
**2-on Networking we chose public endpoint and firewall rules to allow access from external resources such as Azure web app service and set client public IP address**



**3-on SQL database we connect through SQL server by take the server name and use SQL authentication**

**Username: m.enbeh**

**Password: Mohammed1993**



**4-we will execute the following SQL commands as below**

**create table Course(**

**CourseID int,**

**CourseName varchar(1000),**

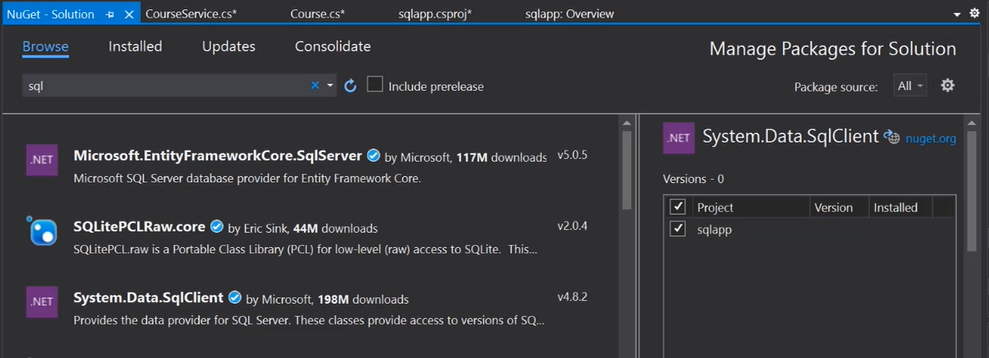
**Rating numeric(2,1));**

**insert into Course(CourseID,CourseName,Rating) values (1,'AZ-204 Developing Azure Solution',4.5);**

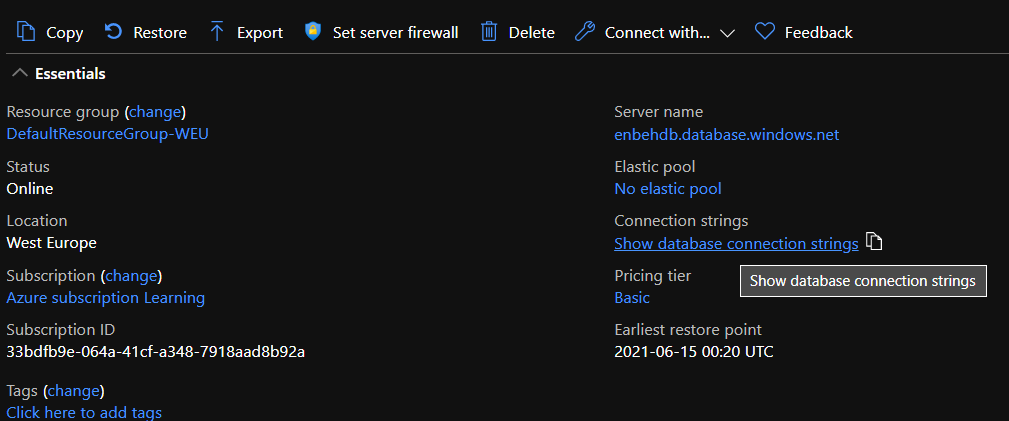
**insert into Course(CourseID,CourseName,Rating) values (2,'AZ-303 Architecture Azure Solution',4.6);**

**insert into Course(CourseID,CourseName,Rating) values (3,'DP-203 Azure Data Engineer',4.7);**

**5-on VS 2019 > create new asp.net core project > install the System.Data.SqlClient**



**6-we have to get the connection string in order to use it on azure web app**



**6-we set the following code as below**

**On Sqlapp > Models > we type the following code as below**

**namespace Sqlapp.Models{**

**// This class represents the struture of our data**

**public class Course{**

**public int CourseID { get; set; }**

**public string CourseName { get; set; }**

**public decimal Rating { get; set; }}}**

**on appsettings.json we set the connection string as below**

**{"Logging": {**

**"LogLevel": {**

**"Default": "Information",**

**"Microsoft": "Warning",**

**"Microsoft.Hosting.Lifetime": "Information"}},**

**"ConnectionStrings": {**

**"SQLConnection": "Server=tcp:enbehdb.database.windows.net,1433;Initial Catalog=enbehdb;Persist Security Info=False;User ID=m.enbeh;Password=Mohammed1993$;MultipleActiveResultSets=False;Encrypt=True;TrustServerCertificate=False;Connection Timeout=30;"},**

**"AllowedHosts": "\*"}**

**On Sqlapp > Services > CourseServcie.cs**

**using Microsoft.Extensions.Configuration;**

**using Sqlapp.Models;**

**using System.Collections.Generic;**

**using System.Data.SqlClient;**

**namespace Sqlapp.Services{**

**public class CourseService{**

**// Ensure to change the below variables to reflect the connection details for your database**

**private IConfiguration \_configuration;**

**public CourseService(IConfiguration \_config){\_configuration = \_config;}**

**private SqlConnection GetConnection(){**

**// Here we are creating the SQL connection**

**return new SqlConnection(\_configuration.GetConnectionString("SQLConnection"));}**

**public IEnumerable<Course> GetCourses(){**

**List<Course> \_lst = new List<Course>();**

**string \_statement = "SELECT CourseID,CourseName,rating from Course";**

**SqlConnection \_connection = GetConnection();**

**// Let's open the connection**

**\_connection.Open();**

**// We then construct the statement of getting the data from the Course table**

**SqlCommand \_sqlcommand = new SqlCommand(\_statement, \_connection);**

**// Using the SqlDataReader class , we will read all the data from the Course table**

**using (SqlDataReader \_reader = \_sqlcommand.ExecuteReader()){**

**while (\_reader.Read()){**

**Course \_course = new Course(){**

**CourseID = \_reader.GetInt32(0),**

**CourseName = \_reader.GetString(1),**

**Rating = \_reader.GetDecimal(2)};**

**\_lst.Add(\_course);}}**

**\_connection.Close();**

**return \_lst;}}}**

**On Sqlapp > Controllers > CourseController.cs**

**using Microsoft.AspNetCore.Mvc;**

**using Sqlapp.Models;**

**using Sqlapp.Services;**

**using System.Collections.Generic;**

**namespace Sqlapp.Controllers{**

**public class CourseController : Controller{**

**private readonly CourseService \_course\_service;**

**public CourseController(CourseService \_svc){\_course\_service = \_svc;}**

**// The Index method is used to get a list of courses and return it to the view**

**public IActionResult Index(){**

**IEnumerable<Course> \_course\_list = \_course\_service.GetCourses();**

**return View(\_course\_list);}}}**

**On Sqlapp > Views > Course > Index.cshtml**

**@model IEnumerable<Sqlapp.Models.Course>**

**@{ViewData["Title"] = "Home page";}**

**<head>**

**<link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css" integrity="sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T" crossorigin="anonymous">**

**</head>**

**<div class="text-center">**

**<h1 class="display-4">This is a list of services of courses</h1>**

**</div>**

**<div>**

**<table class="table" table-dark">**

**<thead>**

**<tr>**

**<th scope="col">Course ID</th>**

**<th scope="col">Course Name</th>**

**<th scope="col">Rating</th>**

**</tr>**

**</thead>**

**<tbody>**

**@foreach (var course in Model){**

**<tr>**

**<th scope="row">@course.CourseID</th>**

**<td>@course.CourseName</td>**

**<td>@course.Rating</td>**

**</tr>}**

**</tbody>**

**</table>**

**</div>**

**On Startup.cs we set the following Code as below**

**using Microsoft.AspNetCore.Builder;**

**using Microsoft.AspNetCore.Hosting;**

**using Microsoft.Extensions.DependencyInjection;**

**using Microsoft.Extensions.Hosting;**

**using Sqlapp.Services;**

**namespace Sqlapp{**

**public class Startup{**

**// This method gets called by the runtime. Use this method to add services to the container.**

**// For more information on how to configure your application, visit https://go.microsoft.com/fwlink/?LinkID=398940**

**public void ConfigureServices(IServiceCollection services){**

**// Ensure to add the services**

**services.AddMvc();**

**services.AddTransient<CourseService>();}**

**// This method gets called by the runtime. Use this method to configure the HTTP request pipeline.**

**public void Configure(IApplicationBuilder app, IWebHostEnvironment env){**

**if (env.IsDevelopment()){app.UseDeveloperExceptionPage();}**

**app.UseRouting();**

**// Ensure to map the controllers accordingly**

**app.UseEndpoints(endpoints =>{**

**endpoints.MapControllerRoute(**

**name: "default",**

**pattern: "{controller=Course}/{action=Index}/{id?}");**

**});}}}**

**6-on publish asp.net core web > under Azure Web App service**