

# Create Minimal Web API Project Lab

Perform these labs on your own computer using Visual Studio 2022 to ensure you understand the lessons presented in the corresponding videos and lectures.

## Lab 1: Create Web API Project Using Visual Studio 2022

Startup Visual Studio 2022 and select **Create New Project** as shown in Figure 1.

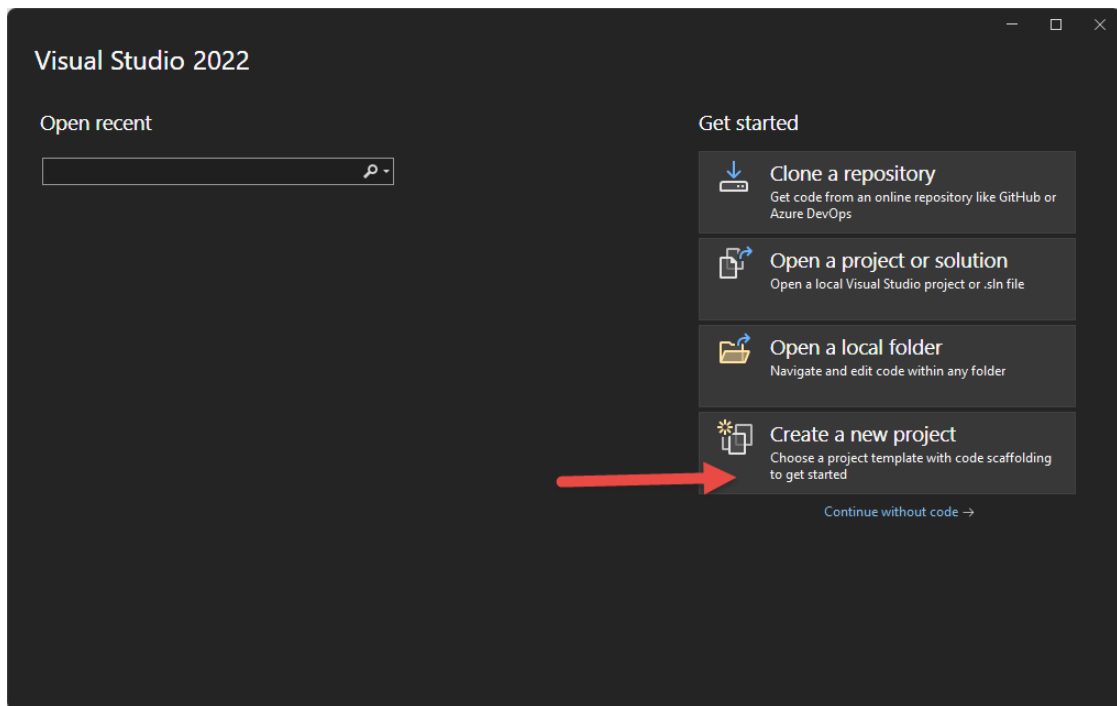


Figure 1: Select what you want to do in Visual Studio startup screen

## Create a New Project Screen

Locate the project template **ASP.NET Core Web API** and select that one as shown in Figure 2.

Click the **Next** button to continue to the next screen

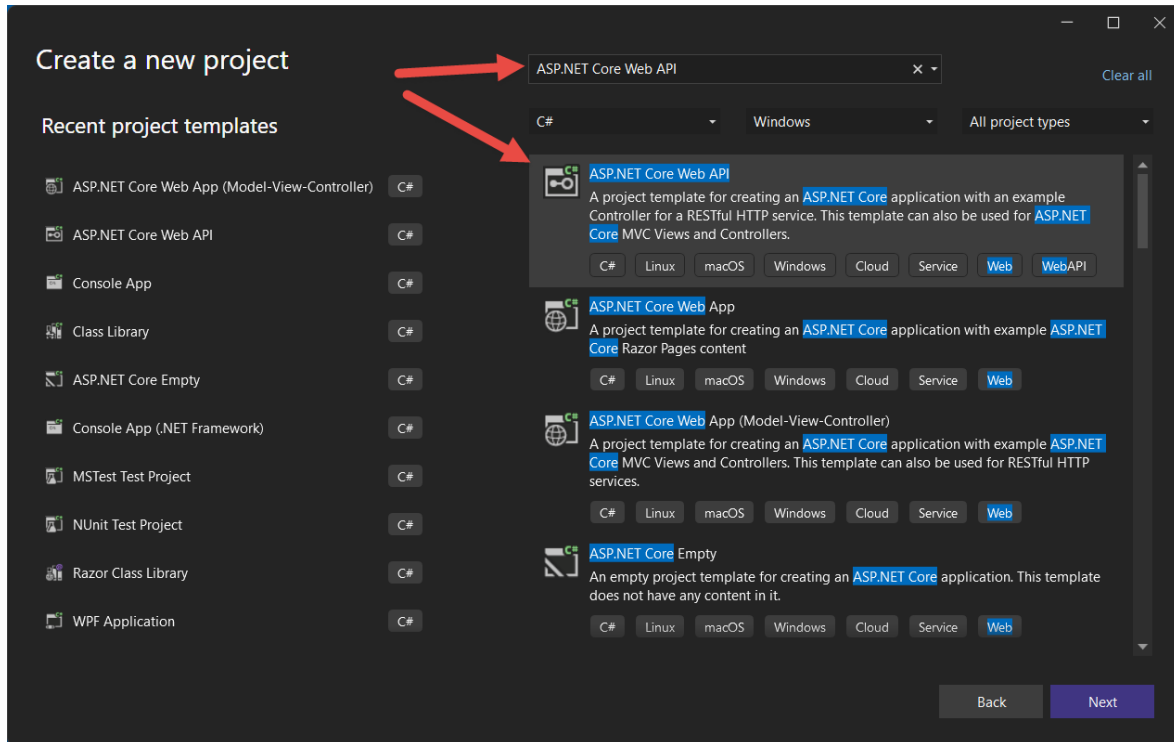


Figure 2: Select the ASP.NET Core Web API Project.

## Configure Your New Project Screen

Set the **Project name** to **AdvWorksAPI**.

Set the **Location** to where you want the project to reside.

**Check** the Place solution and project in the same directory check box as shown in Figure 3.

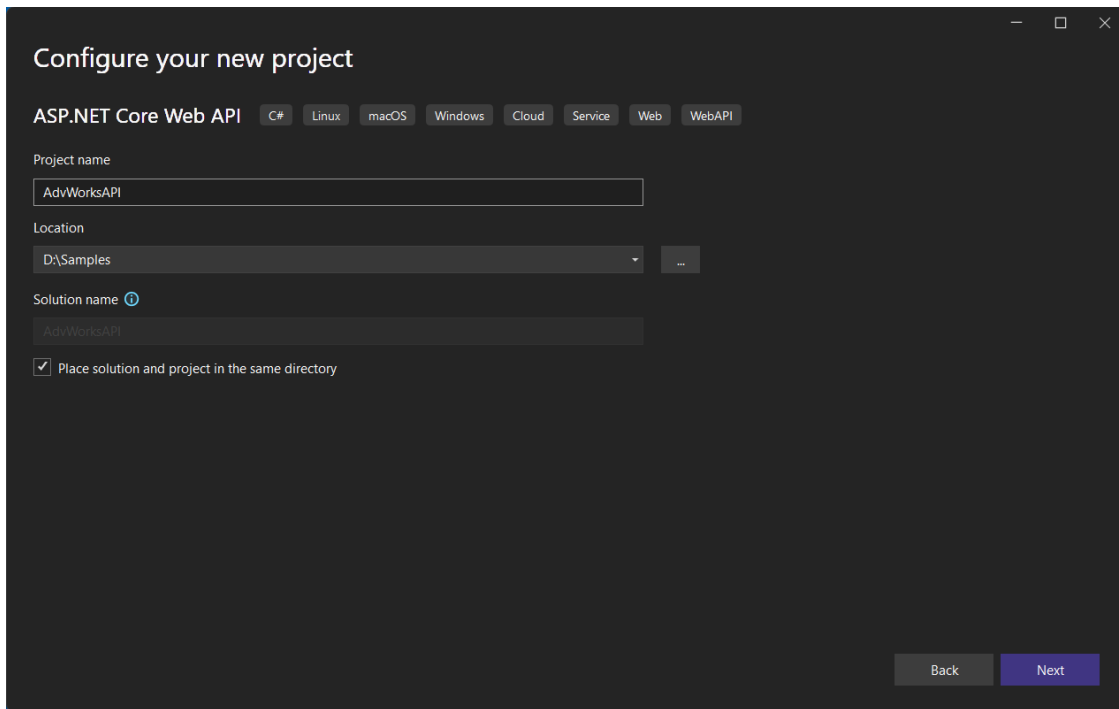


Figure 3: Configure your new project

## Additional Information Screen

**Choose** .NET 6.0 (Long-term support) or .NET 8 (Long-term support)

**Choose** Authentication Type = None

**Uncheck** Configure for HTTPS

**Uncheck** the "Use controllers (uncheck to use minimal APIs)".

**Check** Enable OpenAPI support as shown in Figure 4.

**Click** the **Create** button to create the new project.

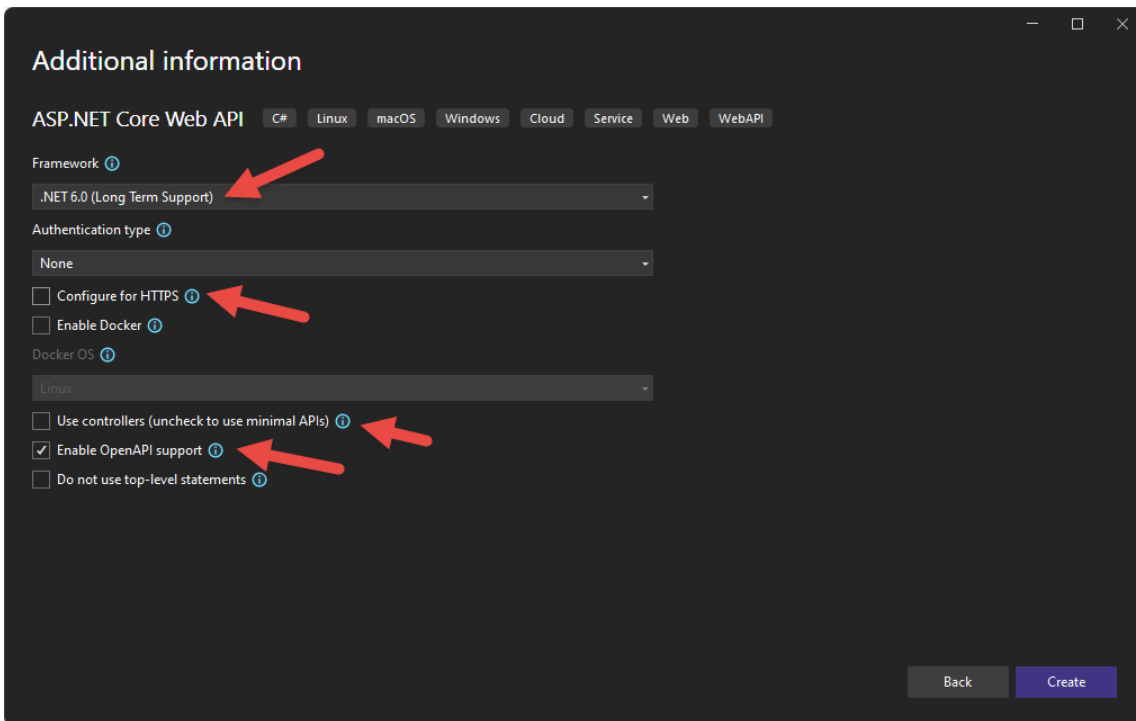


Figure 4: Additional information for your project.

## Try it Out

Select **Debug | Start Debugging** (F5) from the VS menu to build the Web API project and launch a browser.

**NOTE:** If you get a dialog box that asks if you should trust the IIS Express certificate, select **Yes**. In the Security Warning dialog that appears next, select **Yes**.

When the browser appears, it will look like Figure 5.

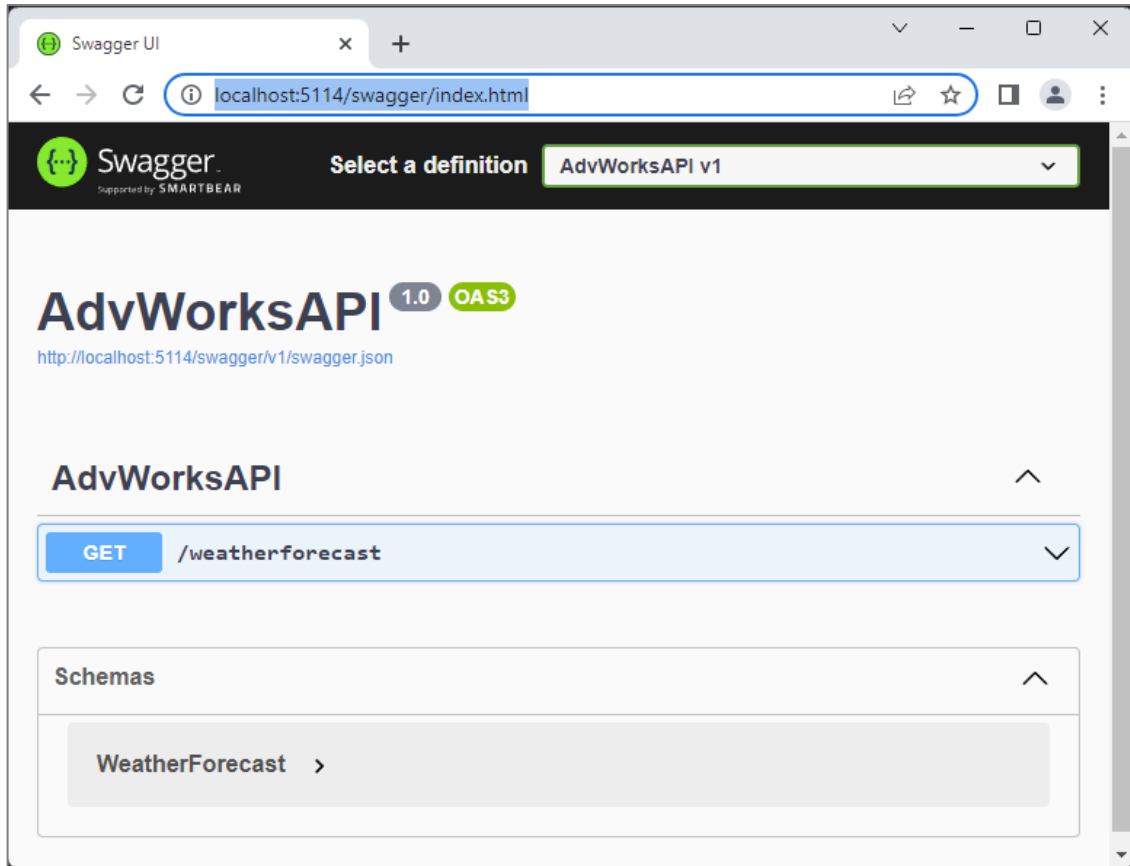


Figure 5: The Swagger Open API page is displayed

Click on the **GET /WeatherForecast** button to display some weather information.

## Lab 2: Comment the Program.cs File

The Program.cs file is a template that comes from Microsoft. It is not very well documented, so let's add some comments.

Open the **Program.cs** file from the Solution Explorer window and replace all the contents with the code shown below.

```
// *****
// Create a WebApplicationBuilder object
// to configure the how the ASP.NET service runs
// *****
var builder = WebApplication.CreateBuilder(args);

// *****
// Add and Configure Services
// *****

// Configure Open API (Swagger)
// More Info: https://aka.ms/aspnetcore/swashbuckle
builder.Services.AddEndpointsApiExplorer();
builder.Services.AddSwaggerGen();

// *****
// After adding and configuring services
// Create an instance of a WebApplication object
// *****
var app = builder.Build();

// *****
// Configure the HTTP Request Pipeline
// *****
if (app.Environment.IsDevelopment()) {
    app.UseSwagger();
    app.UseSwaggerUI();
}

// *****
// Map Minimal API Routes/Endpoints
// *****
var summaries = new[]
{
    "Freezing", "Bracing", "Chilly", "Cool", "Mild",
    "Warm", "Balmy", "Hot", "Sweltering", "Scorching"
};

app.MapGet("/weatherforecast", () =>
{
    var forecast = Enumerable.Range(1, 5).Select(index =>
        new WeatherForecast
        (
            DateTime.Now.AddDays(index),
            Random.Shared.Next(-20, 55),
```

```
summaries[Random.Shared.Next(summaries.Length)]
    ))
    .ToArray();
    return forecast;
})
.WithName("GetWeatherForecast");

// *****
// Run the Application
// *****
app.Run();

// *****
// Any Additional Data Below Here
// *****
internal record WeatherForecast(DateTime Date, int
TemperatureC, string? Summary)
{
    public int TemperatureF => 32 + (int)(TemperatureC /
0.5556);
}
```

## Try it Out

Run the application to make sure everything still works right

## Optional Lab 3: Using Postman

Navigate to <https://www.postman.com/> and install the free version of Postman

## Try it Out

Open Postman (Figure 6) and enter the following

<http://localhost:5114/weatherforecast>

**NOTE:** Change the PORT number with the port from your running Web API project.

Click on the Send button.

## Create Minimal Web API Project Lab

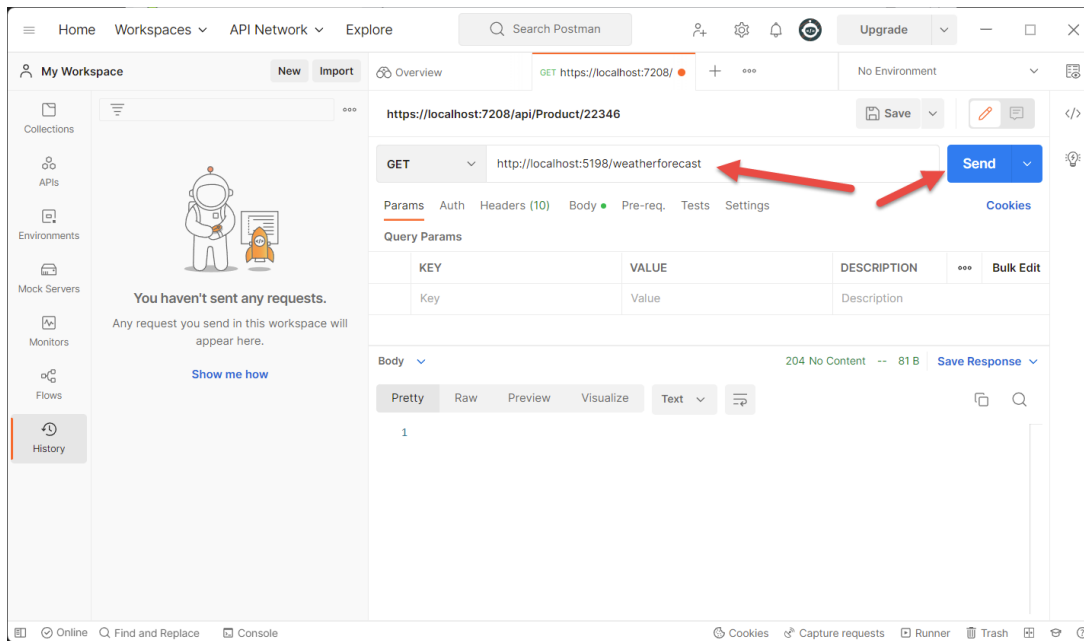


Figure 6: Postman allows you to try out your Web APIs

You should see the return results at the bottom of the Postman screen as shown in Figure 7.

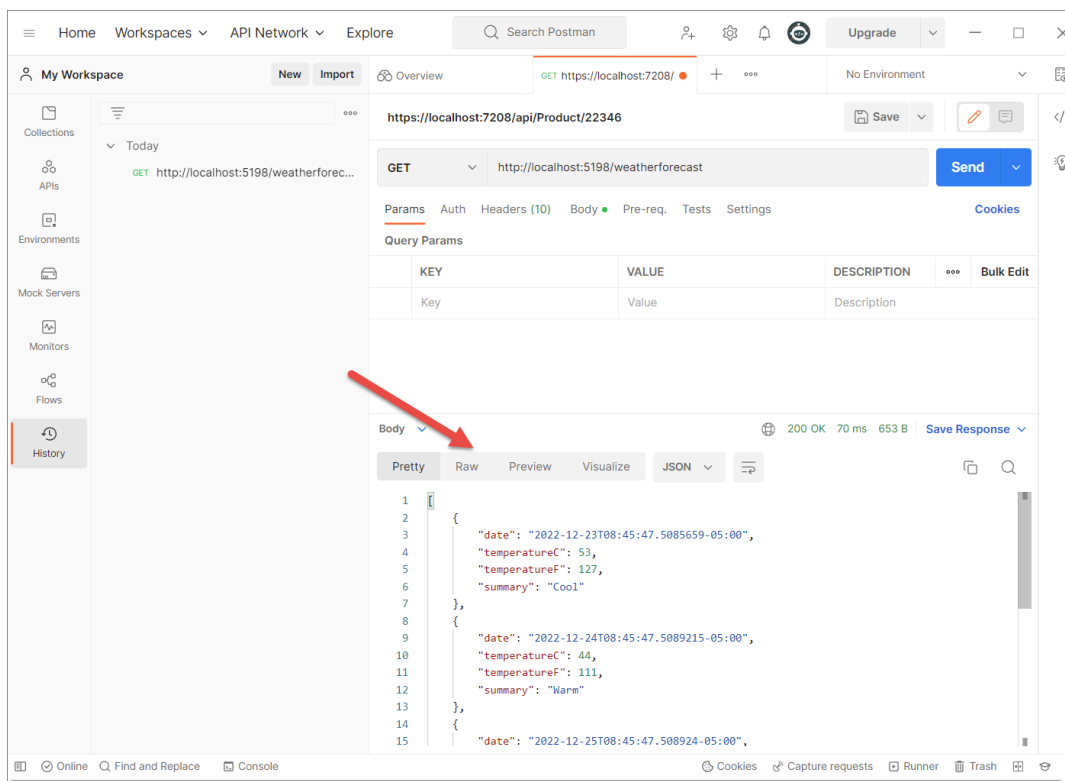


Figure 7: Postman displays the results in nicely formatted JSON