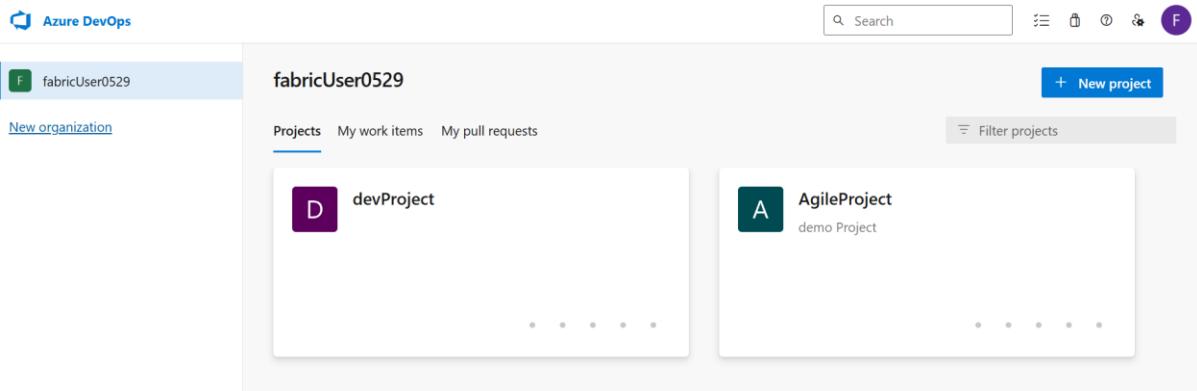


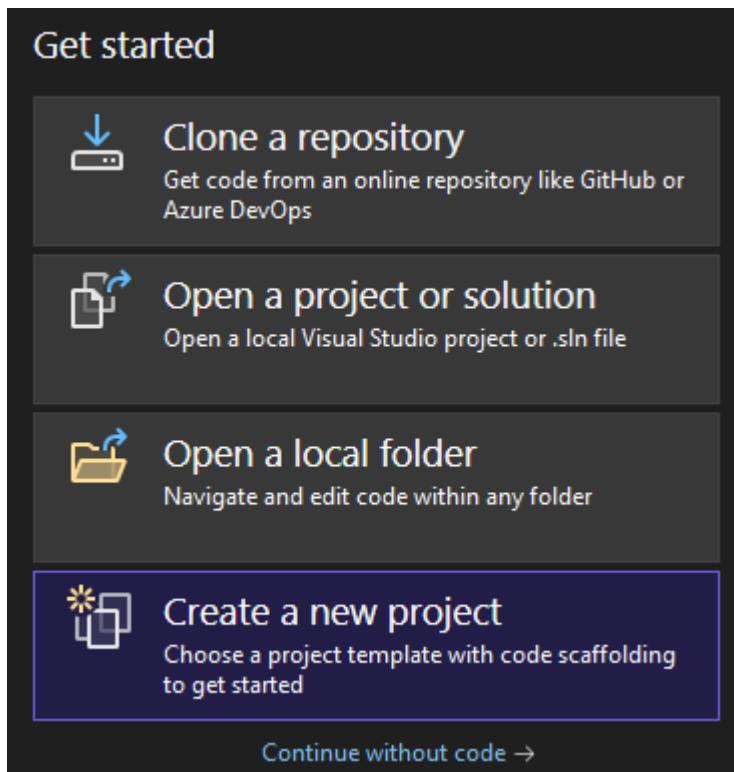
Azure Pipelines

The process involves setting up an Azure Pipeline to automate CI/CD for an ASP.NET Core web app. First, a project is created in Visual Studio, pushed to Azure Repos, and linked to Azure DevOps. Then, a pipeline is created using Azure Repos Git, selecting the ASP.NET Core template. After saving and running the pipeline, an error appears due to restricted parallelism. To resolve this, a request is submitted to Azure DevOps for parallelism increase, which takes a few days for approval. The end goal is to successfully run an automated pipeline for building and deploying the web application.

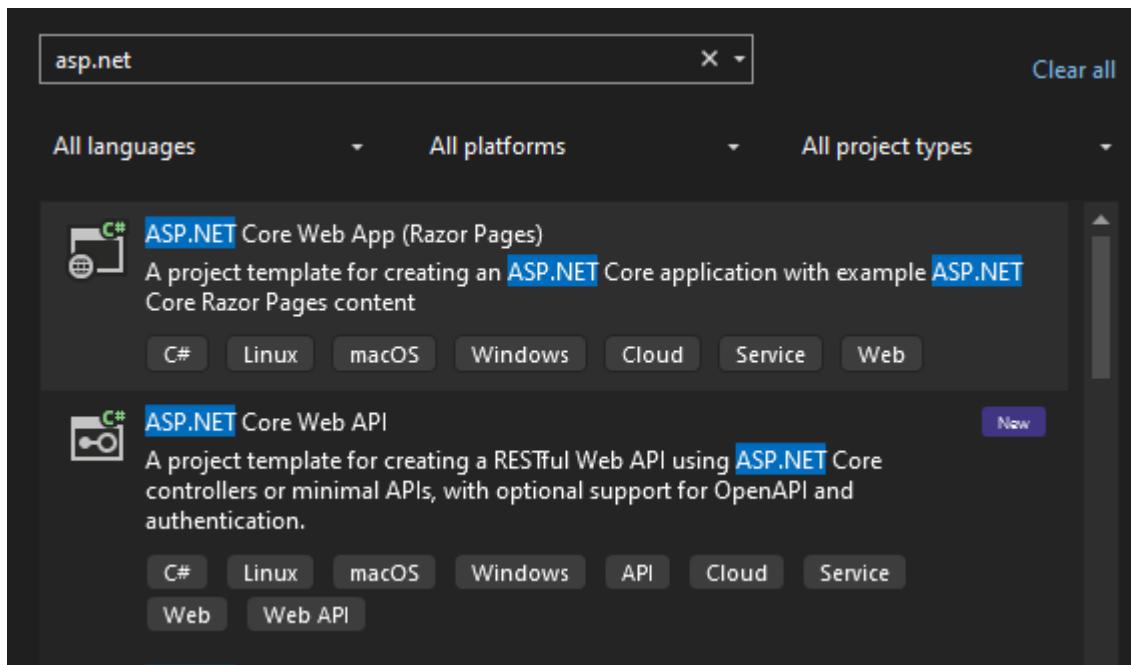
1. In this lab we will try to work with Pipelines, which is important because, for the next section, we will enable a feature that will allow us to work with Azure Pipelines.
2. Now if you are working along from the first lab you know we have two projects in place. So, from the start, we are working with the Agile project but in this lab, we will use Dev Project. If you don't have this project then create a new one.



3. So, here we will push a simple project from Visual Studio to the Azure Repos. You have done this before just choose to create a new project.



4. Search for ASP dot Net and choose the first project to create a web app.



5. Choose a folder of your choice then choose dot Net 8 for long term support and create your web app.

Configure your new project

ASP.NET Core Web App (Razor Pages) C# Linux macOS Windows Cloud Service Web

Project name

WebApp

Location

C:\tmp3\



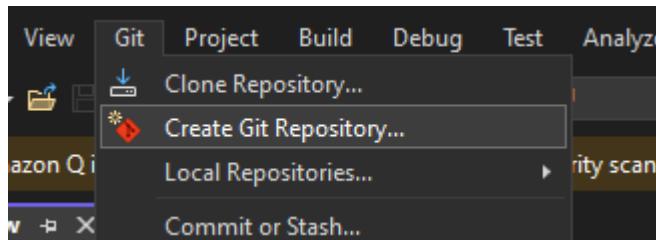
Solution name ⓘ

WebApp

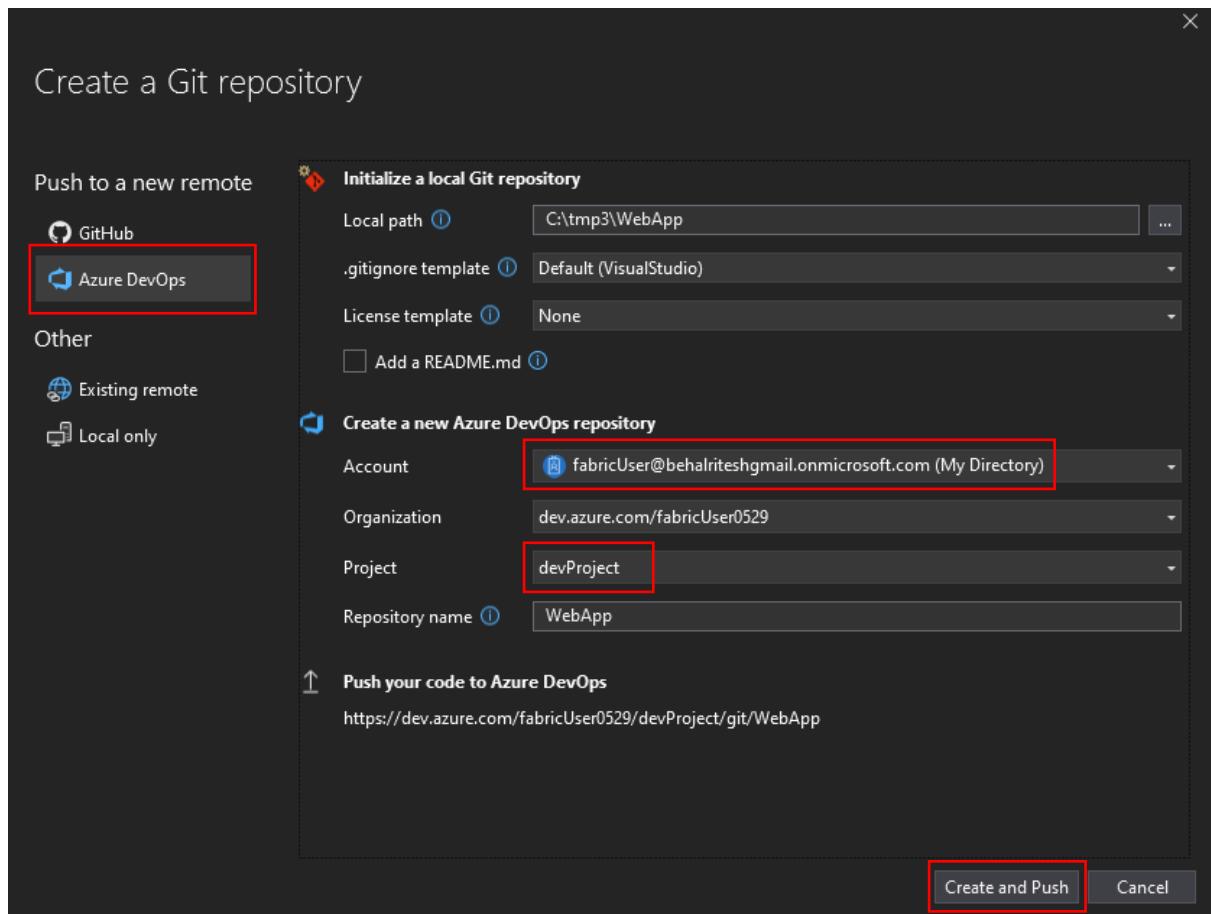
Place solution and project in the same directory

Project will be created in "C:\tmp3\WebApp\WebApp\"

- Once we have the project from the Git menu in Visual Studio choose to create a new Git repository.



- Now choose Azure DevOps instead of GitHub then in the Account sign in to your Azure DevOps account then choose your Project name as Dev Project then click on Create an Push.



8. Then go to the browser and choose your Web app from the repository in Azure DevOps.

The screenshot shows the Azure DevOps repository list. At the top, there's a dropdown for 'devProject' and a 'Search' bar. Below is a 'Filter repositories' bar. The main list shows 'devProject' (selected and highlighted with a blue border) and 'WebApp'. There's also a star icon next to 'devProject'.

The screenshot shows the 'Push details' page for a project named 'devProject'. A push from the 'master' branch was made at commit ID 8011acbe, pushed by 'fabricUser' just now. The 'Summary' tab is selected, showing 77 changed files. The file '_Layout.cshtml' is expanded, showing a diff with 51 additions and 0 deletions. The code changes include setting the charset to utf-8, adding meta viewport tags, and linking stylesheets for site.css and WebApp.styles.css.

```

1 + <!DOCTYPE html>
2 + <html lang="en">
3 + <head>
4 +     <meta charset="utf-8" />
5 +     <meta name="viewport" content="width=device-width, initial-scale=1.0" />
6 +     <title>@ ViewData["Title"] - WebApp</title>
7 +     <link rel="stylesheet" href="~/lib/bootstrap/dist/css/bootstrap.min.css" />
8 +     <link rel="stylesheet" href="~/css/site.css" asp-append-version="true" />
9 +     <link rel="stylesheet" href="~/WebApp.styles.css" asp-append-version="true" />
10 +    </head>
11 +   <body>
12 +     <header>
13 +       <nav class="navbar navbar-expand-sm navbar-toggleable-sm navbar-light bg-white border-bottom box-shadow pb-3" data-aos="fade-down">
14 +         <div class="container">
15 +           <a class="navbar-brand" asp-area="" asp-page="/index">WebApp</a>
16 +           <button class="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-target="#navbarSupportedContent" aria-expanded="false" aria-label="Toggle navigation">
17 +             <span class="navbar-toggler-icon"></span>
18 +           </button>
19 +         </div>
20 +       </nav>

```

9. Now go to the Pipelines feature and click on Create Pipeline.

The screenshot shows the 'Pipelines' feature in Azure DevOps. The 'Pipelines' tab is selected in the left sidebar. A central area displays a 'Create your first Pipeline' wizard with the heading 'Create your first Pipeline'. It includes a sub-instruction: 'Automate your build and release processes using our wizard, and go from code to cloud-hosted within minutes.' Below this is a large blue 'Create Pipeline' button, which is highlighted with a red box.

10. Choose Azure Repos Git in where is your code.

Connect

Select

Configure

Review

New pipeline

Where is your code?



Azure Repos Git YAML

Free private Git repositories, pull requests, and code search



Bitbucket Cloud YAML

Hosted by Atlassian



Github YAML

Home to the world's largest community of developers



GitHub Enterprise Server YAML

The self-hosted version of GitHub Enterprise

11. Then select your Web app.

✓ Connect

Select

Configure

Review

New pipeline

Select a repository



WebApp

12. In the configure section choose ASP.Net Core.

✓ Connect ✓ Select **Configure** Review

New pipeline

Configure your pipeline



ASP.NET

Build and test ASP.NET projects.



ASP.NET Core (.NET Framework)

Build and test ASP.NET Core projects targeting the full .NET Framework.



.NET Desktop

Build and run tests for .NET Desktop or Windows classic desktop solutions.



Universal Windows Platform

Build a Universal Windows Platform project using Visual Studio.



Xamarin.Android

Build a Xamarin.Android project.

13. Leave everything as it is on the Review page. Click on Save and run.

✓ Connect ✓ Select ✓ Configure **Review**

New pipeline

Review your pipeline YAML

Variables

Save and run ▾

WebApp / azure-pipelines.yml * □

Show assistant

```
1  # ASP.NET Core (.NET Framework)
2  # Build and test ASP.NET Core projects targeting the full .NET Framework.
3  # Add steps that publish symbols, save build artifacts, and more:
4  # https://docs.microsoft.com/azure/devops/pipelines/languages/dotnet-core
5
6  trigger:
7  - master
8
9  pool:
10  - vmImage: 'windows-latest'
11
12  variables:
13  - solution: '**/*.sln'
14  - buildPlatform: 'Any CPU'
15  - buildConfiguration: 'Release'
16
17  steps:
18    - task: NuGetToolInstaller@1
```

14. Now once your pipeline is created click on Job.

#20250311.1 • Set up CI with Azure Pipelines

Triggered by fabricUser

View 3 changes

Repository and version

WebApp
master 98ef0fda

Time started and elapsed

Just now

Related

0 work items

Tests and coverage

Get started

Jobs

Name	Status	Duration
Job	Queued	

15. Now you will see that you are getting an error and it is common with every new user using the pipeline for the first time.

← Jobs in run #20250311.1

WebApp

Jobs

Job

Report build sta... <1s

Job

1: ##[error]No hosted parallelism has been purchased or granted. To request a free parallelism grant, please fill out the following form https://aka.ms/azpipelines-parallelism-request

2: Pool: Azure Pipelines

3: Image: windows-latest

4: Started: Just now

5: Duration: 41s

6:

7: ▶ Job preparation parameters

16. If you scroll to the right to read your error you will see a link to copy it and paste it into a new tab.

Job

grant, please fill out the following form https://aka.ms/azpipelines-parallelism-request

17. Here you can see that you have to fill out a form to increase the parallelism in Azure DevOps.
18. This can take some days for Azure to permit you, so, just wait for some days until you get the Request accepted. You will get a mail from Microsoft in some days.
19. Also, we are requesting a parallelism increase for Private projects.

Azure DevOps Parallelism Request

This form is for users to request increased parallelism in Azure DevOps.

Please consider that it could take 4-5 business days to process the request. We are working on improving this process at the moment. Sorry for the inconvenience.

* Required

1. What is your name? *

Ritesh Behal

2. What is your email address? *

behal.ritesh@gmail.com

3. What is the name of your Azure DevOps Organization? *

(E.g. for <https://myorganization.visualstudio.com> or <https://dev.azure.com/myorganization> link formats - organization name would be 'myorganization')

<https://dev.azure.com/fabricUser0529>

4. Are you requesting a parallelism increase for Public or Private projects? *

Private

Public

20. Submit this and wait for a few days until you get permission to use the Pipelines.