Module 1: Introduction to Azure DevOps

Assignment Solution

Problem Statement:

Hooli Inc. is working on a product for which there is a distributed development team across geographies. Coordinating between the development team is proving to be difficult but the code needs to be synchronized. The company has chosen Git as the source repository for the product development. To check the functionality some sample math helper functions have been developed. Check the Git integration with the help of the available code.

Functions:

- Addition
- Multiplication
- Calculation of sin/ cos
- Distance between 2 points

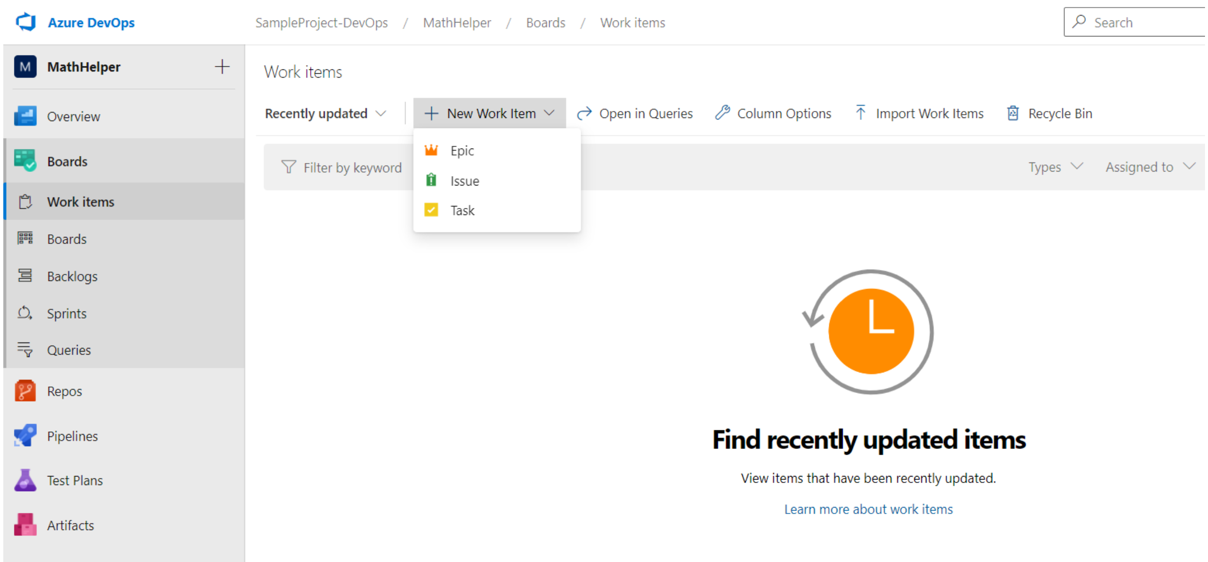
Create these sample functions

Steps to Perform:

- Create user stories and task for the functionality and assign the sprints using Azure Board
- Assign the stories and tasks to the developer
- Change the status as per task execution
- Create a Git project holding the project
- Upload the project to Git
- Add new calculation functions to the project and check-in the changes to Git
- Compare the historical changes to see the changes introduced
- Creating a new local repository from the master repository for any new local repository creation

Solution:

- Open dev.azure.com
- Create a project named “MathHelper”. It can be Public or private
- Go to Azure Board and click on “New Work Item” and select Epic and create a Epic “Math Helper”

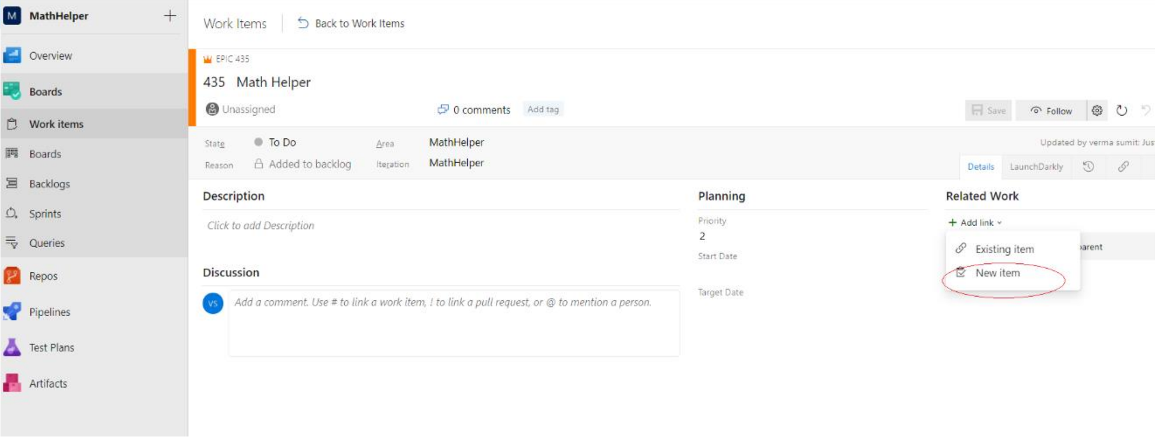


Find recently updated items

View items that have been recently updated.

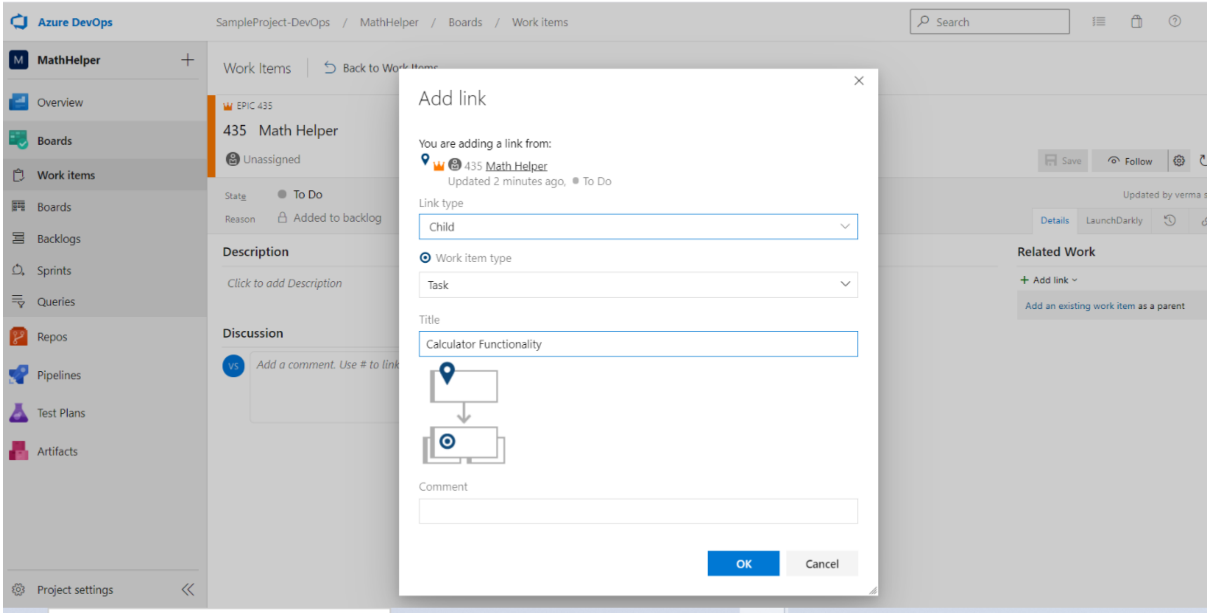
Learn more about work items

- After creation of Epic, create a Related item as shown



State: To Do
Reason: Added to backlog
Area: MathHelper
Iteration: MathHelper
Updated by verma sumit: Jus
Click to add Description
Priority: 2
Start Date
Target Date
Add a comment. Use # to link a work item, ! to link a pull request, or @ to mention a person.

- Add the new work item as shown below.



Add link

You are adding a link from:

435 Math Helper

Updated 2 minutes ago, ● To Do

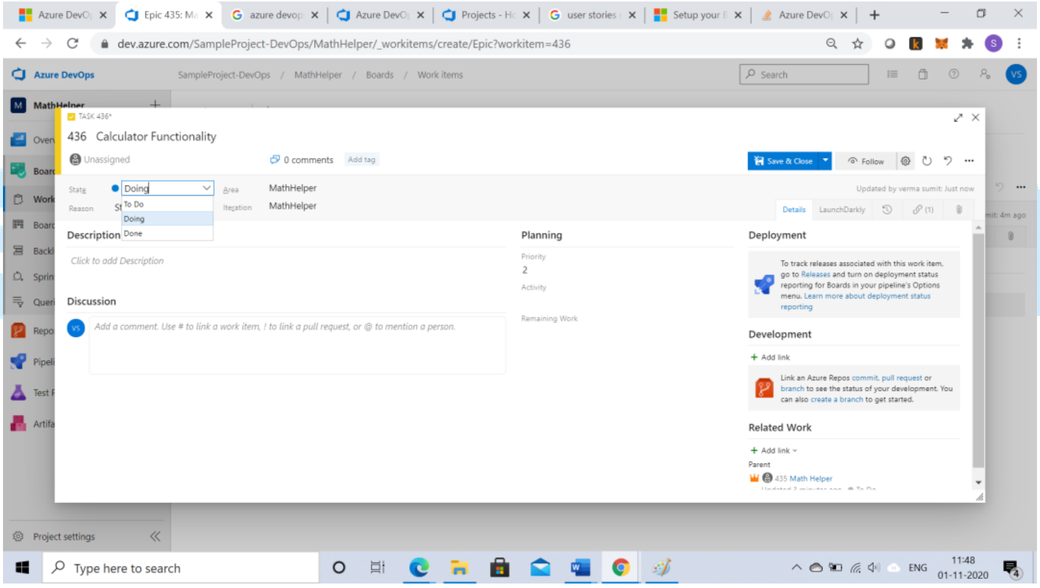
Link type: Child

○ Work item type: Task

Title: Calculator Functionality

Comment

- Open the above newly create task and change the status to Doing



dev.azure.com/SampleProject-DevOps/MathHelper/_workitems/create/Epic?workitem=436

436 Calculator Functionality

Unassigned

0 comments

State: Doing

To Do
Doing
Done

Area: MathHelper

Iteration: MathHelper

Updated by verma sumit: Just now

Description

Click to add Description

Discussion

Add a comment. Use # to link a work item, ! to link a pull request, or @ to mention a person.

Planning

Priority: 2

Activity

Remaining Work

Deployment

To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

+ Add link

Link an Azure Repos commit, pull request or branch to see the status of your development. You can also create a branch to get started.

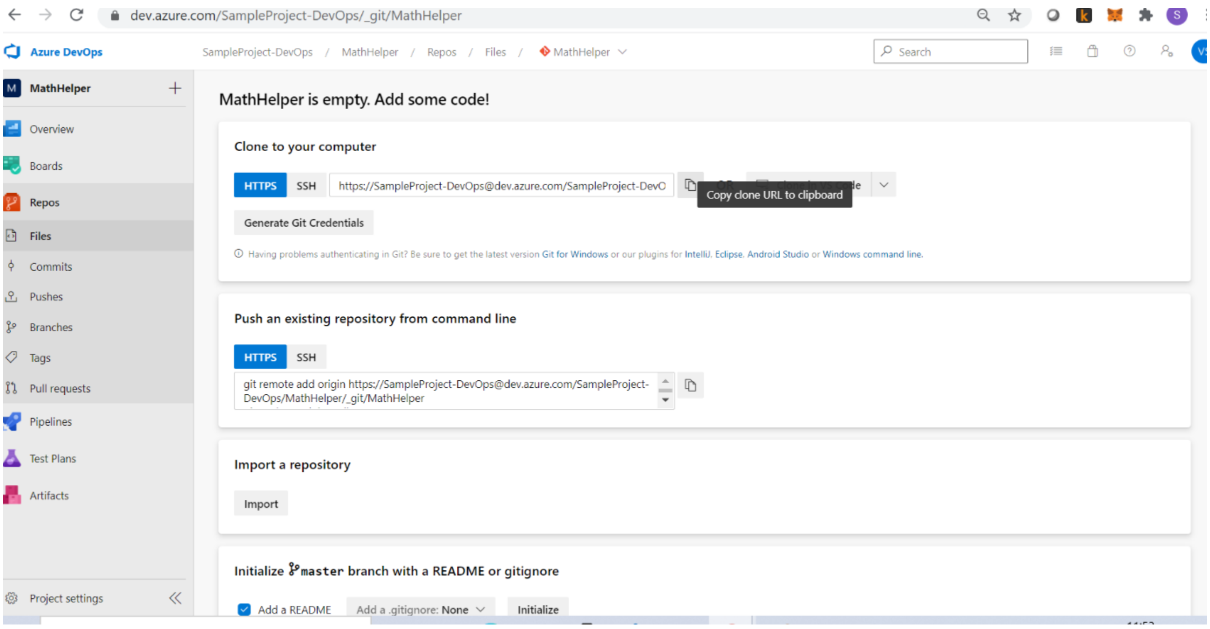
Related Work

+ Add link

Parent

435 Math Helper

- Also change the Math Helper Epic to Doing status
- Now create some calculator code and check in to this DevOps project
- Go to Repos File and copy the link



dev.azure.com/SampleProject-DevOps/_git/MathHelper

MathHelper is empty. Add some code!

Clone to your computer

HTTPS SSH https://SampleProject-DevOps@dev.azure.com/SampleProject-DevO

Copy clone URL to clipboard

Generate Git Credentials

ⓘ Having problems authenticating in Git? Be sure to get the latest version Git for Windows or our plugins for IntelliJ, Eclipse, Android Studio or Windows command line.

Push an existing repository from command line

HTTPS SSH

```
git remote add origin https://SampleProject-DevOps@dev.azure.com/SampleProject-DevOps/MathHelper/_git/MathHelper
```

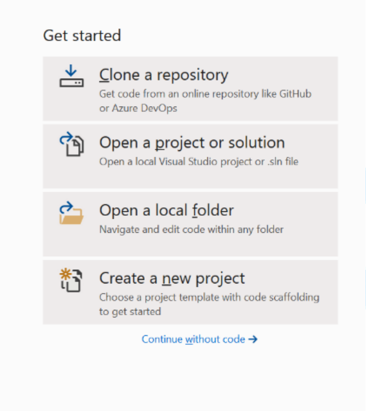
Import a repository

Import

Initialize master branch with a README or gitignore

☑ Add a README   Add a .gitignore: None   Initialize

- Open the Visual studio 2017 or above
- Create a new project and use the clone from repository using the link that we copied



Get started

Clone a repository
Get code from an online repository like GitHub or Azure DevOps

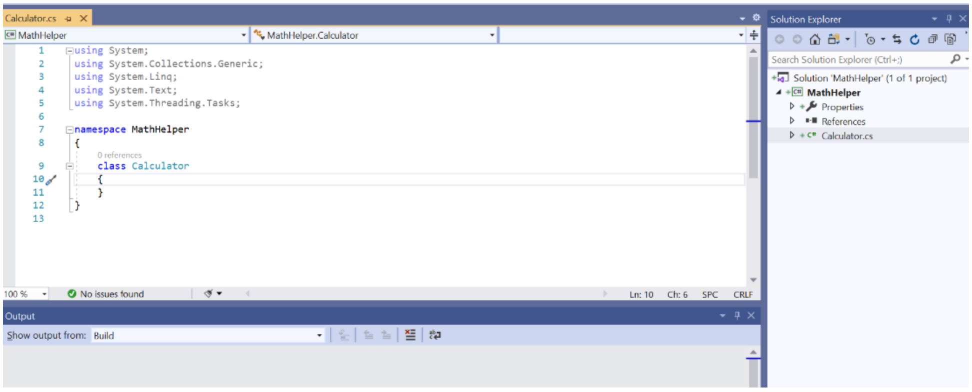
Open a project or solution
Open a local Visual Studio project or .sln file

Open a local folder
Navigate and edit code within any folder

Create a new project
Choose a project template with code scaffolding to get started

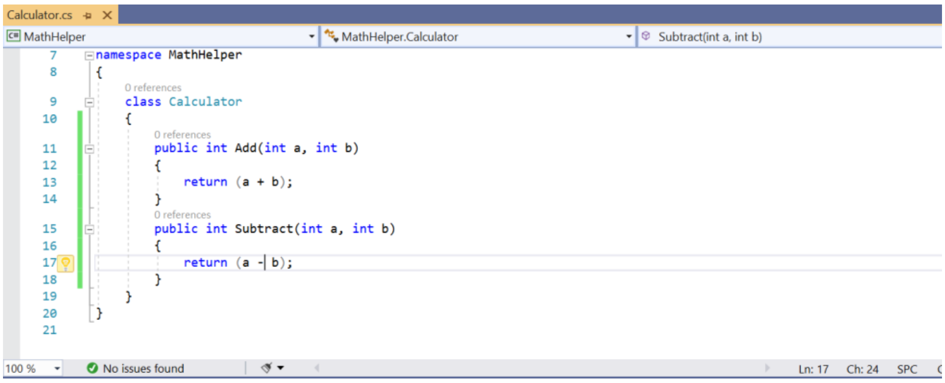
Continue without code →

- Create a class library (.Net Framework). Name It as MathHelper
- Delete the default file Class1.cs created
- Add a new class file calculator.cs to this project as shown below



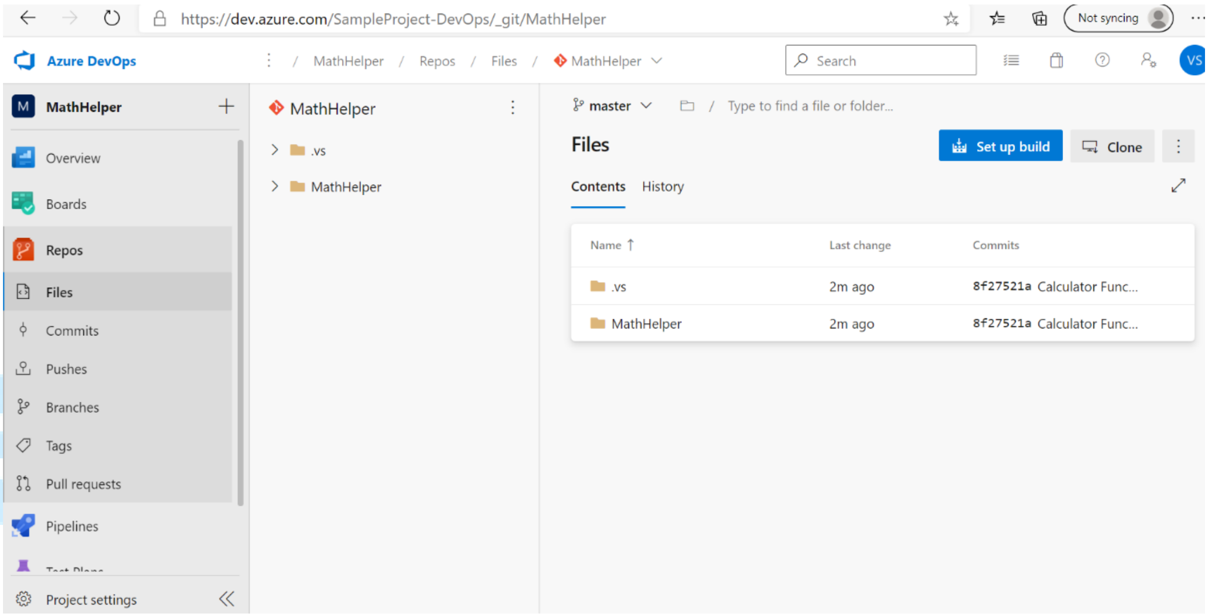
```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace MathHelper
{
    0 references
    class Calculator
    {
    }
}
```

- Add some methods like Add, Subtract as shown below



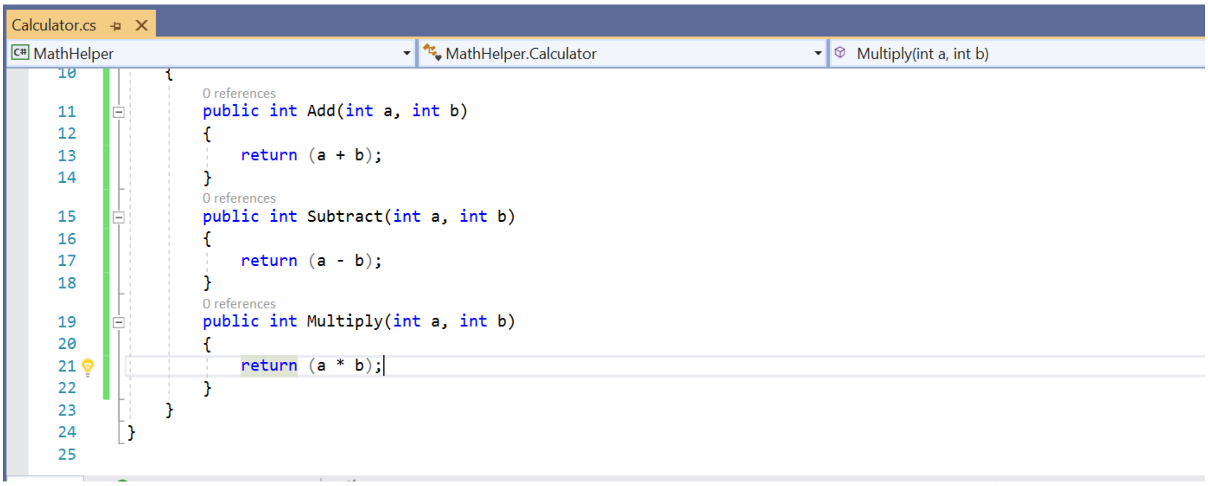
```
namespace MathHelper
{
    0 references
    class Calculator
    {
        0 references
        public int Add(int a, int b)
        {
            return (a + b);
        }
        0 references
        public int Subtract(int a, int b)
        {
            return (a - b);
        }
    }
}
```

- Build the solution and ensure that it is compiled successfully and then check in the code using Commit and push
- Go back to Azure DevOps project and verify that checked-in solution is present



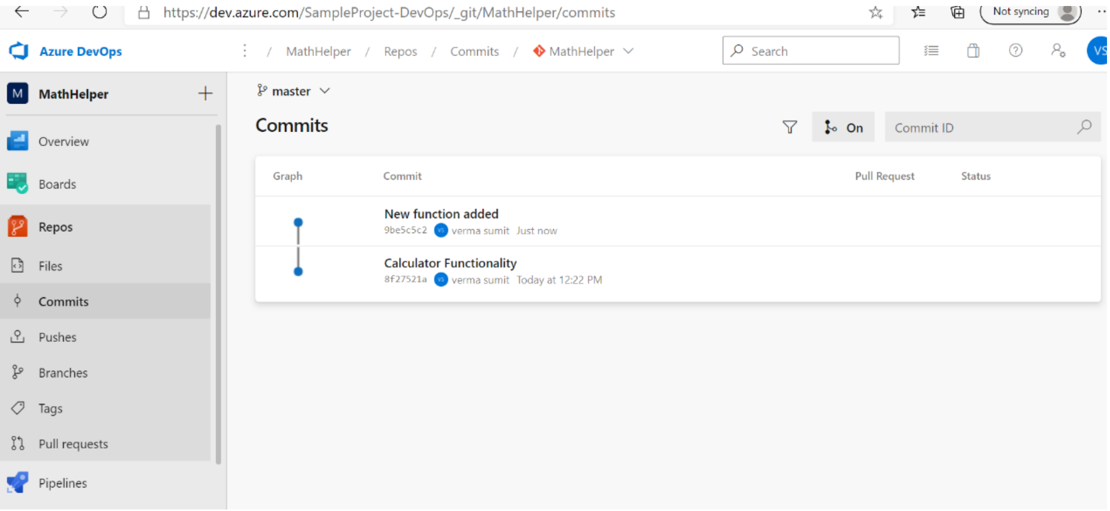
Name ↑	Last change	Commits
.vs	2m ago	8f27521a Calculator Func...
MathHelper	2m ago	8f27521a Calculator Func...

- Now make some changes in Visual studio code and check-in. Add another ‘multiply’ functionality



```
    {
        0 references
        public int Add(int a, int b)
        {
            return (a + b);
        }
        0 references
        public int Subtract(int a, int b)
        {
            return (a - b);
        }
        0 references
        public int Multiply(int a, int b)
        {
            return (a * b);
        }
    }
}
```

- Check in the code and do a simple version compare. The check in comment for this project is “New Function Added”
- Go to Repos→ Commit and it will show all the code commits

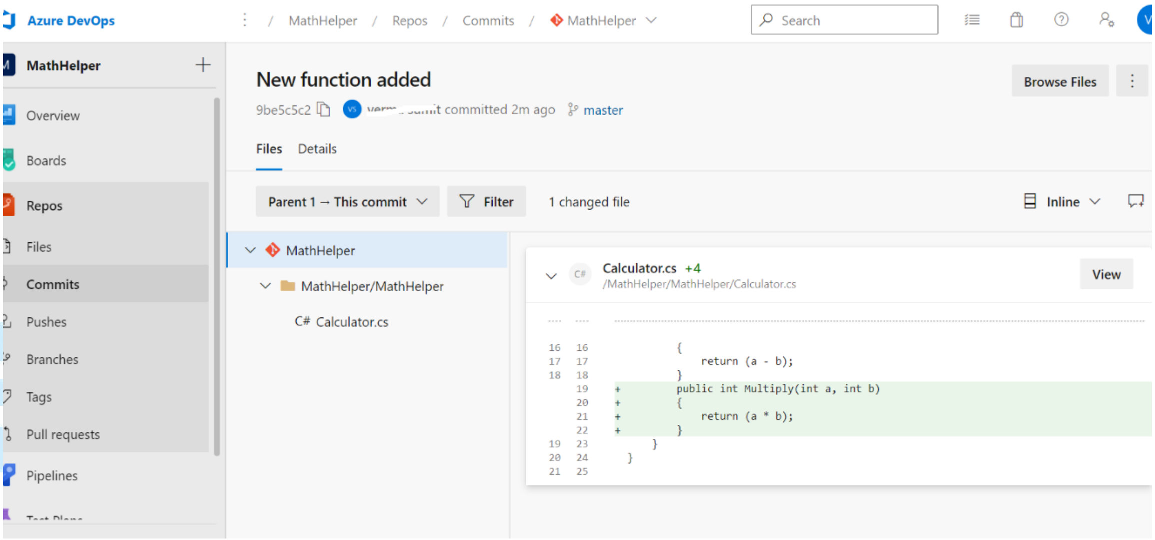


master

Commits

Graph	Commit	Pull Request	Status
	New function added 9be5c5c2 verma sumit Just now		
	Calculator Functionality 8f27521a verma sumit Today at 12:22 PM		

- Click on New Function added, and it will show the code changes from the previous project



New function added

9be5c5c2 verma sumit committed 2m ago master

1 changed file

Calculator.cs +4
/MathHelper/MathHelper/Calculator.cs

```
            {
                return (a - b);
            }
+           public int Multiply(int a, int b)
+           {
+               return (a * b);
+           }
        }
    }
```

This concludes this project