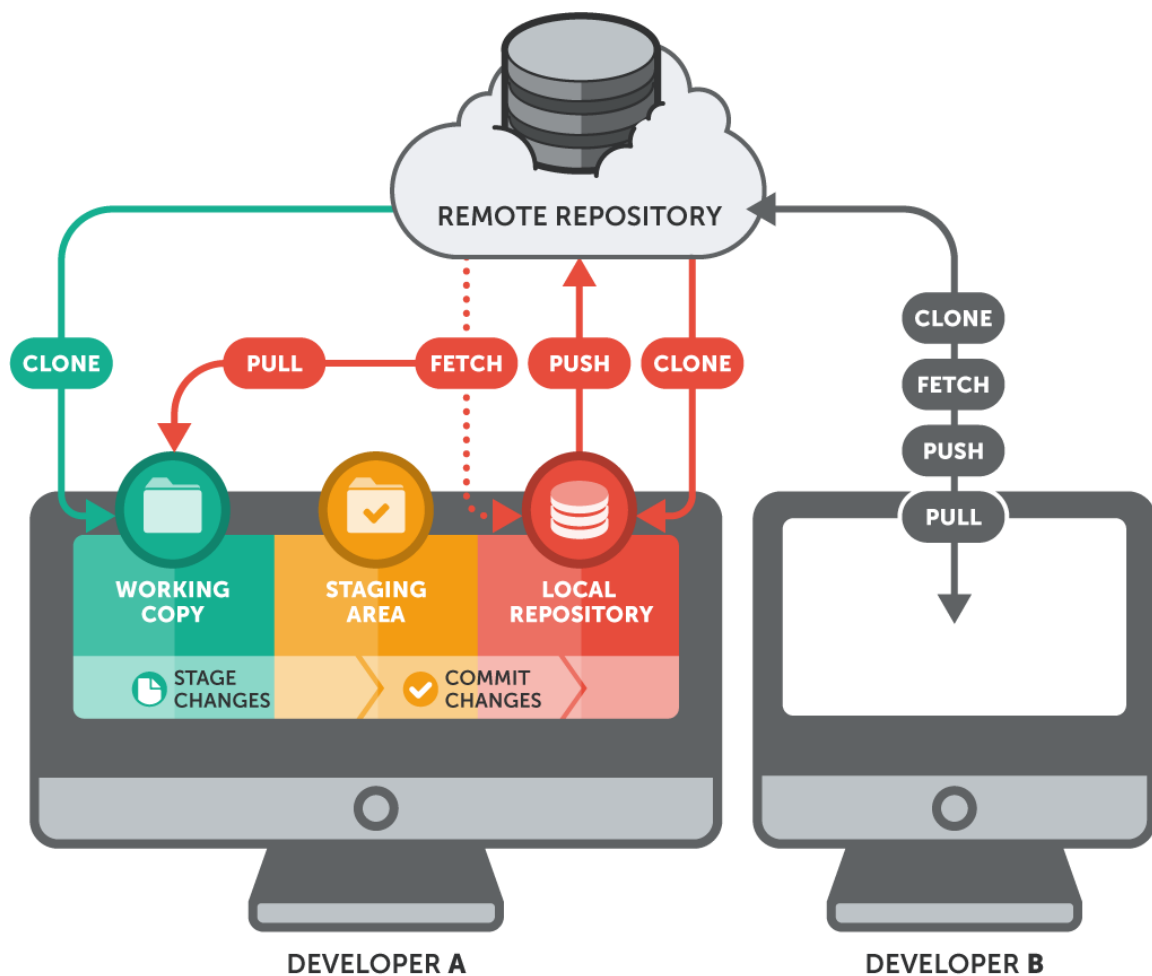


Git and GitHub Tutorial using Visual Studio 2017

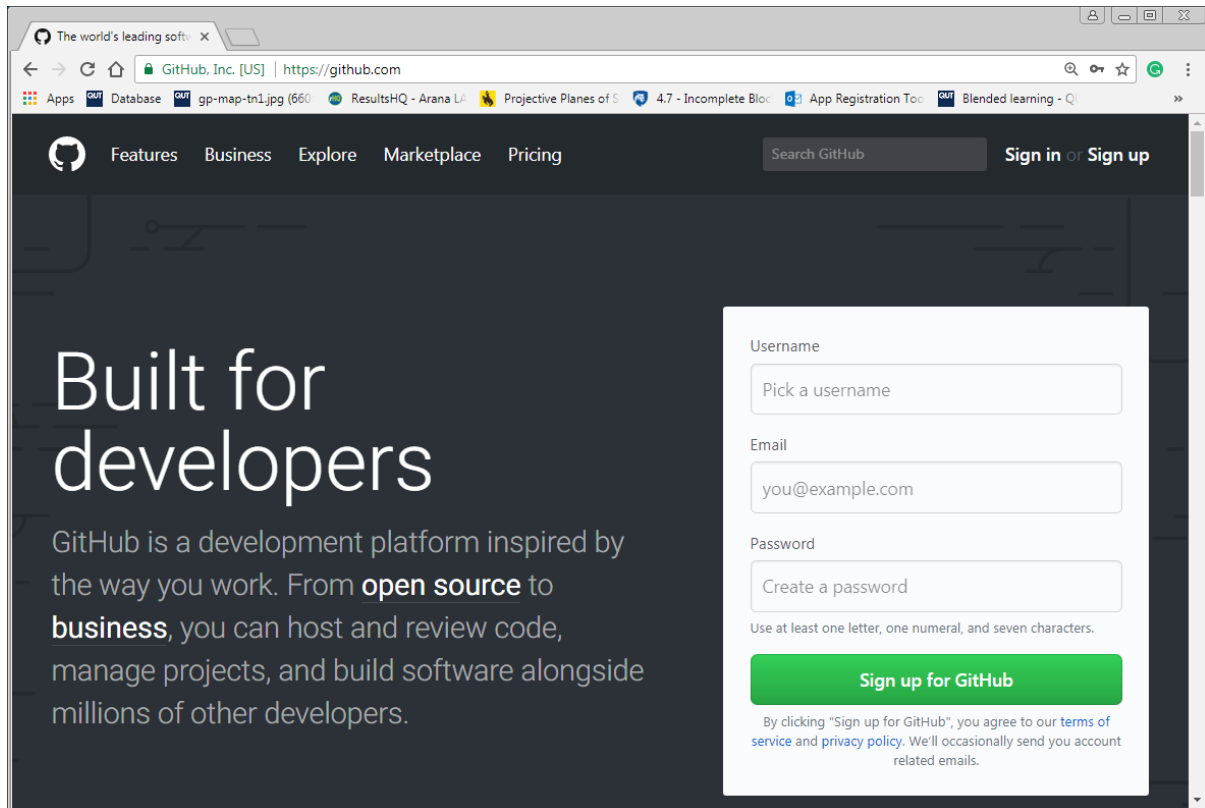
Part A: Git Overview

<https://guides.github.com/introduction/git-handbook/>

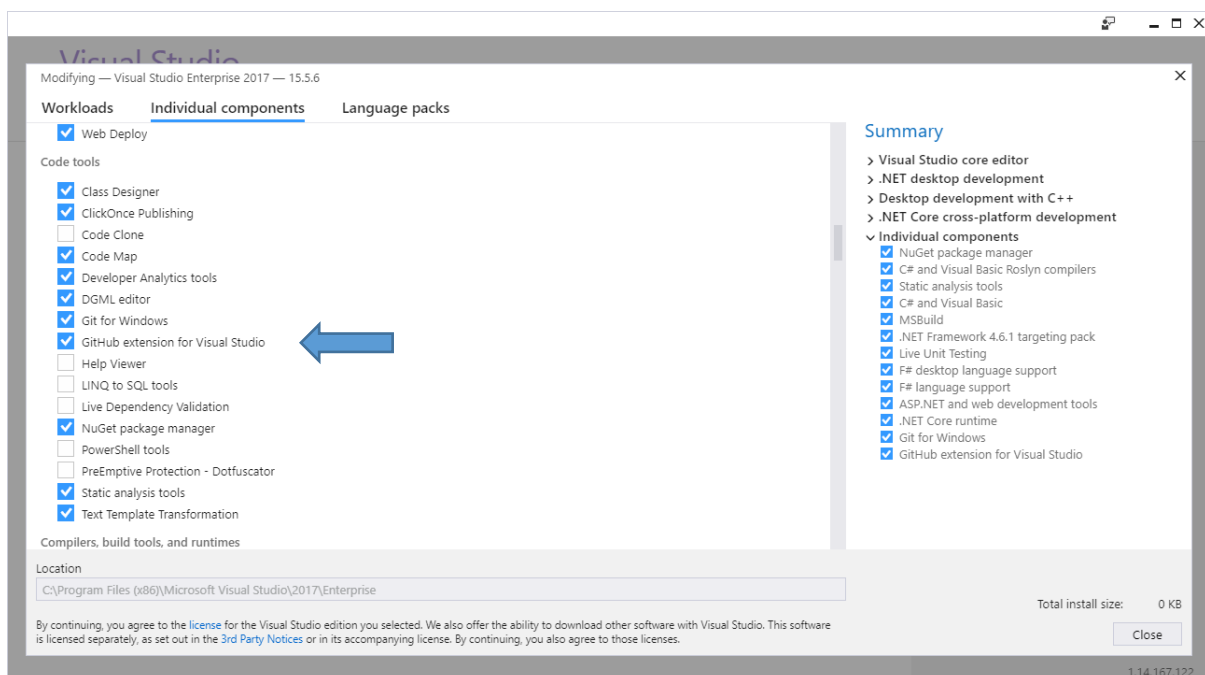


Part B: One Team Member – Create and add Visual Studio project to GitHub

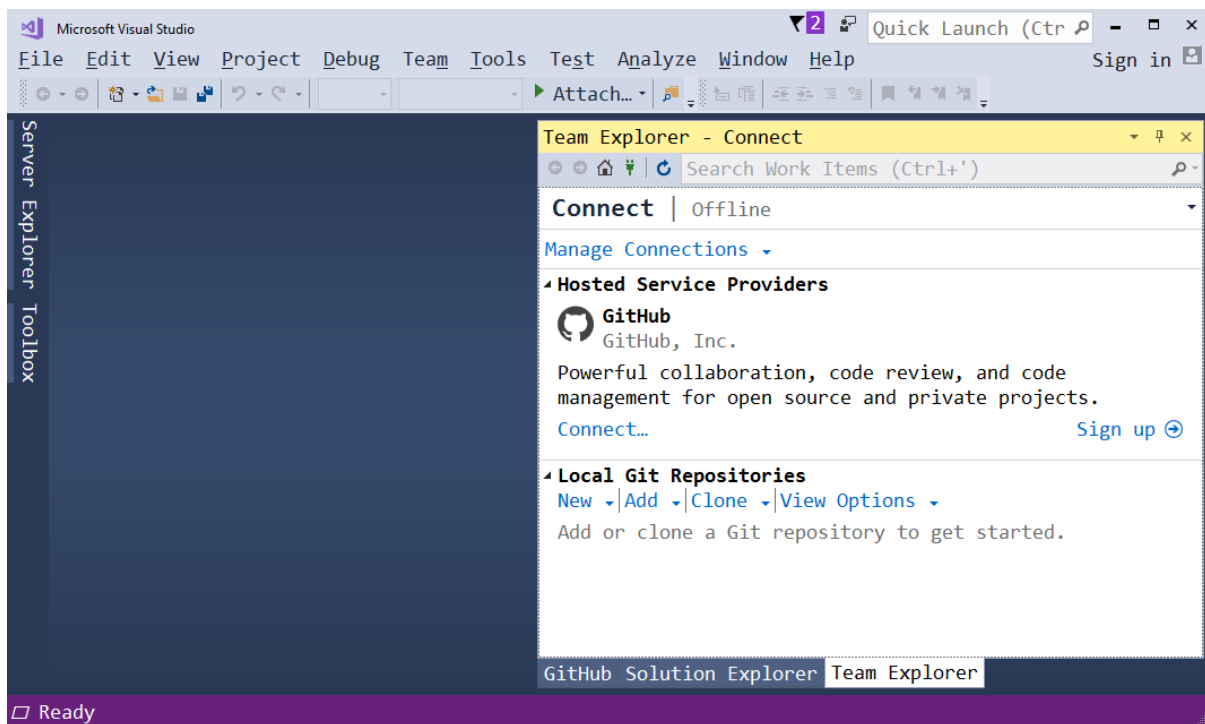
If you don't already have a GitHub account, go to <https://github.com/> and sign up:



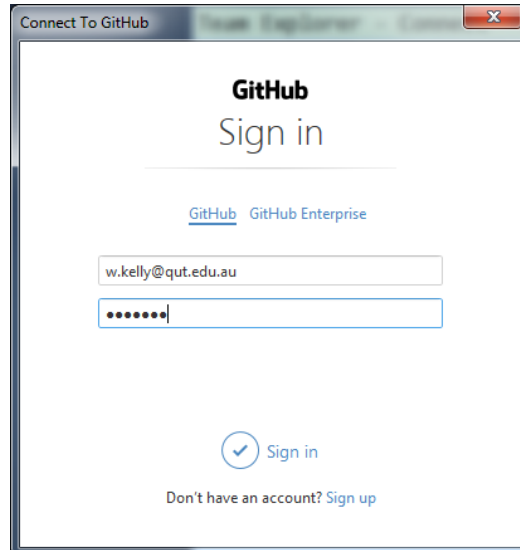
The following assumes that your version of Visual Studio 2017 has the *GitHub extension for Visual Studio* installed. If it's not installed you can easily add it by going back to the installer and ticking the missing boxes.



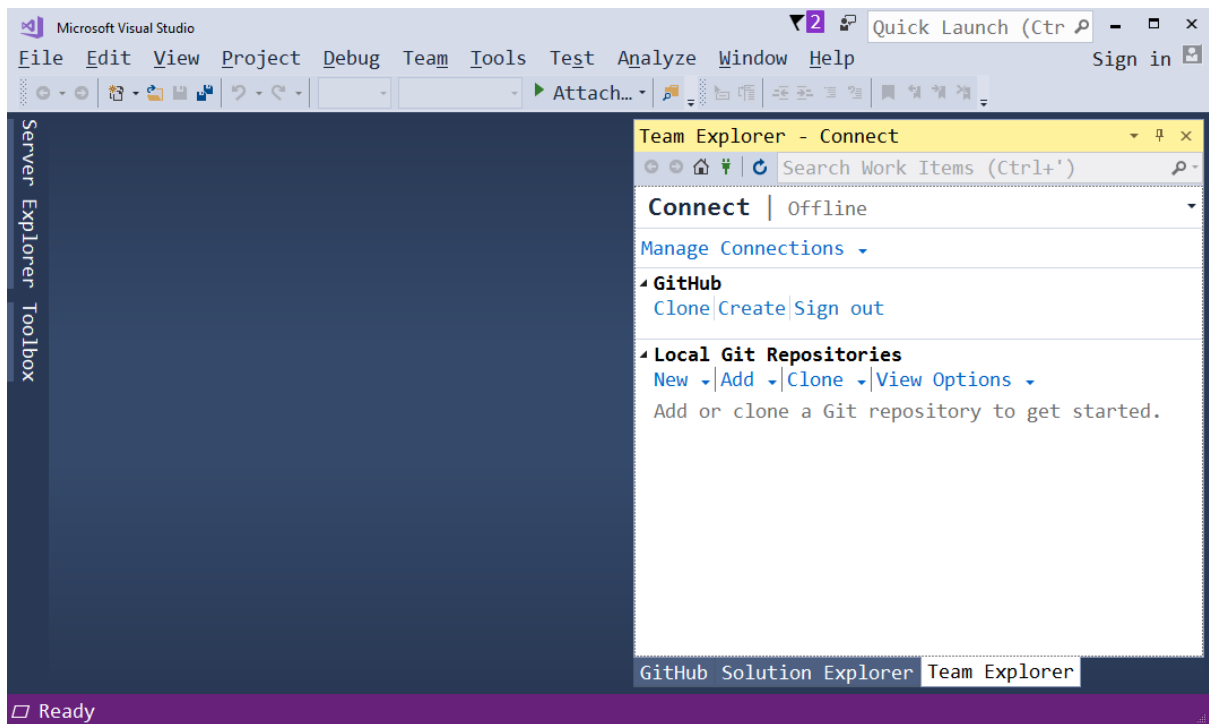
Open Visual Studio 2017 and open the “Team Explorer” window:



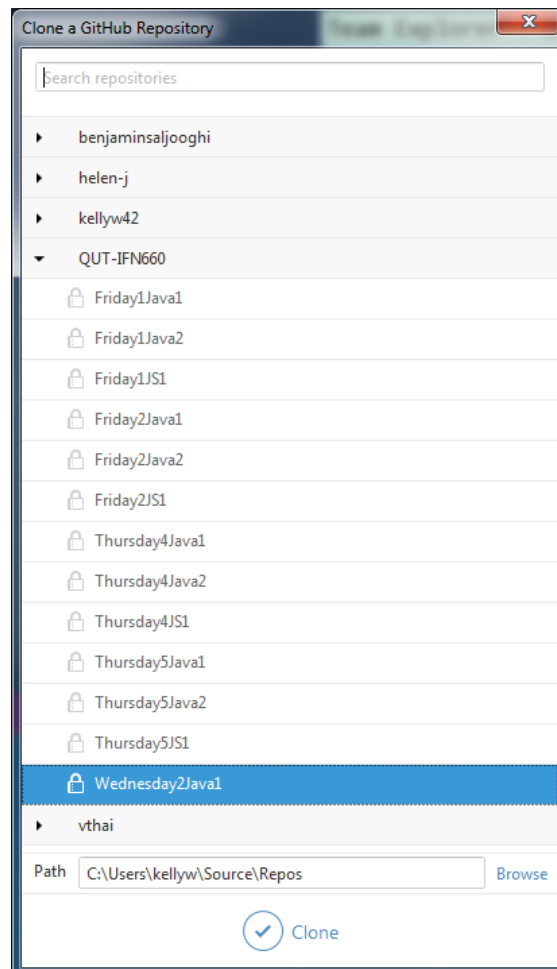
Click on “Connect...” to login to GitHub using your GitHub user name and password:



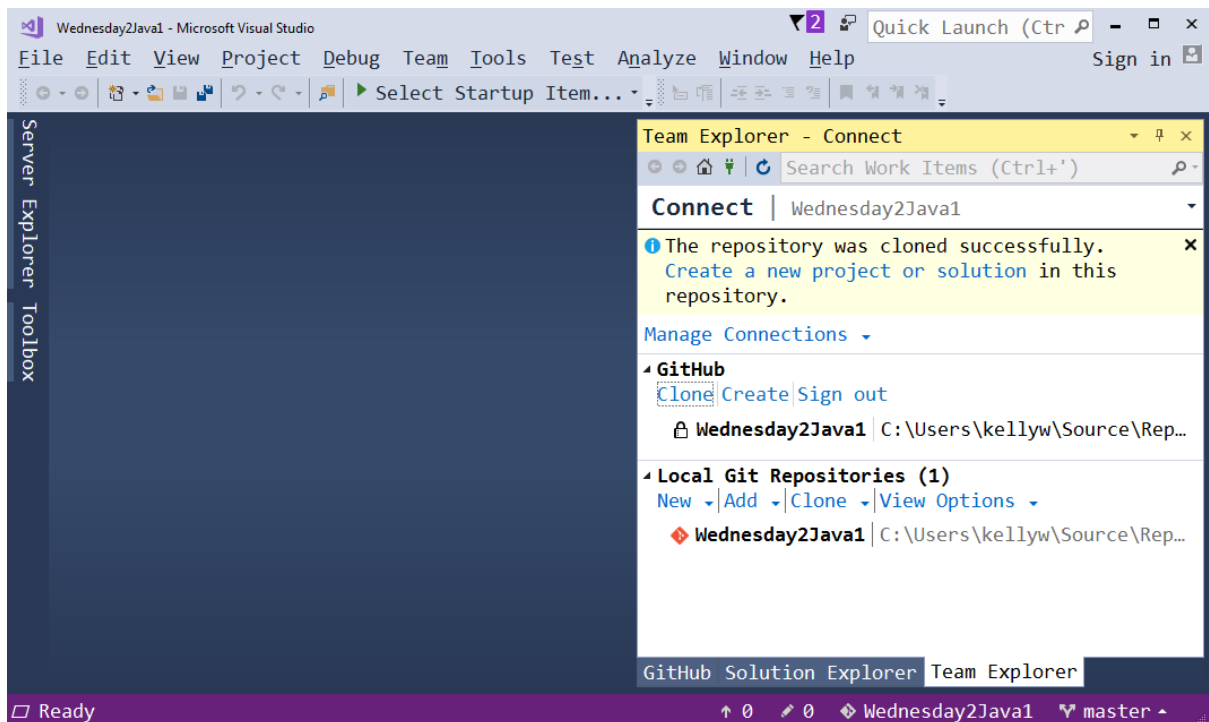
In the Visual Studio Team Explorer Window, click on the “Clone” option:



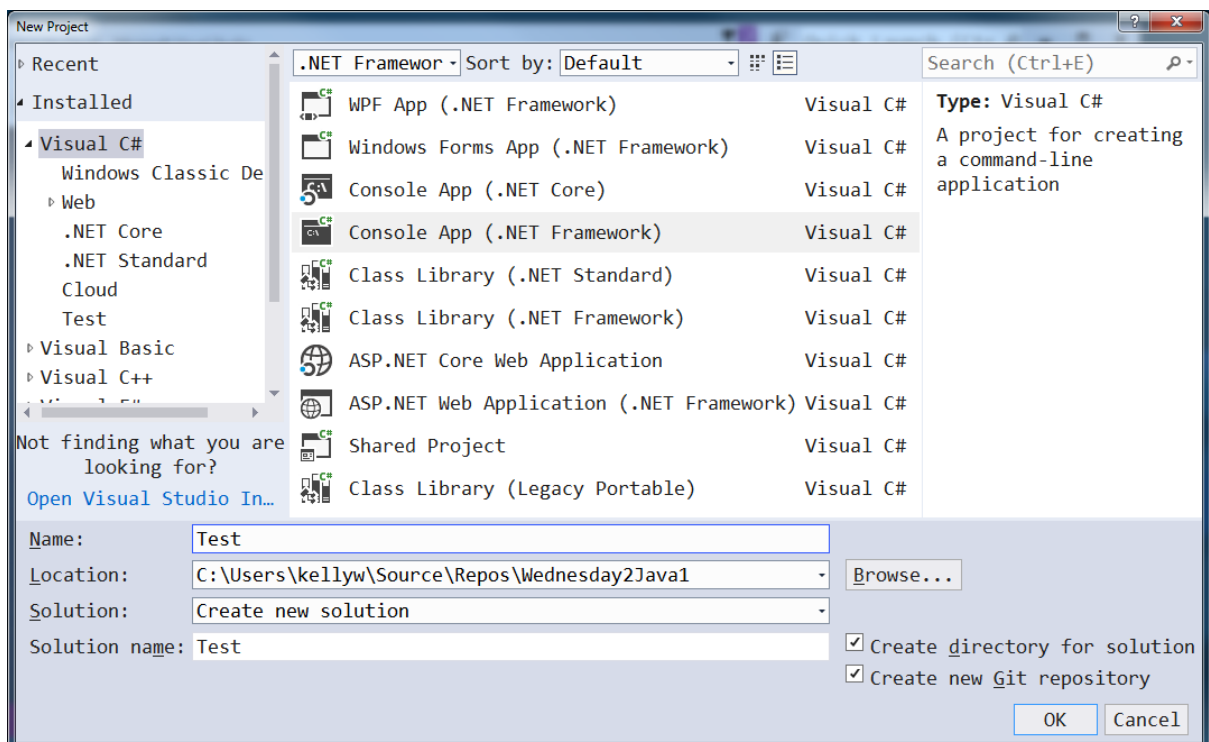
Select your team’s repository listed under the QUT-IFN660 organization:



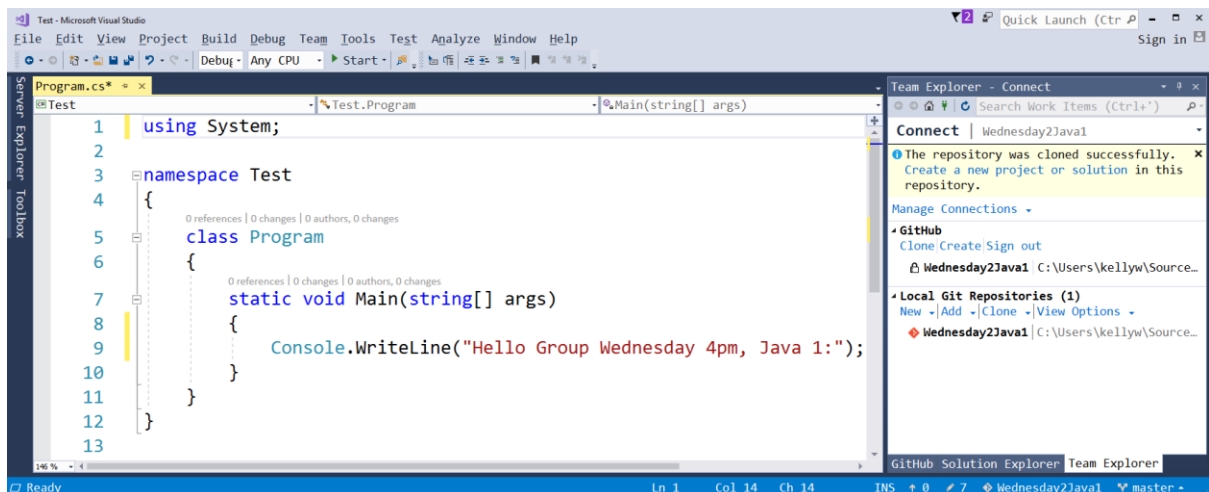
Check the message to confirm “The repository was cloned successfully”:



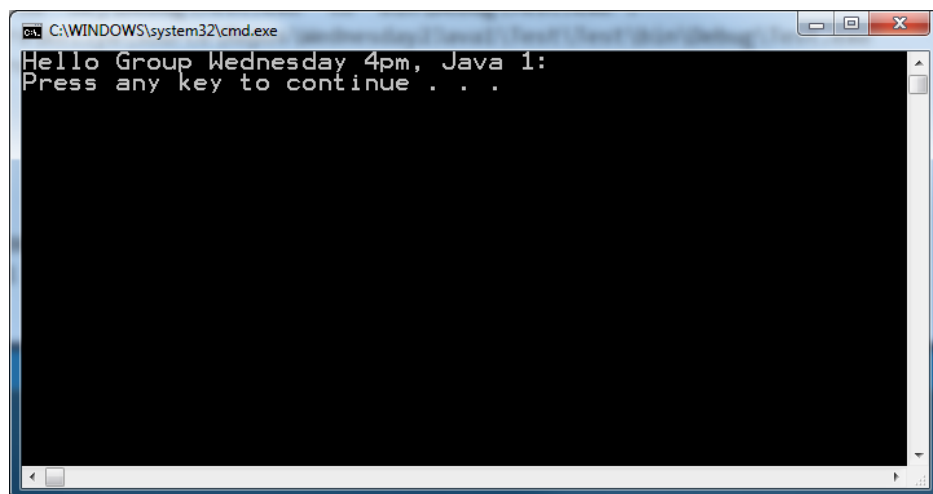
In the Team Explorer window, click on “Create a new project or solution in this repository” and create a C# or C++ console application:



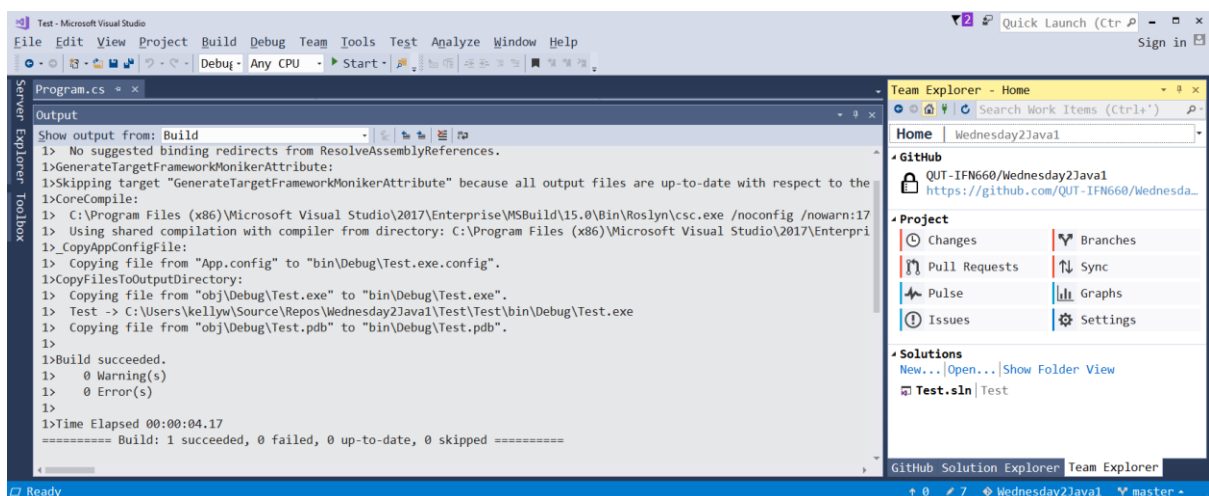
Add a print statement to output your group's name:



Always compile and test that it works correctly before committing and sharing with your group:

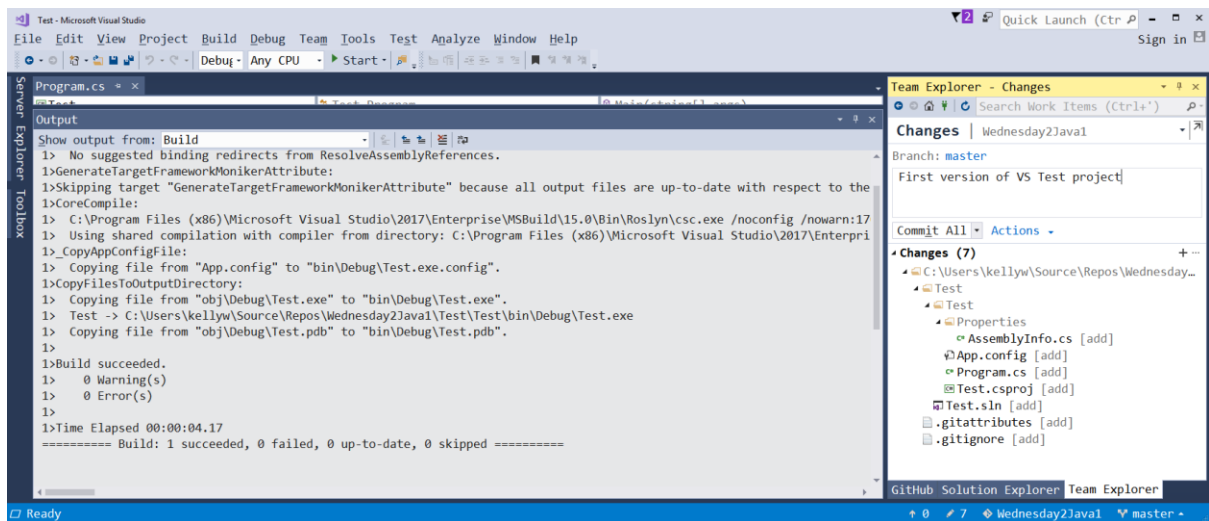


In the Team Explorer window, click on the Home icon to go back to the home page and click on the Changes button to view changes you have made locally that are not yet committed to the (local) repository:

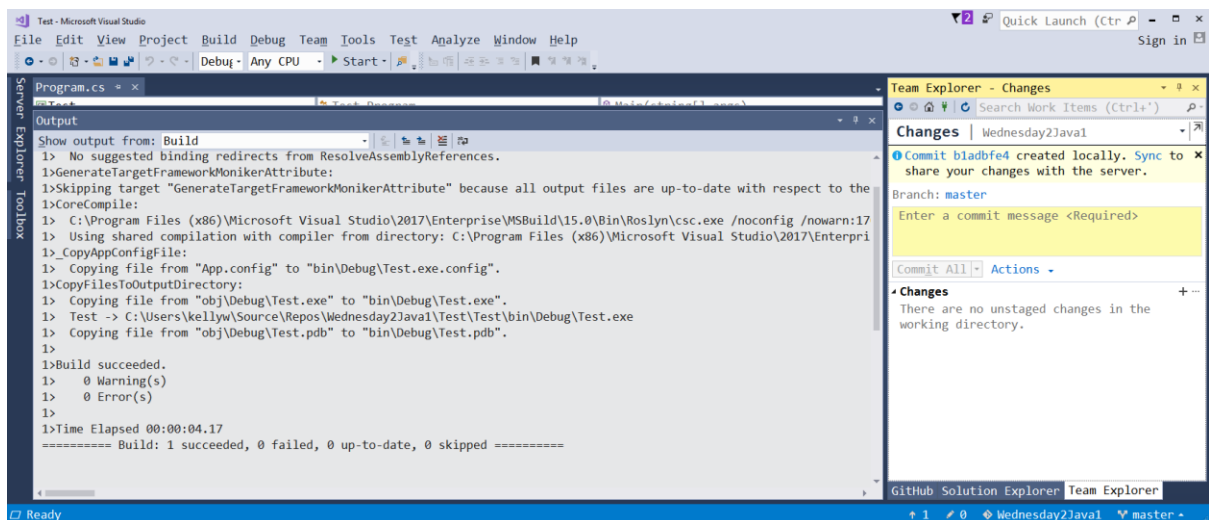


View the list of files that have changed or need adding to the repository.

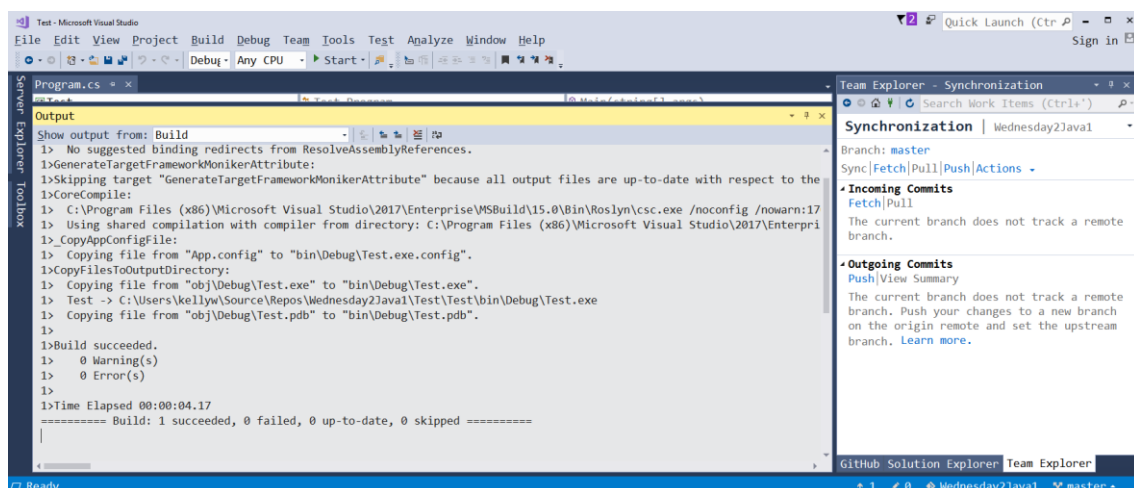
Enter an informative commit message that will help your team understand what this change is that you have made, then click the “Commit All” button (to save the changes to the GIT local repository):



Check the message to confirm “Commit b1adbfe4 created locally”:



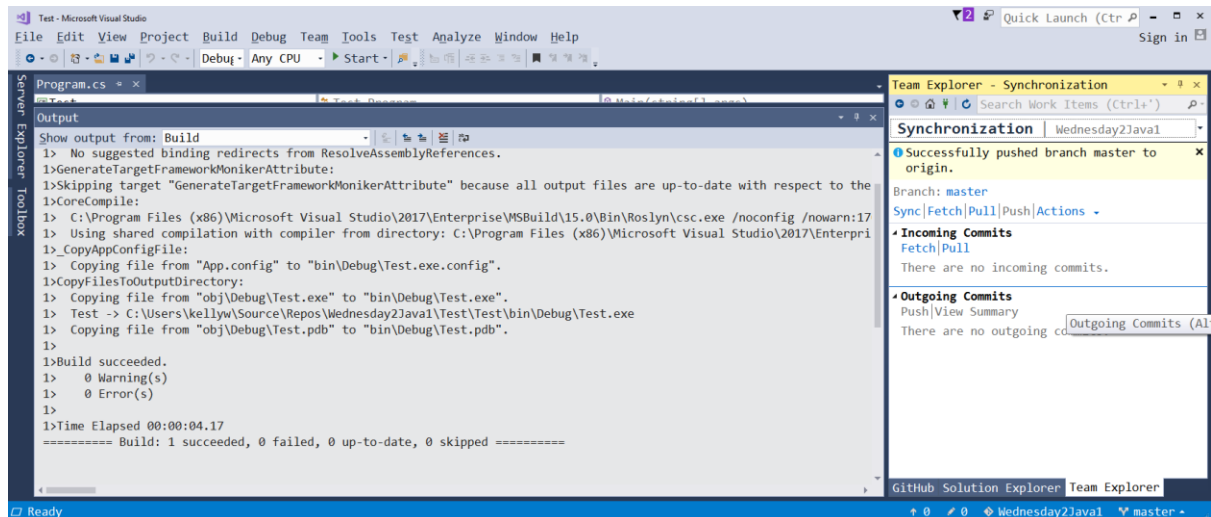
Press the “Sync” link in the Team Explorer window to take you make to the Synchronization view:



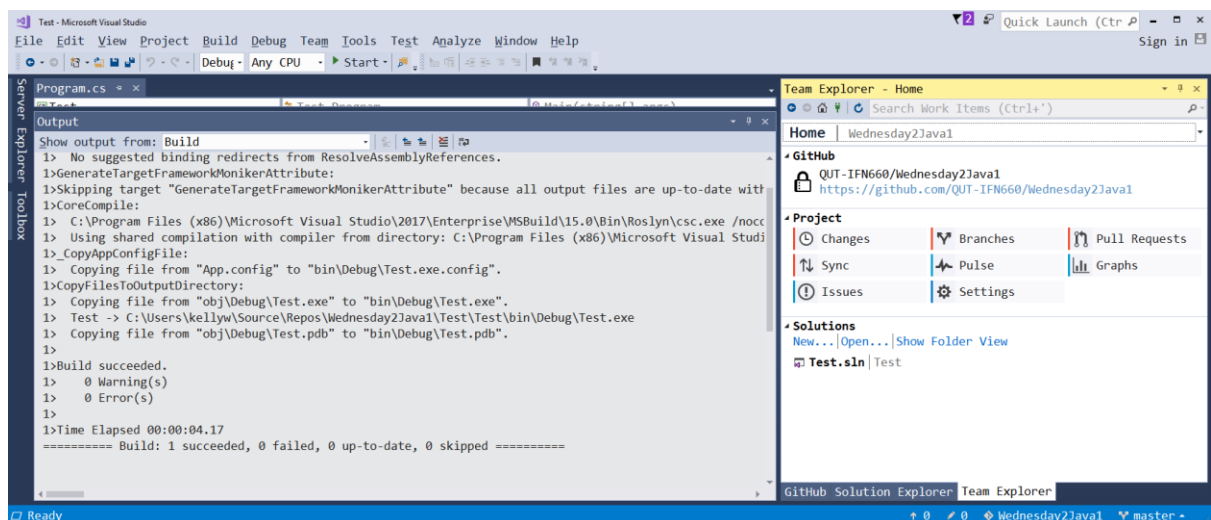
Click the “Fetch” (or “Pull”) link to double check that other team members haven’t committed any changes since you cloned the repository.

Click the “Push” link to upload your commit to the remote GitHub repository.

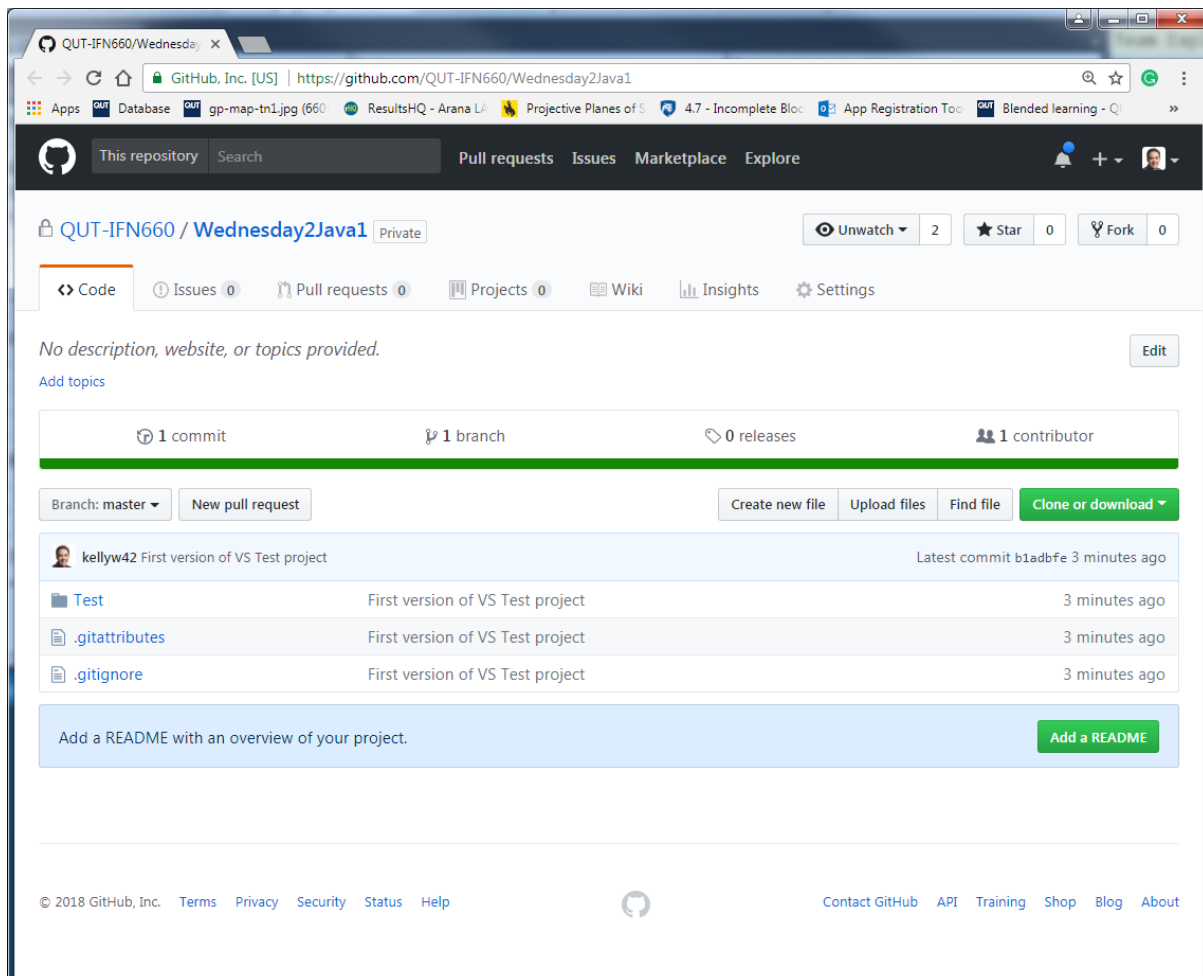
Check the message to confirm: “Successfully pushed branch master to origin”:



Click on the Home icon in the Team Explorer window to return to the Home view.



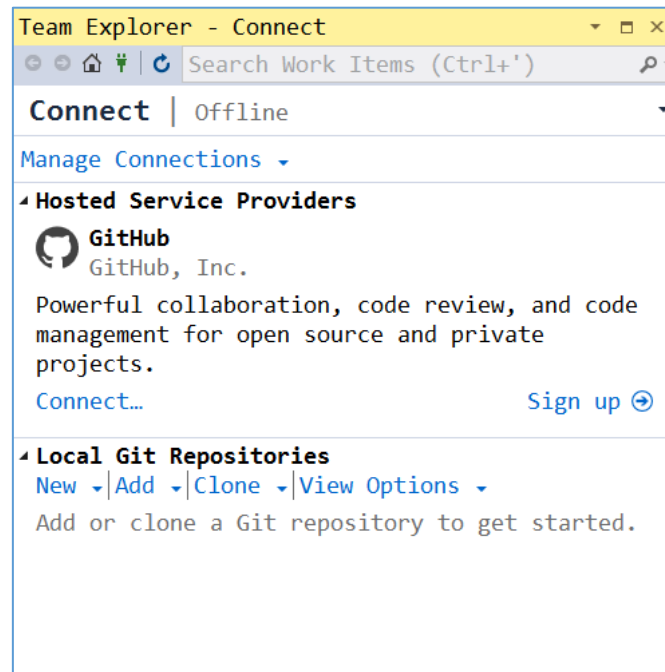
Click on the hyperlink <https://github.com/QUT-IFN660/> in the Team Explorer window to open the GitHub repository in your web browser:



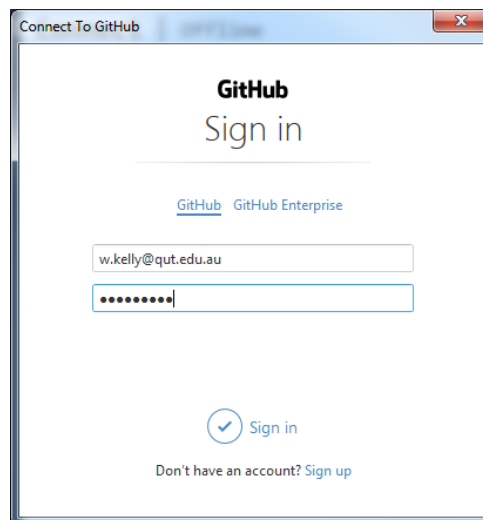
Part C – Another Team Member wants to make changes

Each team member should now perform the following on their own computer.

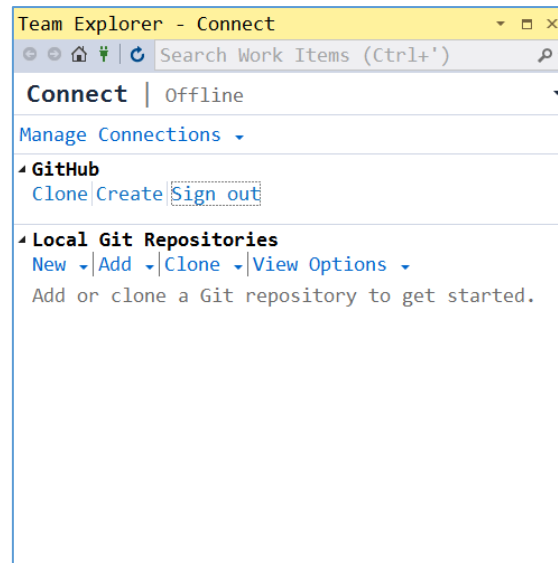
Open Visual Studio 2017 and open the Team Explorer window:



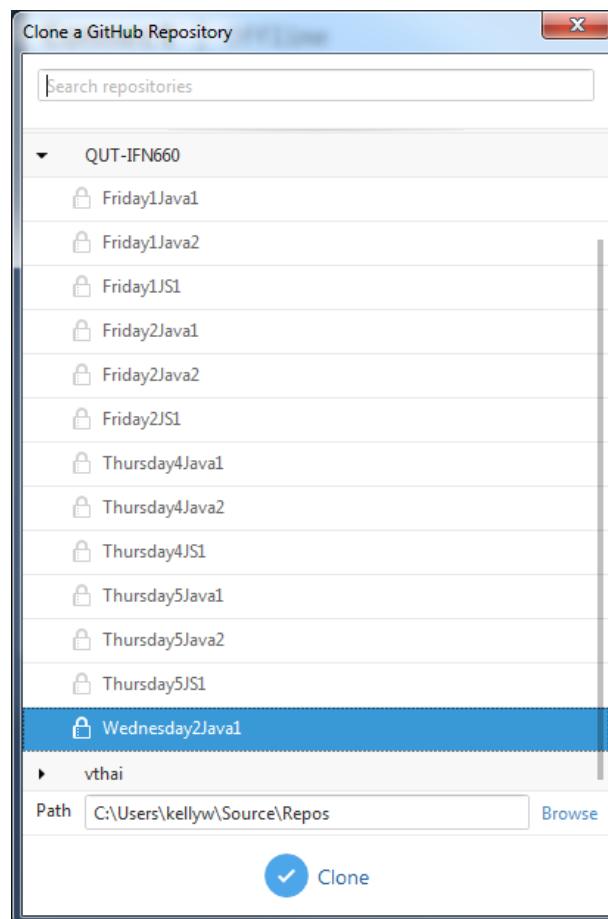
Click on “[Connect...](#)” to login to GitHub using your GitHub user name and password:

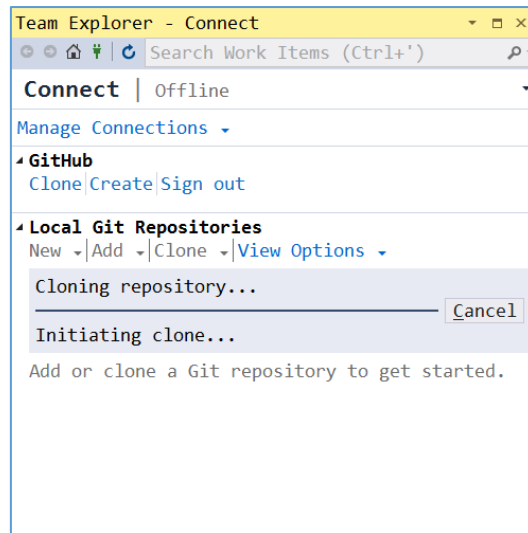


In the Visual Studio Team Explorer Window, click on the “[Clone](#)” option:

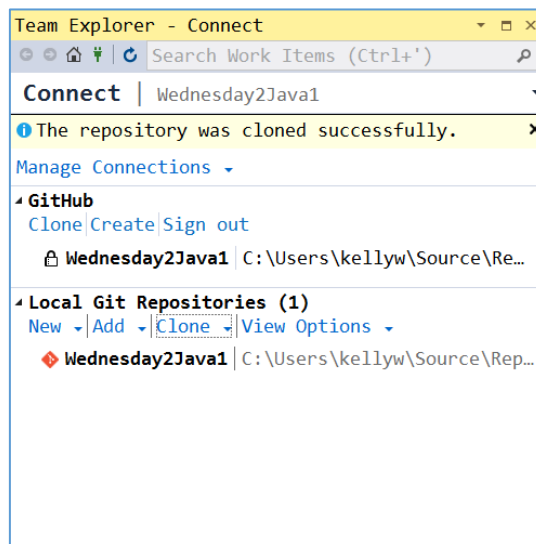


Select your team's repository listed under the QUT-IFN660 organization:

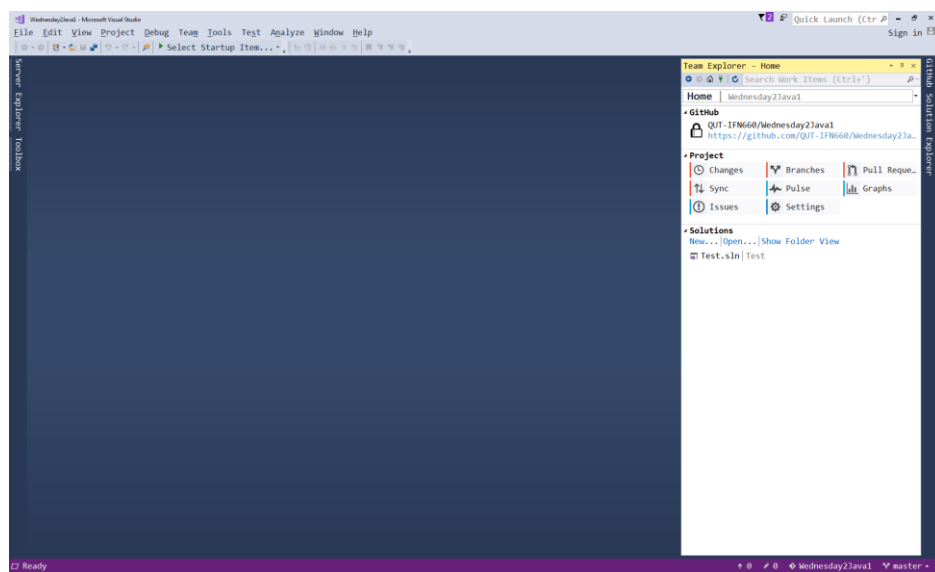




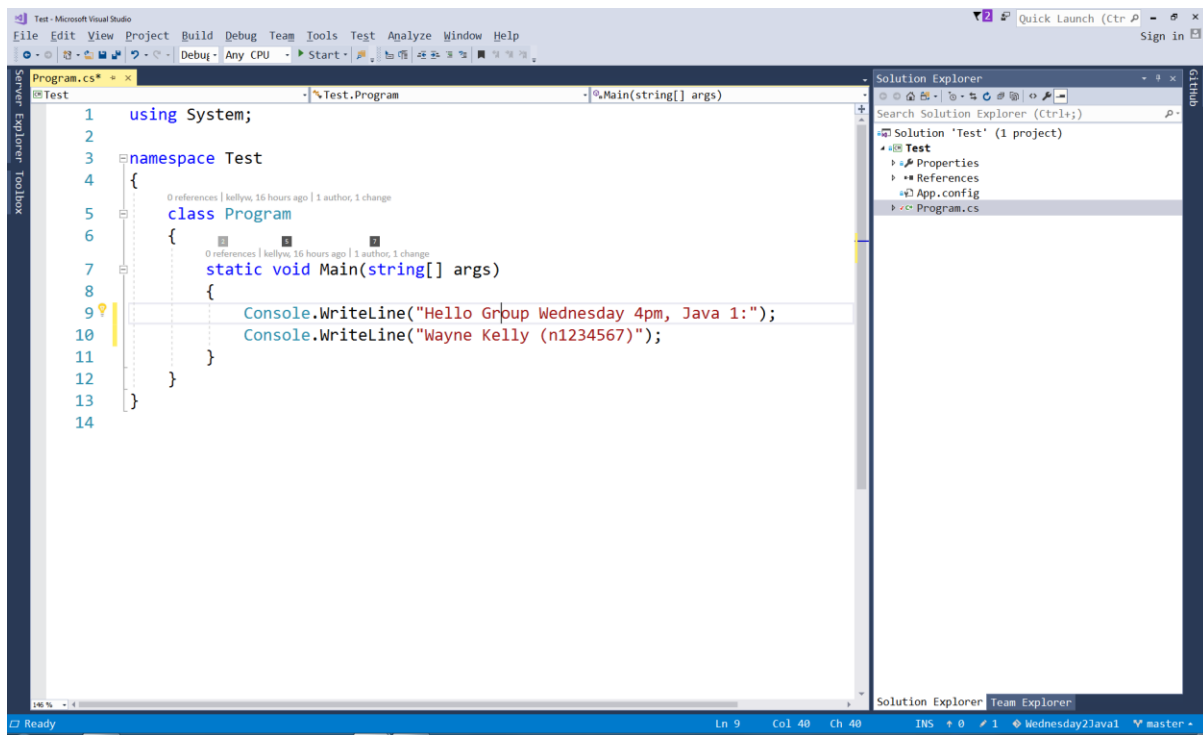
Check the message to confirm “The repository was cloned successfully”:



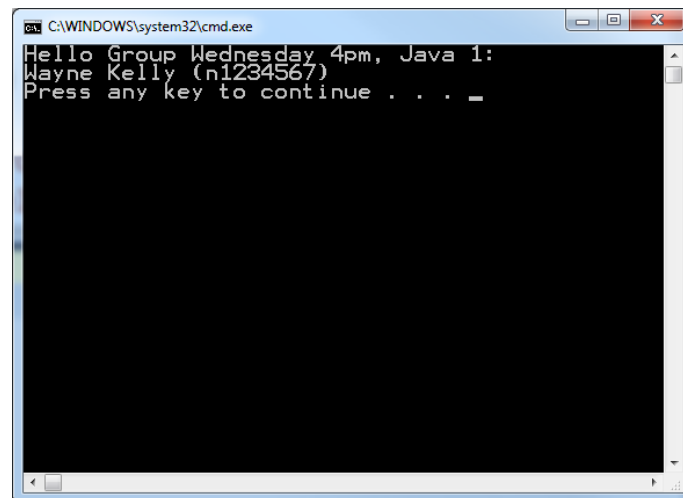
Click on the Home icon in the Team Explorer window to return to the main view then double click on the link to Solution Test.sln:



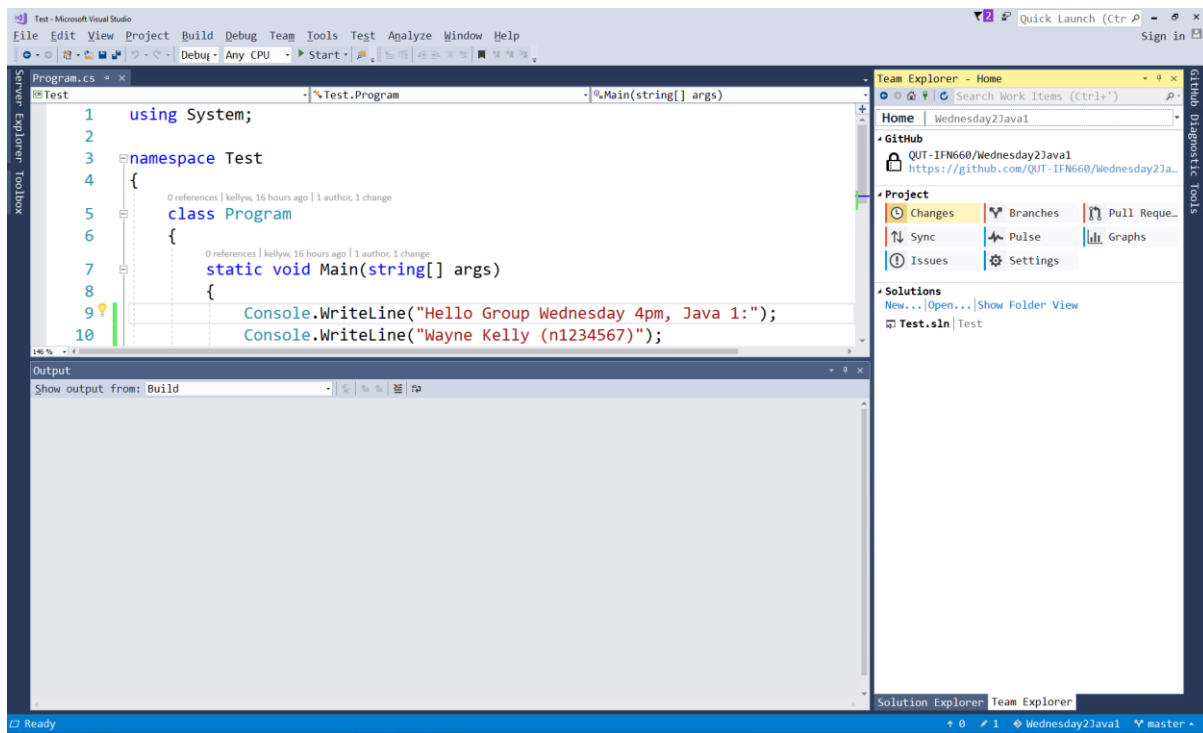
Add a print statement including name and student number:



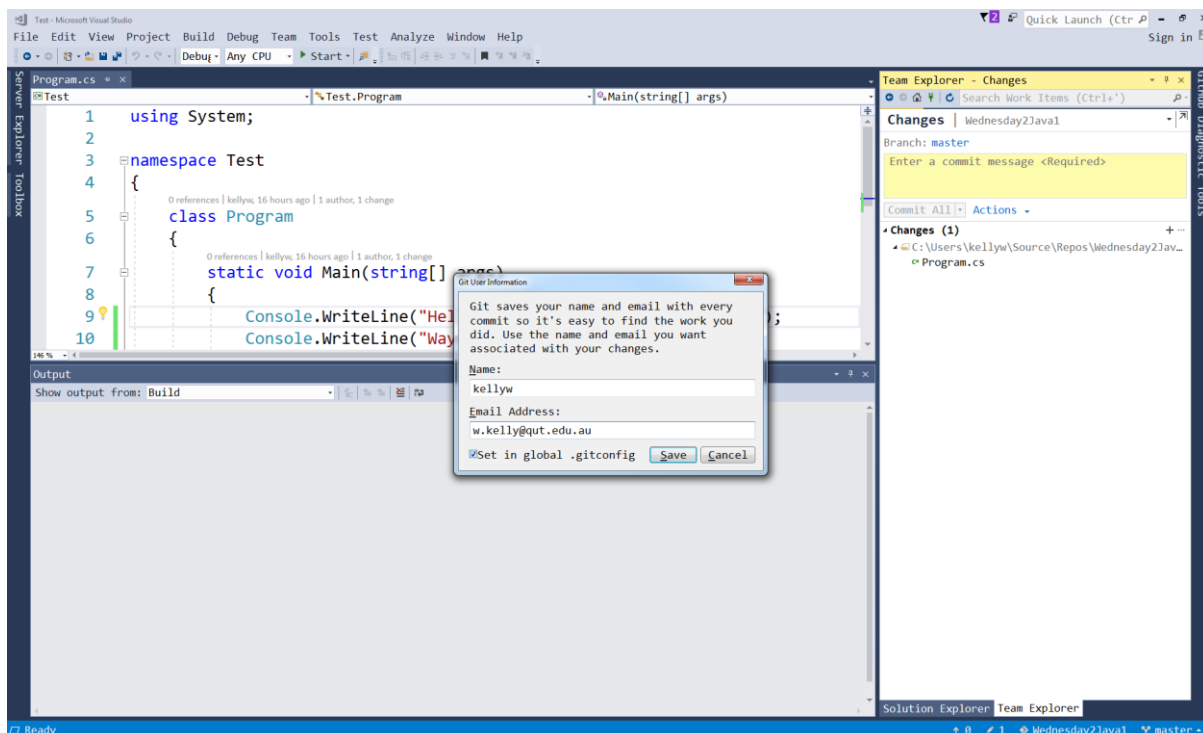
Always compile and test that it works correctly before committing and sharing with your group:



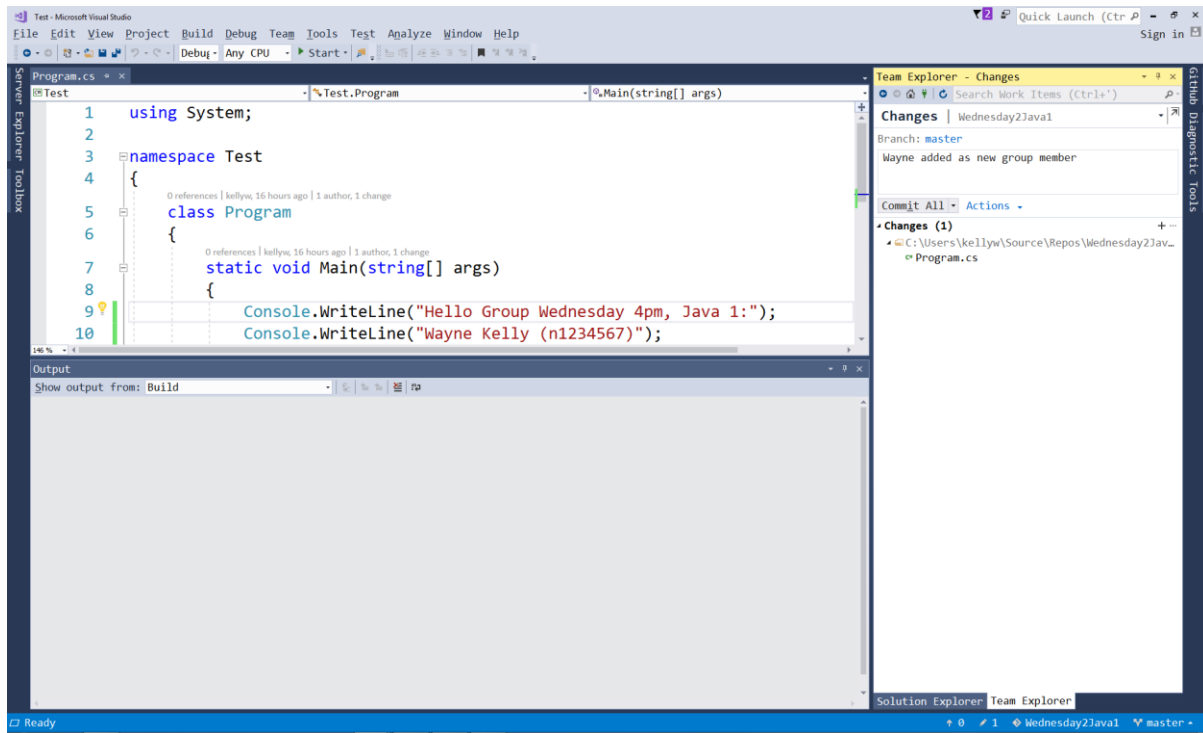
In the Team Explorer window, click on the Home icon to go back to the home page.



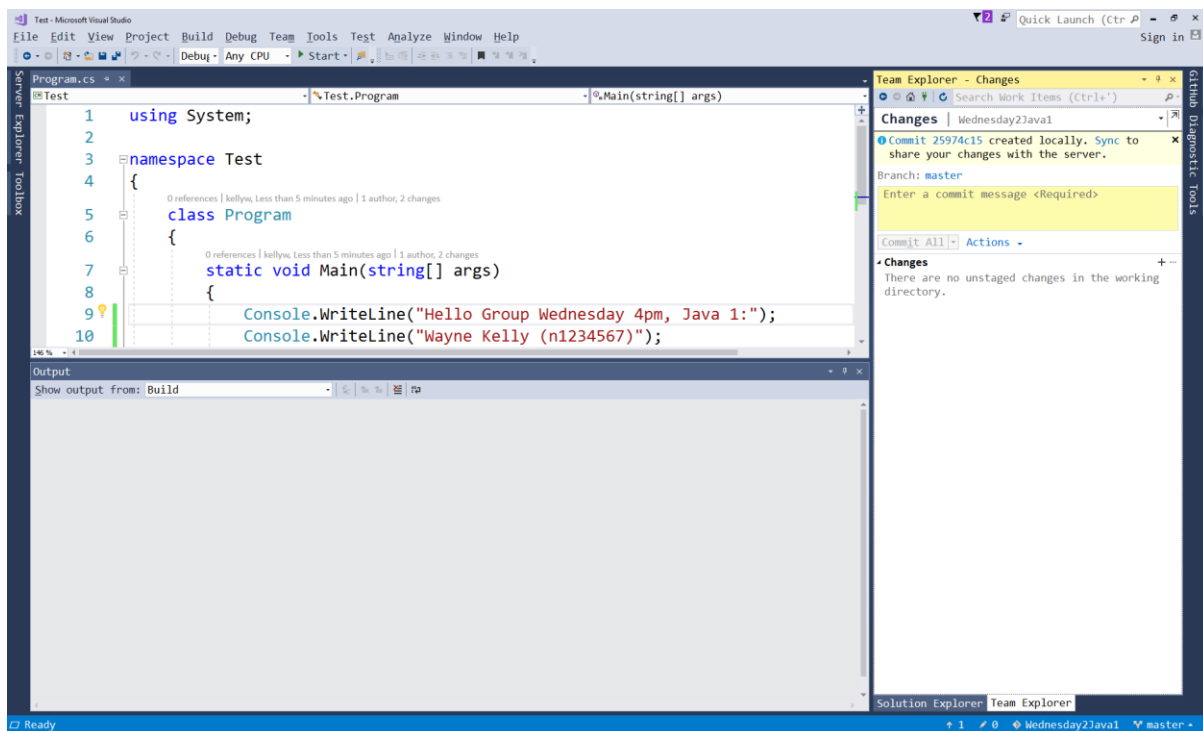
Click on the Changes button to view changes you have made locally that are not yet committed to the (local) repository:



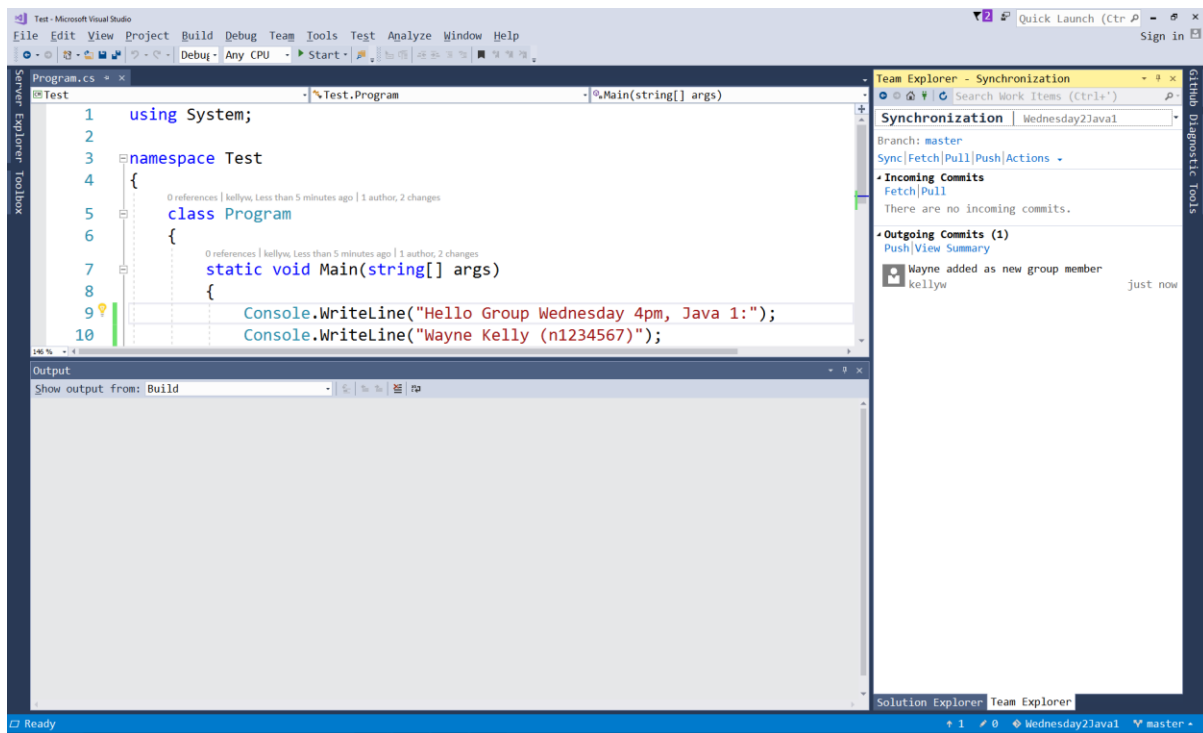
Enter an informative commit message that will help your team understand what this change is that you have made, then click the “Commit All” button (to save the changes to the GIT local repository):



Check the message to confirm “Commit 25974c15 created locally”:

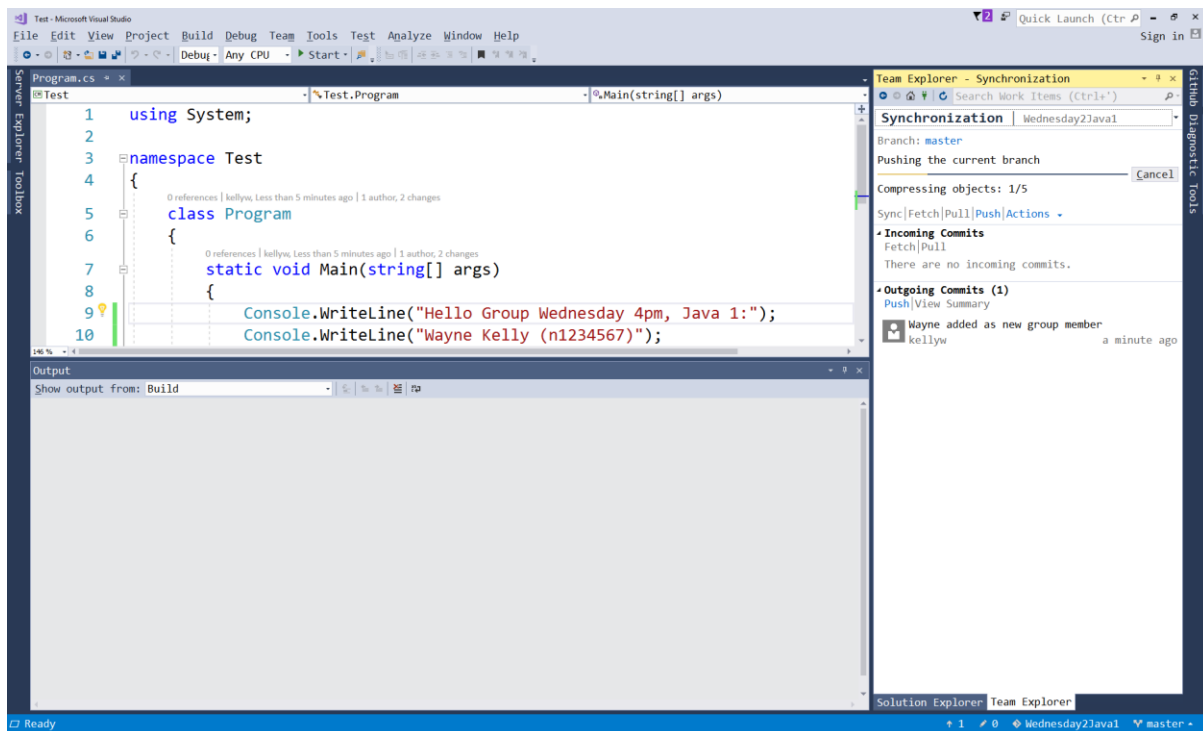


Press the “[Sync](#)” link in the Team Explorer window to take you make to the Synchronization view:

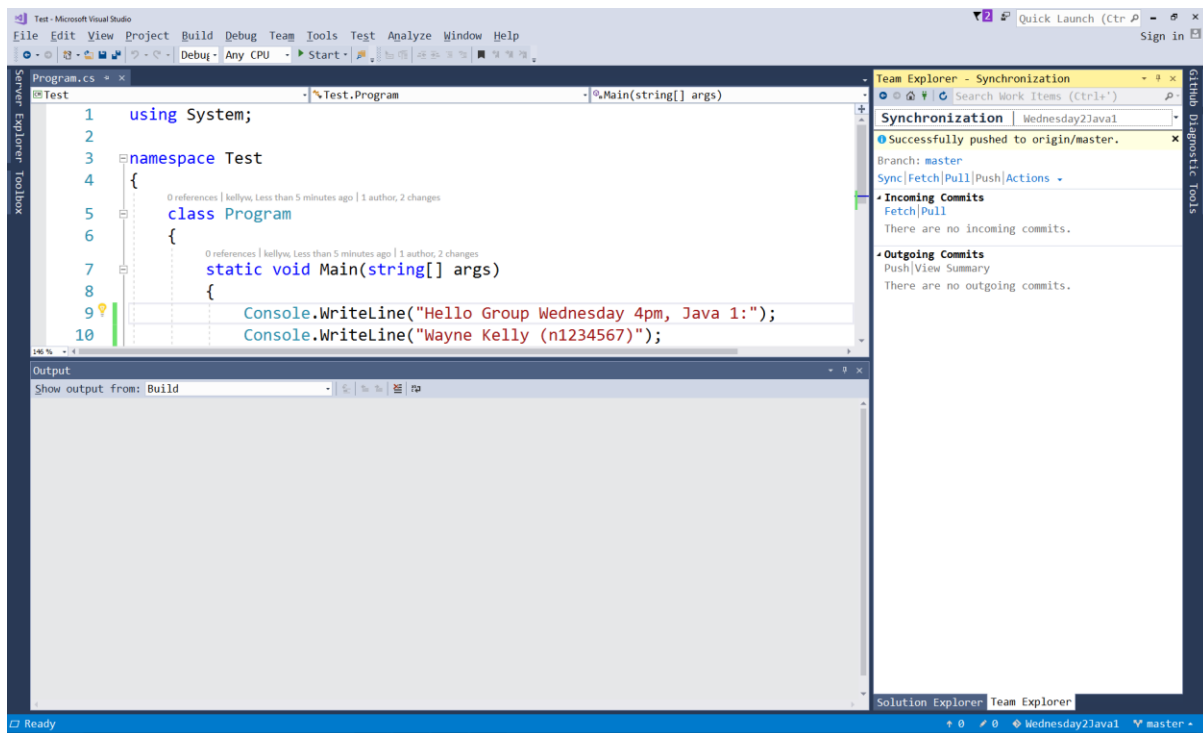


Click the “[Fetch](#)” (or “[Pull](#)”) link to double check that other team members haven’t committed any changes since you cloned the repository.

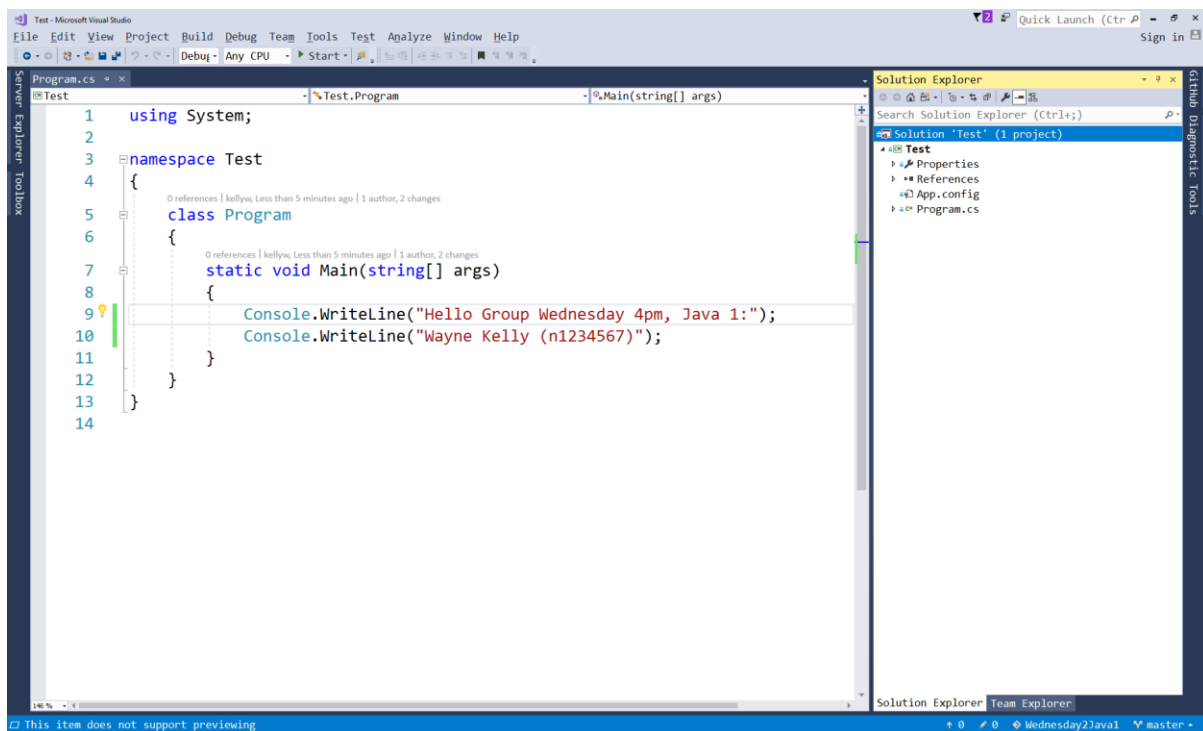
Click the “[Push](#)” link to upload your commit to the remote GitHub repository.



Check the message to confirm: “Successfully pushed branch master to origin”:



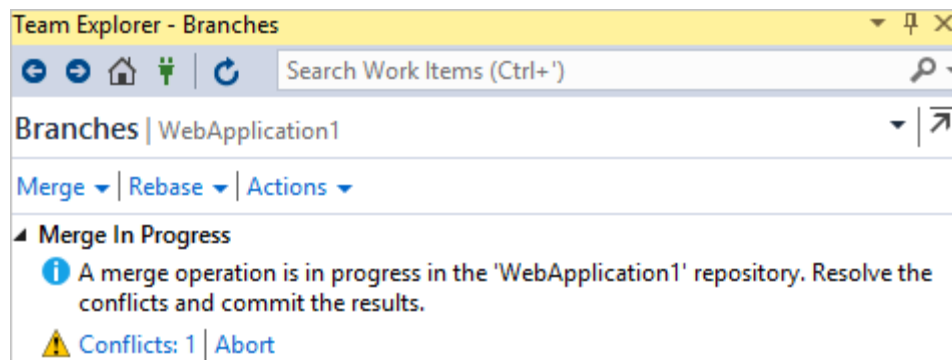
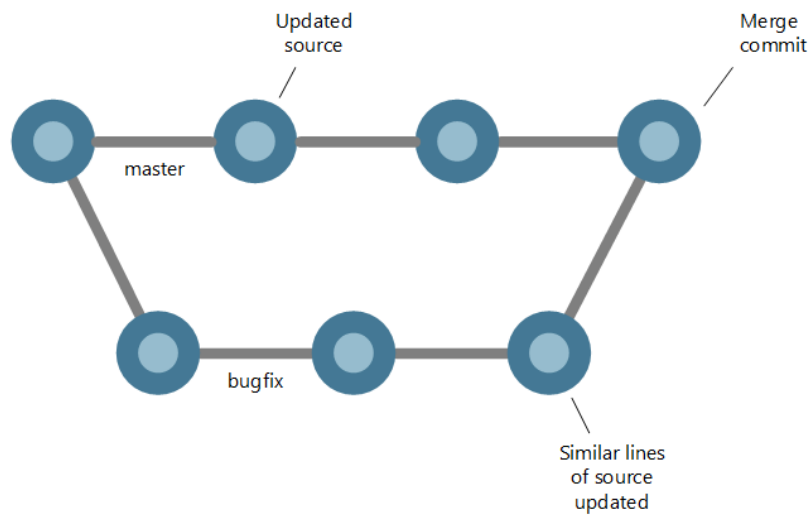
Note how `Program.cs` in the `Solution Explorer` no longer has a red check mark next to it (indicating that it contains uncommitted changes).



Try editing `Program.cs` and note how the check mark reappears.

Part D: Merge Conflicts

<https://docs.microsoft.com/en-us/vsts/git/tutorial/merging>



https://docs.microsoft.com/en-us/vsts/git/tutorial/_img/vsmerge.gif