

Please view Word version of the document here Using ADO Repo and VS Code

NBT	
MES –	
PSI De-	
velop-	
ment:	
Azure	
DevOps	
Git	
Reposi-	
tory	
Basics »	
Recorded	
on	07-Feb-2023
» De-	This document is intended to support existing documentation in
scrip-	Azure DevOps and serve as supplemental training resource for new
tion	users who will be developing PSI Metals software on Nucor
	Business Technology hosted servers and repositories. Pre-requisite:
	users already install and set up Git and VS Code. Both have
	additional information about initial setup on their respective
	websites. https://git-scm.com/doc
	https://code.visualstudio.com/docs Git-Quick-Start.md guide for
	NBT development may be found in ADO Repo: https://dev.azure.com/Nucor-NBT/NextGen/_git/code_guidelines
	(Note Preview view makes for easy reading)

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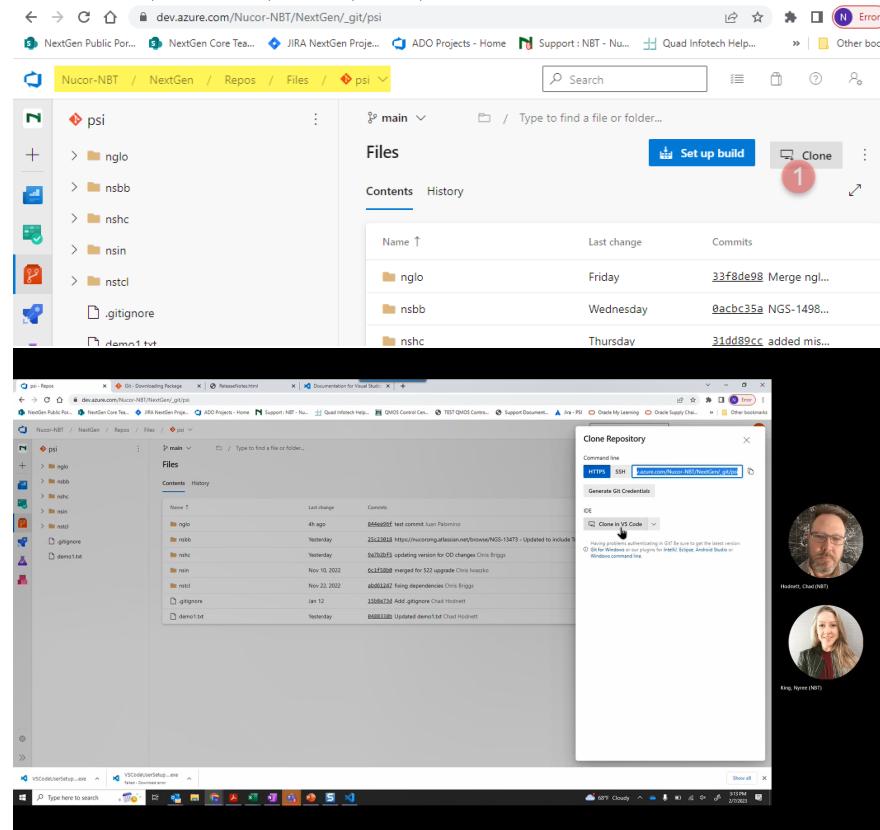
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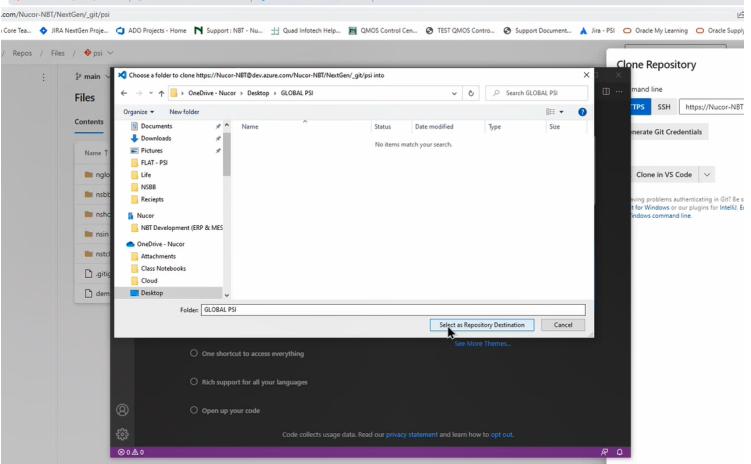
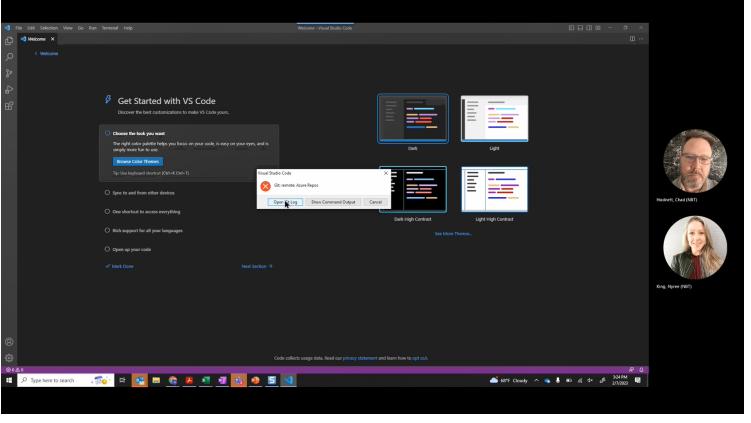
Part I Clone Central Repository to Local Copy:

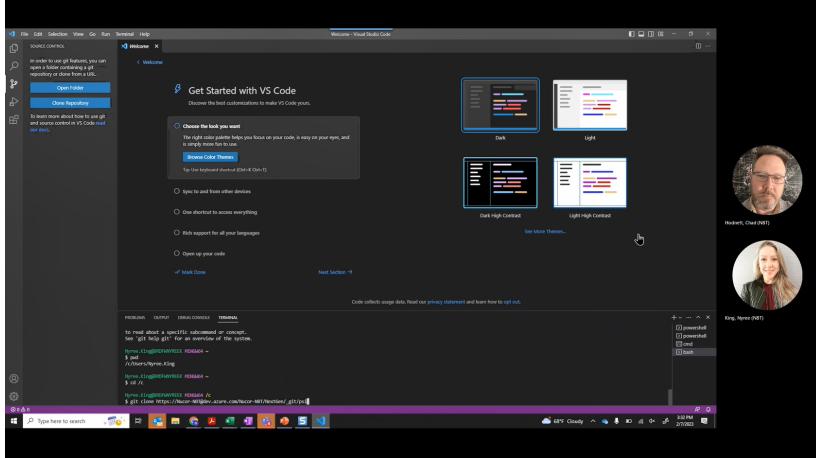
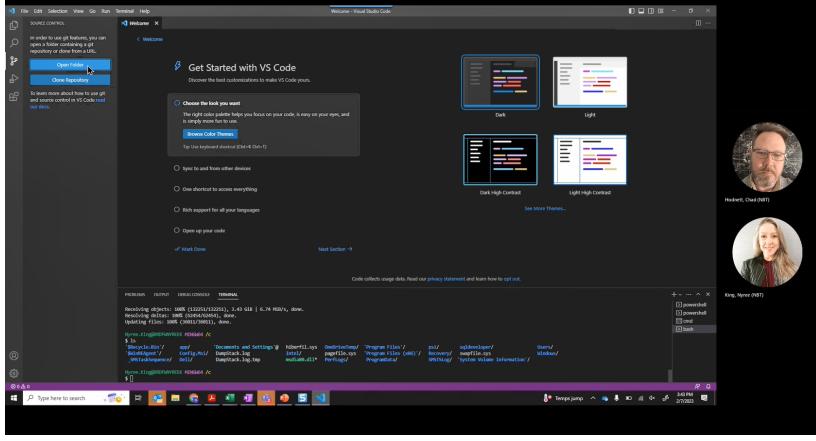
No. Step Description

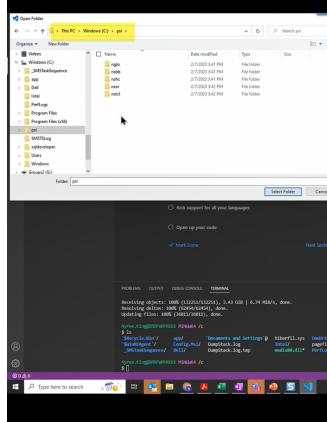
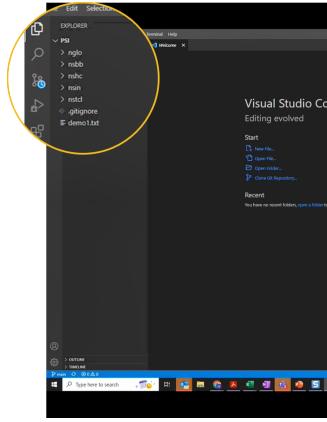
I.1 Activity: Clone Main from ADO server repo to local In ADO: Nucor-NBT/NextGen/Repos/Files/psi

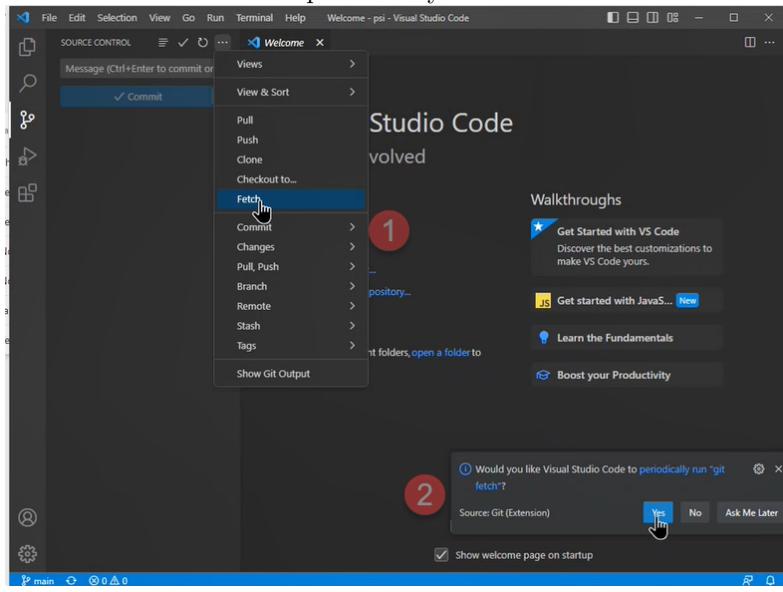


*Note for VM - Check with file explorer to be sure you are loading where expected under your user. Check security for the Git folder for Full Execute to avoid permissions issues. Very lengthy file paths are not compatible. Shorten path or run: git config --system core.longpaths true

No.	Step Description
I.2	<p>Activity: Clone Main from ADO server repo to local Determine local destination *see note about long file paths</p>  

No.	Step Description
I.3	<p>Activity: Clone Main from ADO server repo to local</p> <p>Note: Buttons or commands may be used. For this example Git Bash was used – PowerShell & Command Prompt should also work. The process may go faster or slower depending on size of repo and internet connection health the process. Duration at the time of this recording was about 10 min.</p>  

No.	Step Description
I.4	<p>Activity: Clone Main from ADO server repo to local</p> <p>Open to make navigation from the explorer possible When opening it is important to open the root folder not the individual division specific ones</p>  

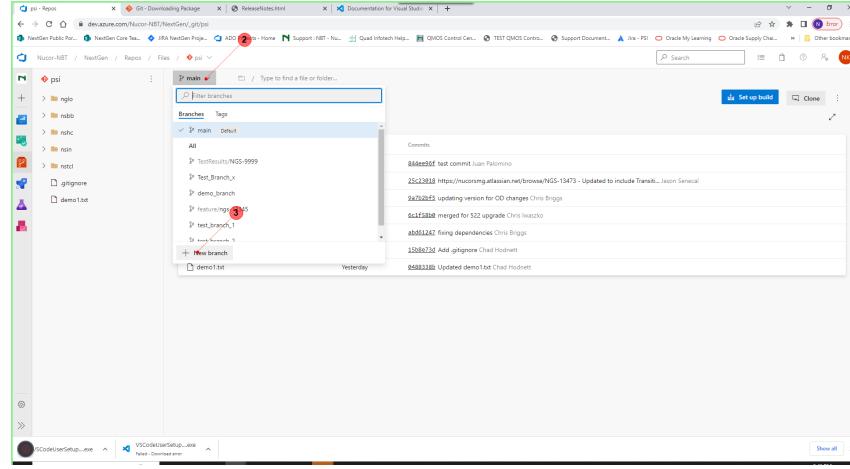
No.	Step Description
I.5	<p>Activity: Clone Main from ADO server repo to local *Note the importance to sync periodically to have most recent changes from the central repository Good idea to set up so there is new data fetched periodically</p> 

Part II: Basic Branching:

No. Step Description

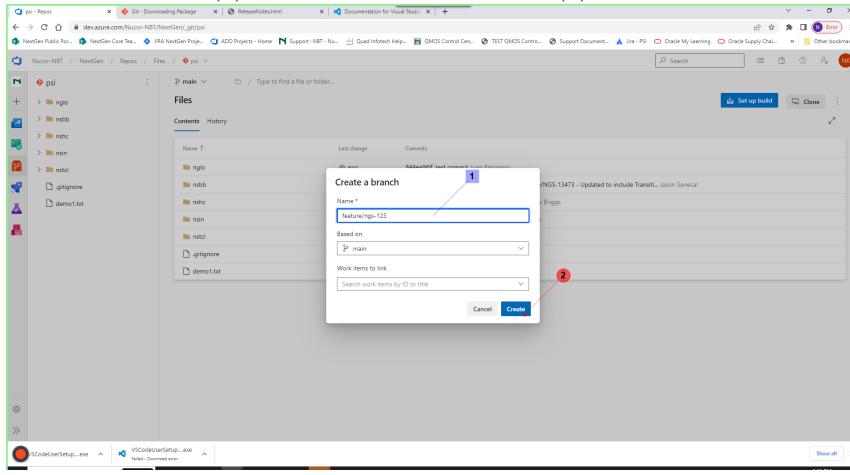
II.1 Activity: Create a feature branch from ADO Go to:

“https://dev.azure.com/Nucor-NBT/NextGen/_git/psi” Click on “main” button (2) Click on “New branch” (3)



No. Step Description

Activity: Create a feature branch from ADO Add name for branch describing feature vs bug: e.g. “feature/ (short descriptive name) “in the”Name ” field (1) Click on “Create” button (2)

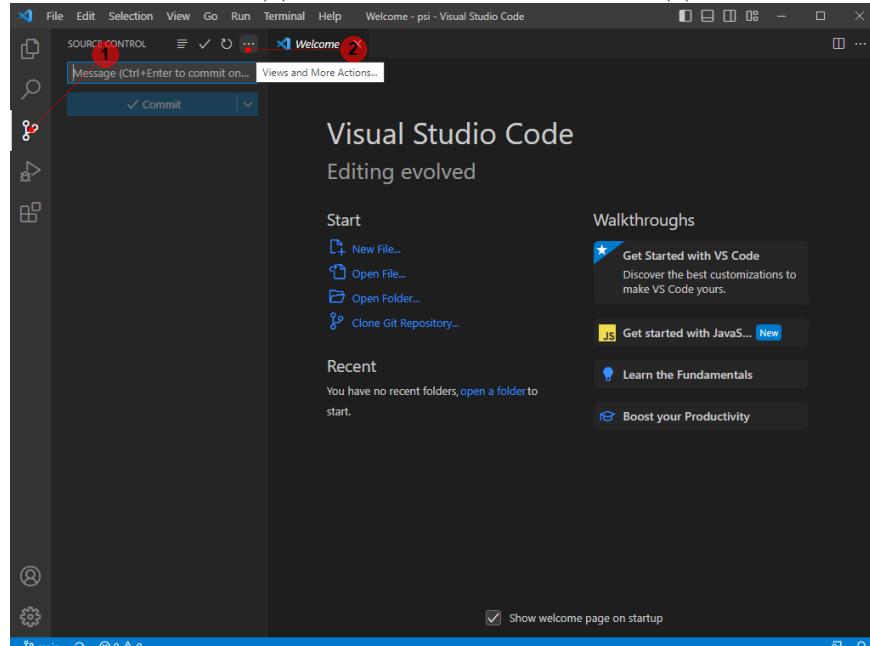


A screenshot of the Visual Studio Code interface. The left sidebar shows a file tree with a folder named 'feature/regis-123' containing files like 'nrgo', 'nrb', 'nhc', 'nem', 'nrel', 'githome', and 'demo1.txt'. The main editor area displays the text 'Editing evolved'. The right sidebar has sections for 'Start' (New File, Open File, Open Folder, Clone Git Repository), 'Recent' (empty), and 'Walkthroughs' (Get started with VS Code, Get started with Java...). The bottom status bar shows the path 'VSCodeUserSetup.exe' and the file 'VSCodeUserSetup.exe' is also visible in the taskbar.

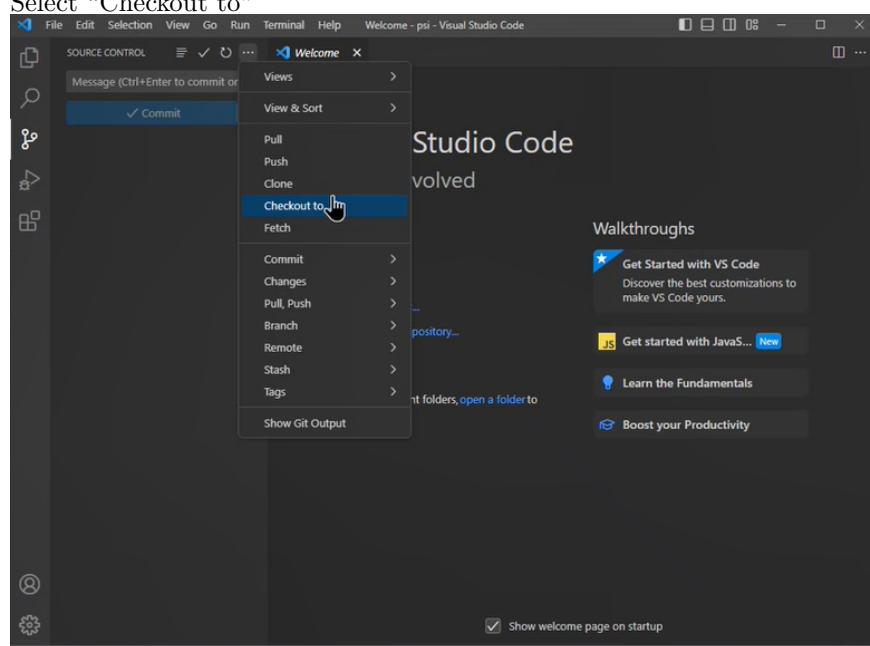
No. Step Description

No. Step Description

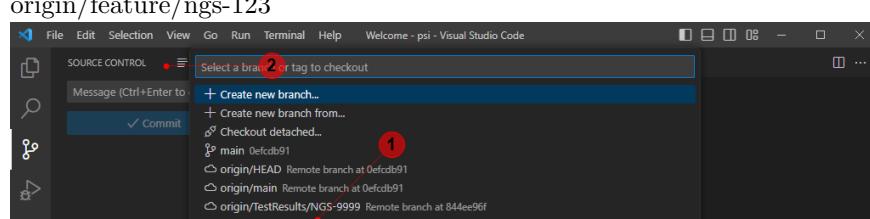
Activity: Use a feature branch in VSCode Click on “Overview – Source Control” link (1) Click on Source Control Menu (2)



Select “Checkout to”

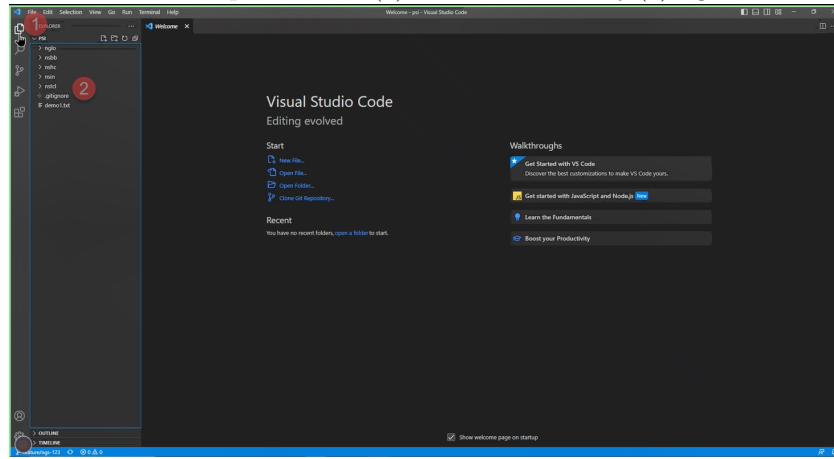


Select your new feature branch (created from ADO) – e.g.,
origin/feature/ngs-123



No.	Step Description
1	Activity Click on “Overview – File Explorer” Link (1) Select file to modify (2) e.g., demo1.txt

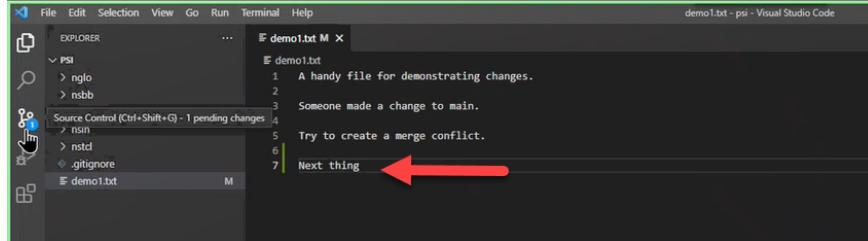
Activity Click on
“Overview – File Explorer” Link (1) Select file to modify (2) e.g., demo1.txt



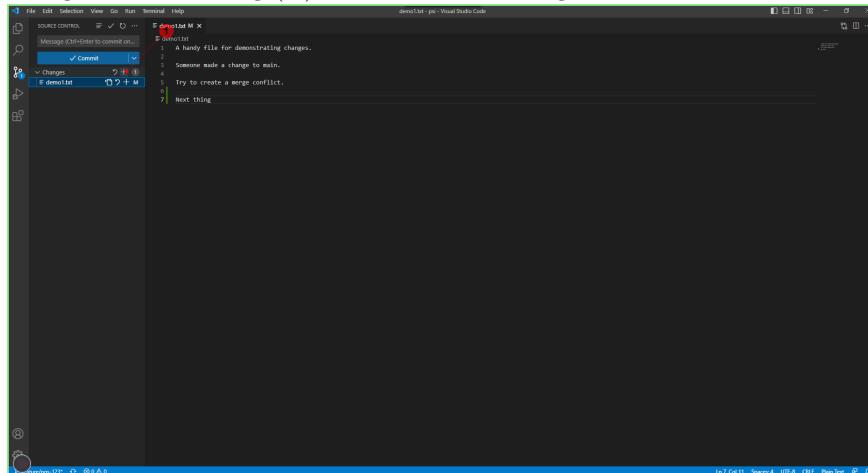
No. Step Description

No. Step Description

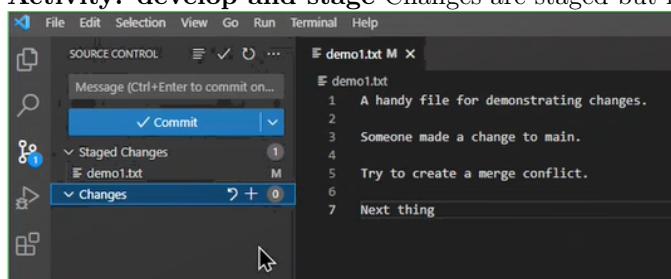
II.3 Activity: develop and stage Note upon save (ctl+s or icon) the change is picked up



May stage individually by selection (+ icon) or collectively by hovering at changes then selecting (+). Note count of changes saved

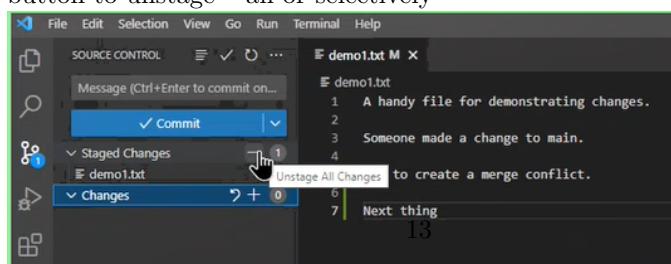


Activity: develop and stage Changes are staged but not committed.



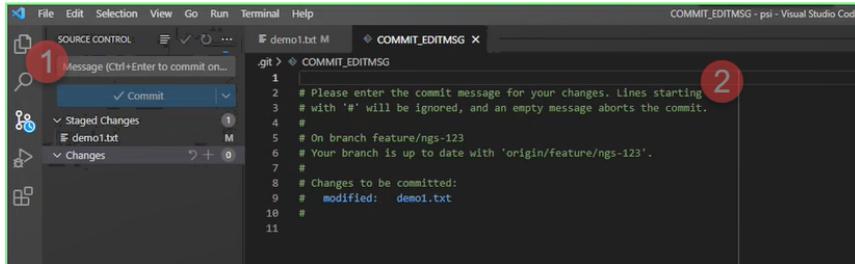
May use (-)

button to unstage – all or selectively

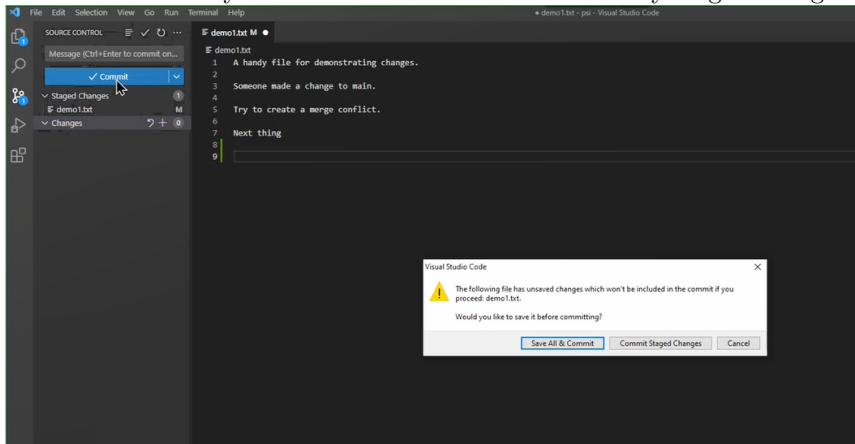


No. Step Description

II.4 Activity Commit Change to Local Must add a commit message. May be at message box (1) or in editing pane (2)

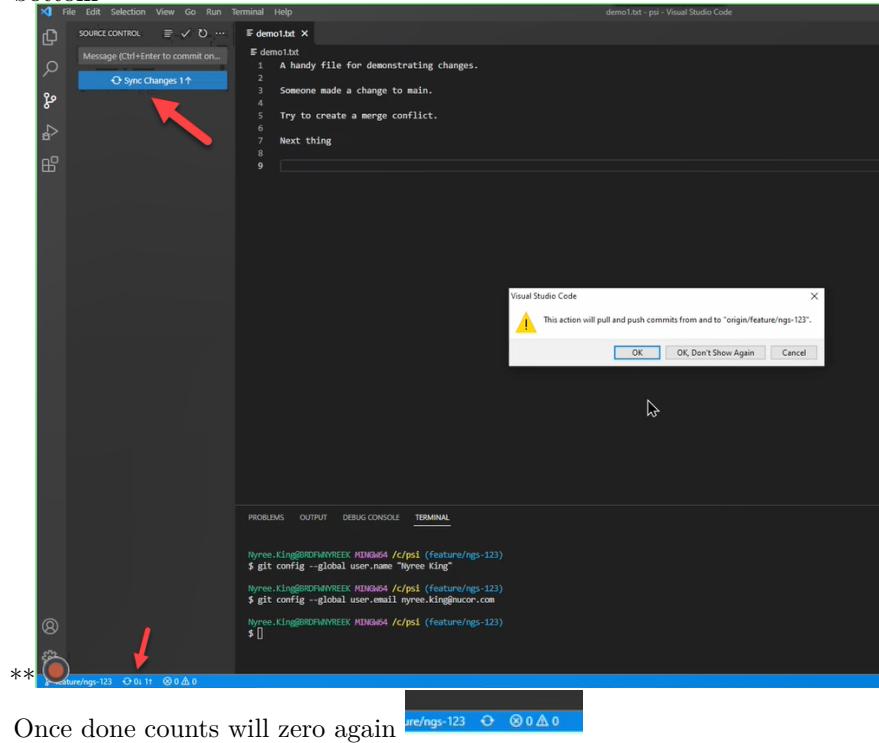


Click Commit. May save all and commit or commit only staged changes



No. Step Description

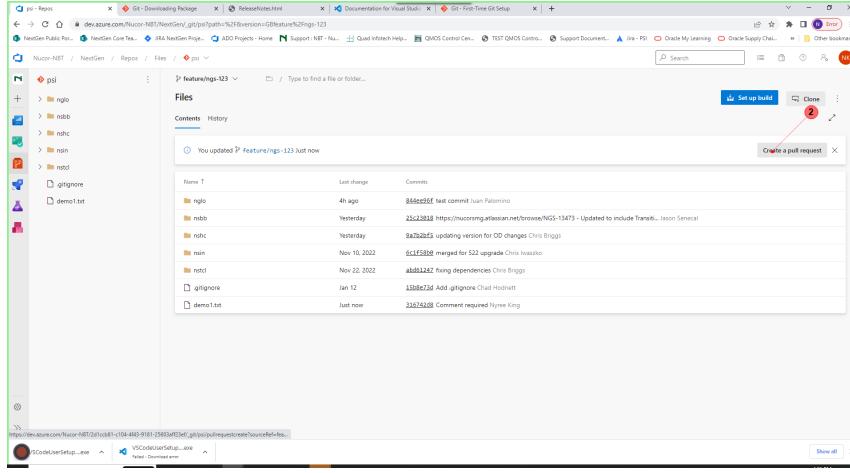
II.5 Activity: Sync Changes Click Sync Changes & Ok Note counts also at bottom**



No. Step Description

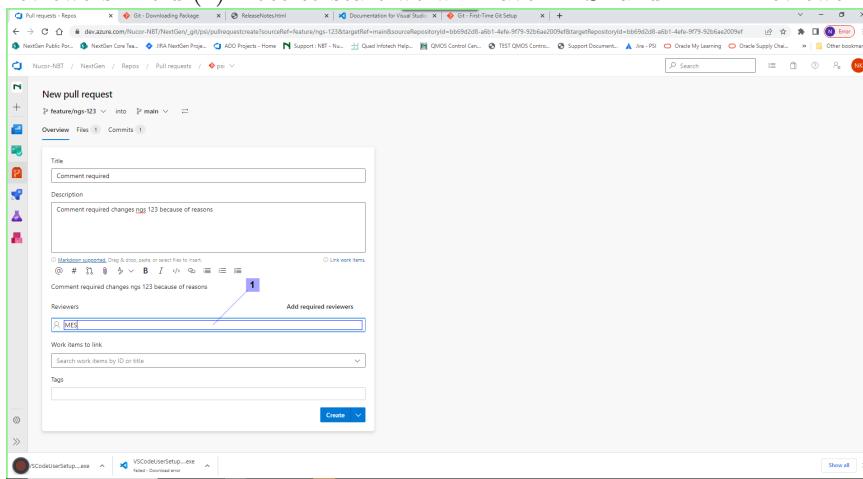
II.6 Activity: Complete Pull Request Go to:

“https://dev.azure.com/Nucor-NBT/NextGen/_git/psi” (1) Click on “Create a pull request” link (2) Note “Pull” is pulling *into* common repo.



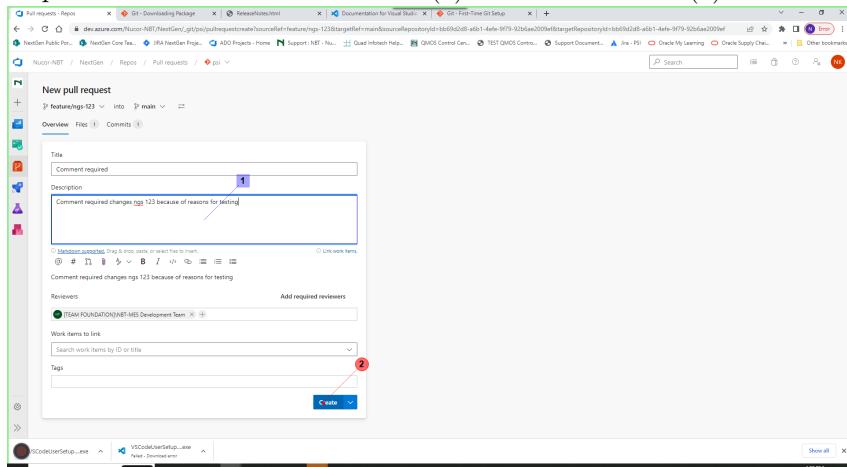
No. Step Description

Activity: Complete Pull Request Enter Title for request briefly describing change in the text area (While still using Jira including which NGS-xxxx it is for is helpful to associate with the functional request)
Search or enter a reviewer in the “Search users and groups to add as reviewers” field (1) Note to start we will have 1 PSI and 1 NBT reviewer



No. Step Description

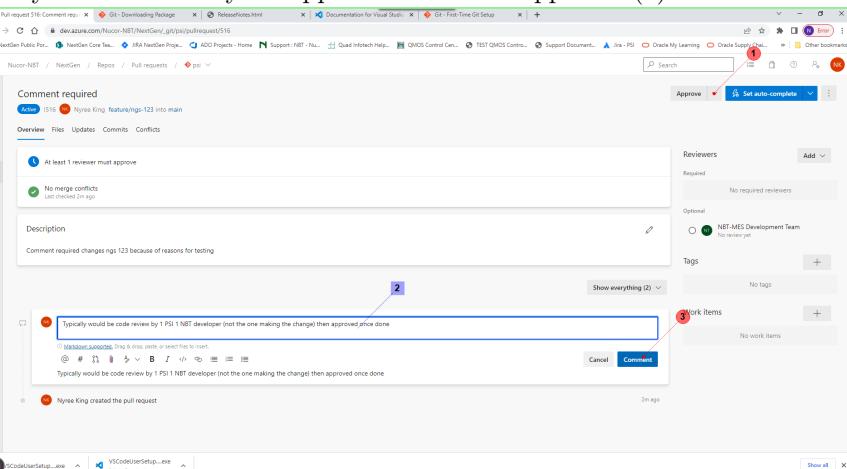
Activity: Complete Pull Request Enter short comment that may be helpful for reviewer in the text area (1) Click on “Create” (2)



No. Step Description

II.7 Activity: Reviewing ADO Pull Request (Code Review Record)

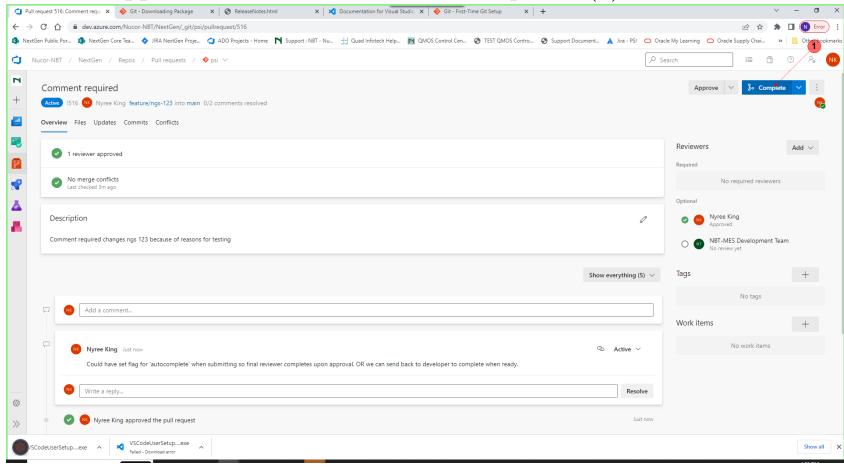
Comments may be left to indicate improvements needed to align with coding guidelines in the text area (2) Click on “Comment” button (3) to share with other ADO users Note Developer could have set flag for ‘autocomplete’ when submitting pull request so final reviewer completes upon approval. OR we can send back to developer to complete when they’re ready Once it is ready for approval Click on “Approve” (1)



No. Step Description

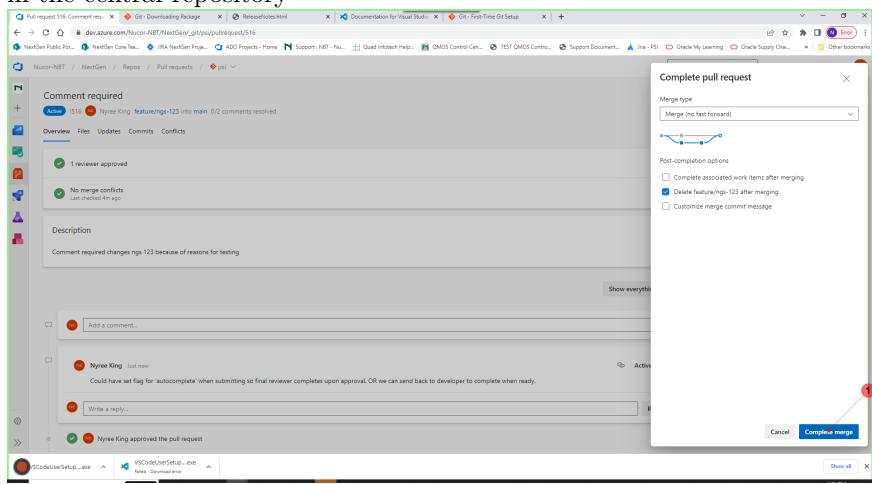
Activity: Reviewing ADO Pull Request (Code Review Record)

After all approvals are done Click on “Complete” (1)



No. Step Description

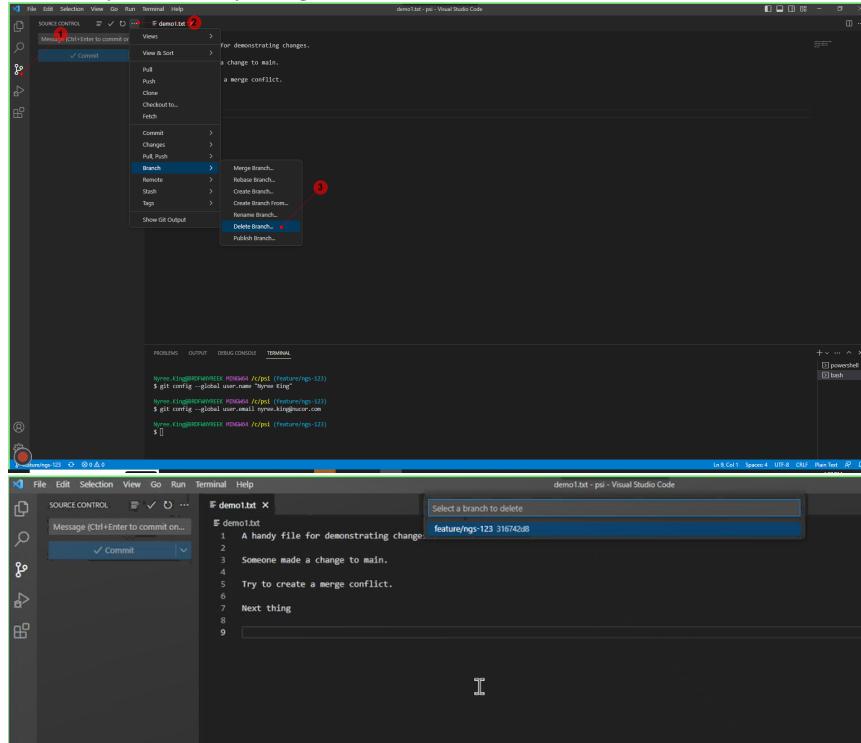
II.8 Activity: Completing Pull Request – Merging to repo Merge type defaults to “Merge (no fast forward) The top box should be *unchecked* for both Jira and ADO tickets. Delete feature is checked (to remove branch after merge) Customize merge commit message optional Once all is ready to merge to main. Click “Complete merge” (1) This merges to the branch in the central repository



No. Step Description

II.9 Activity: Cleaning up VSCode In VS Code Go to Source Control (1)

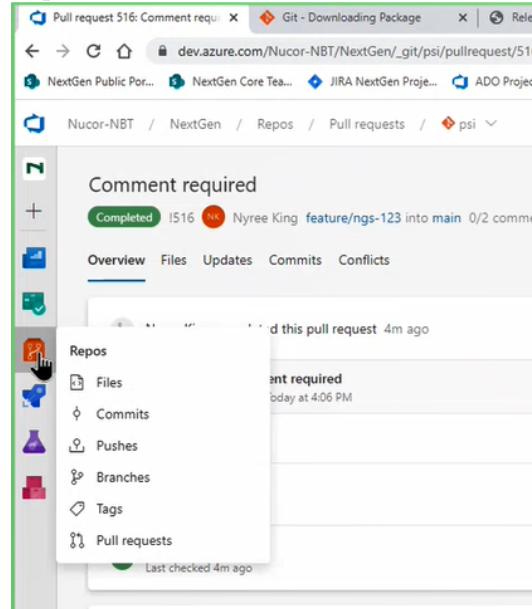
Select menu (2) > “Branch” > “Delete Branch” (3) Select feature/branch (e.g. NGS-123) to clean up *Note depending how quickly the change is done may need to sync again



Part III: Resolving a Merge Conflict:

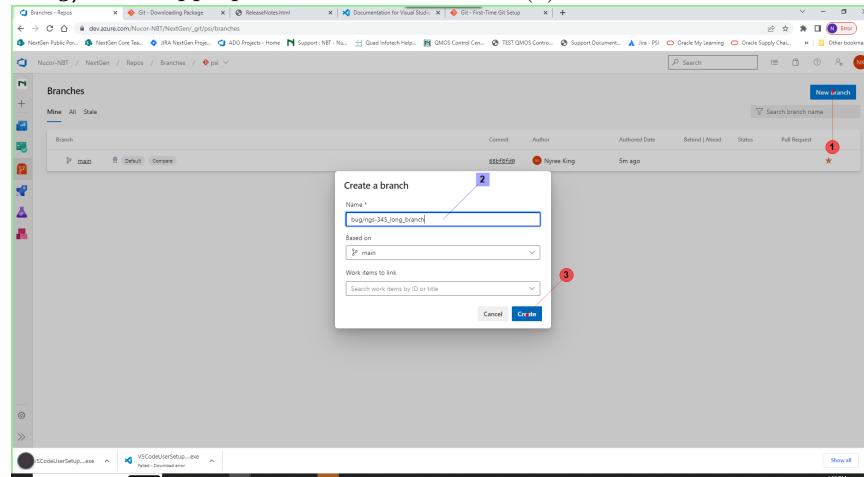
No. Step Description

III.1 Activity: Create a feature branch from ADO In ADO: Click on Repos Icon Click on “Branches” link

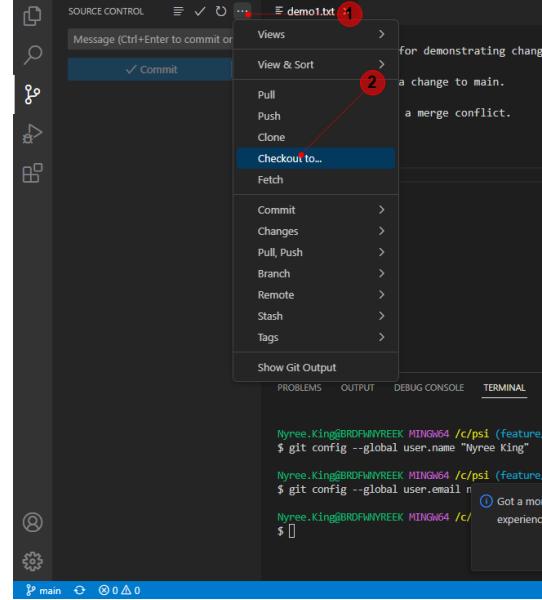


Click on “New branch” (1)

Enter Short description in the “Name” field (2) prefixing “feature/_ “ or “bug/_” as appropriate Click on “Create” (3)

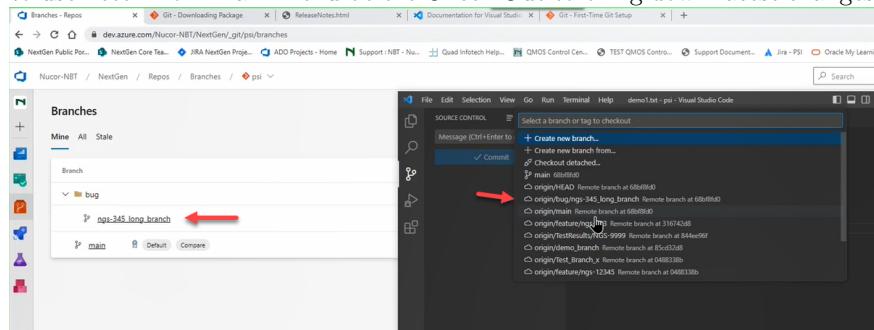


No.	Step Description
III.2	Activity: Use a bug branch in VSCode From Source Control: Menu (1) Click on “Checkout to” (2)

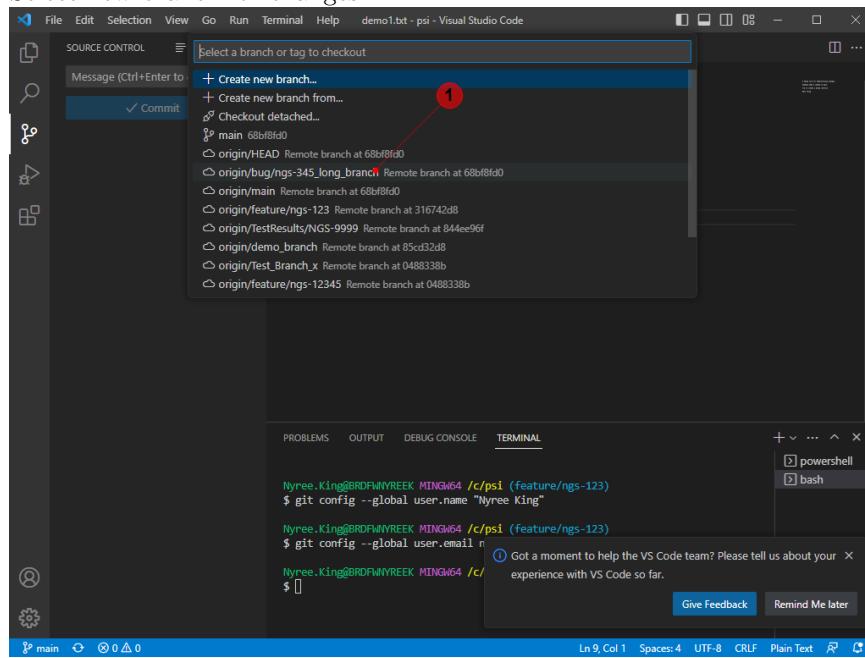


No. Step Description

III.3 Activity In VS Code Check out your branch you're going to work on (remember it should be from origin/ – the latest for that code) *note If you do not see the new branch in the list you may need to use Fetch from main Menu before Check Out to bring down latest changes



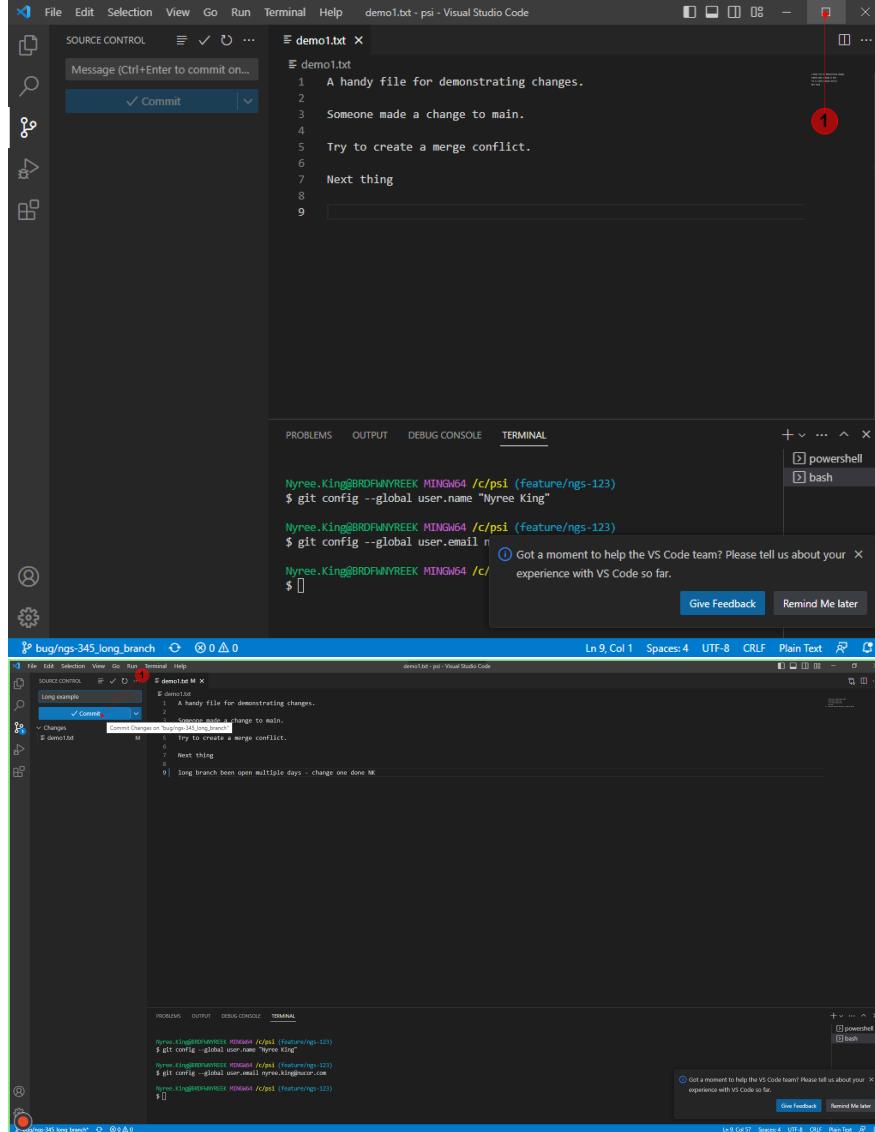
Select new branch for changes



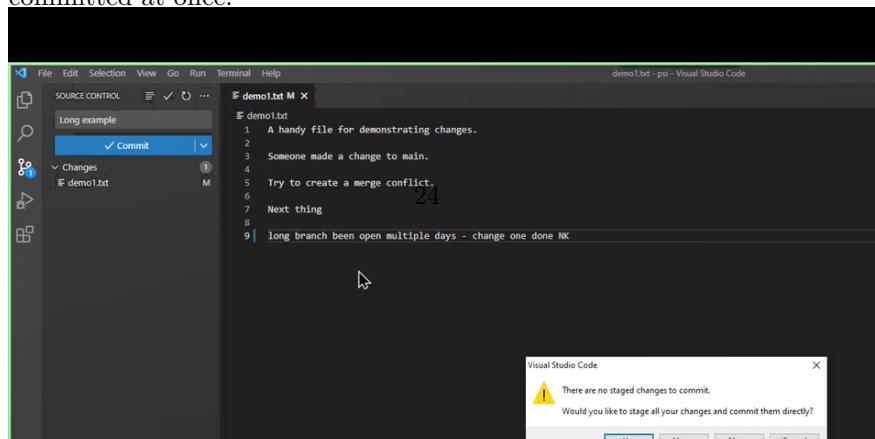
NoStep Description

NoStep Description

III. Activity Choose a file for changes – save – stage commit



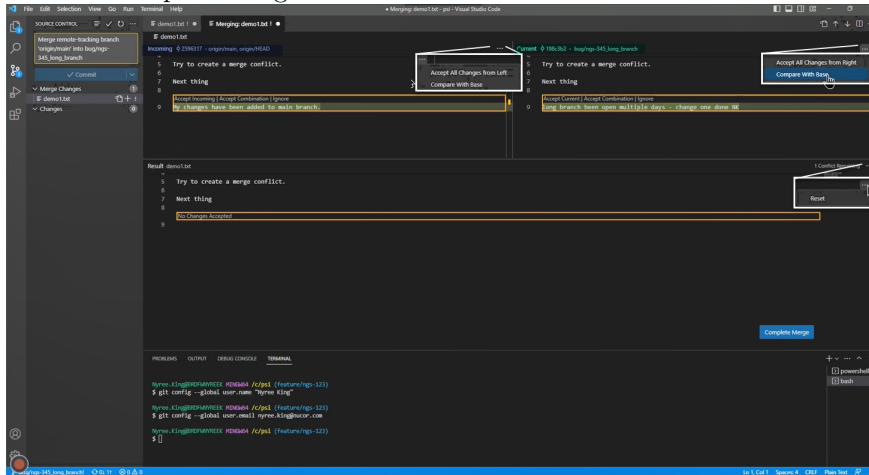
If changes are not staged (quick single change) they may be staged and committed at once.



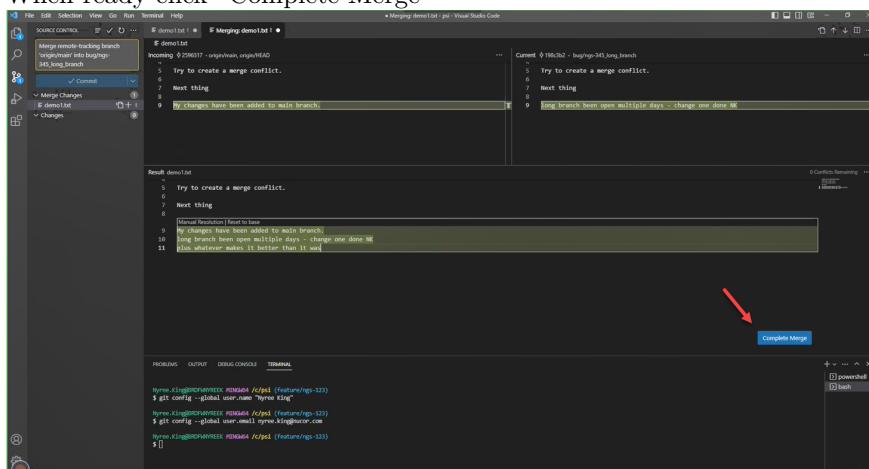
No. Step Description

No. Step Description

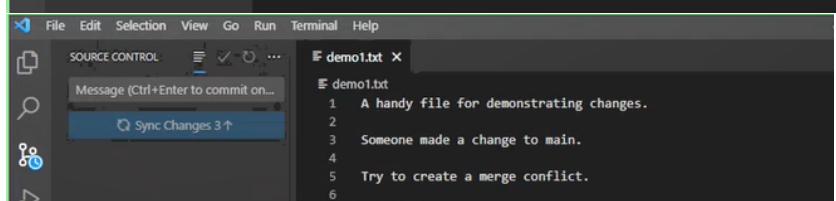
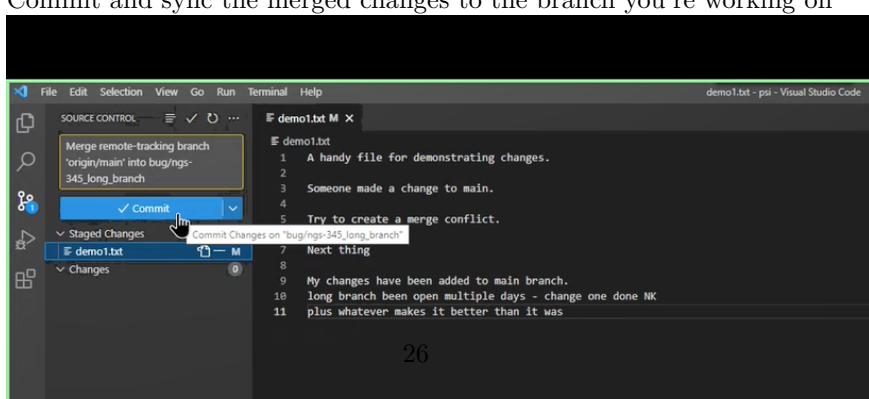
III.5Activity VS Code Merge Editing: may use the ellipsis from each pane to determine steps to merge – select some or all and edit in the results field



When ready click “Complete Merge”



Commit and sync the merged changes to the branch you're working on.

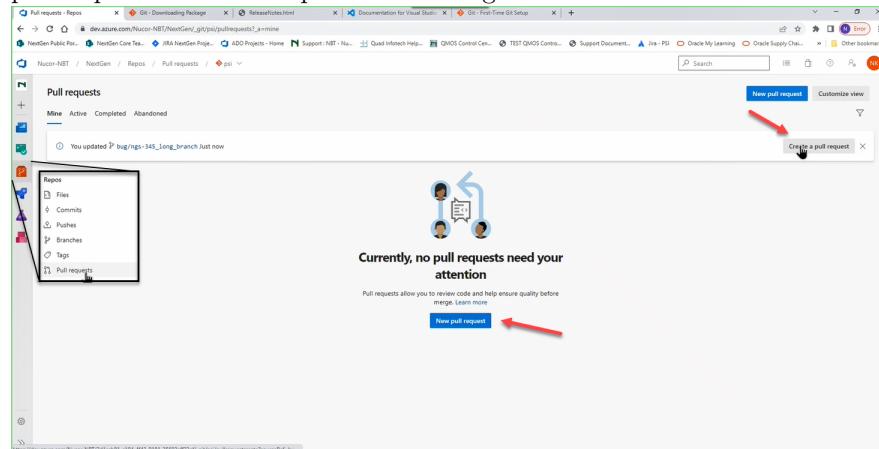


No.Step Description

No.Step Description

III.6Activity: Complete Pull Request Go to:

"https://dev.azure.com/Nucor-NBT/NextGen/_git/psi" Click on "Create a pull request" link - multiple methods to get there



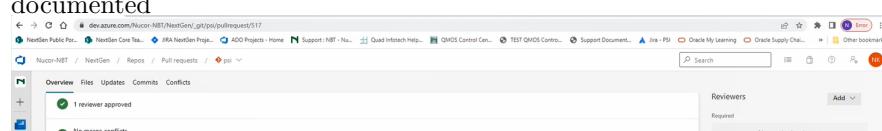
Describe the pull request and add reviewers. Note "Pull" is pulling *into* common repo. Reviewers for now will be jointly between PSI & Nucor

A screenshot of the 'New pull request' dialog box. It shows the source branch as 'bug/ngs-345_long_branch' and the target branch as 'main'. The 'Title' field contains 'for long branch merge'. The 'Description' field contains 'describe the changes complete with merges'. Under 'Reviewers', '[TEAM FOUNDATION]\NBT-MES Development Team' is selected. A large red arrow points to the 'Create' button at the bottom right of the dialog.

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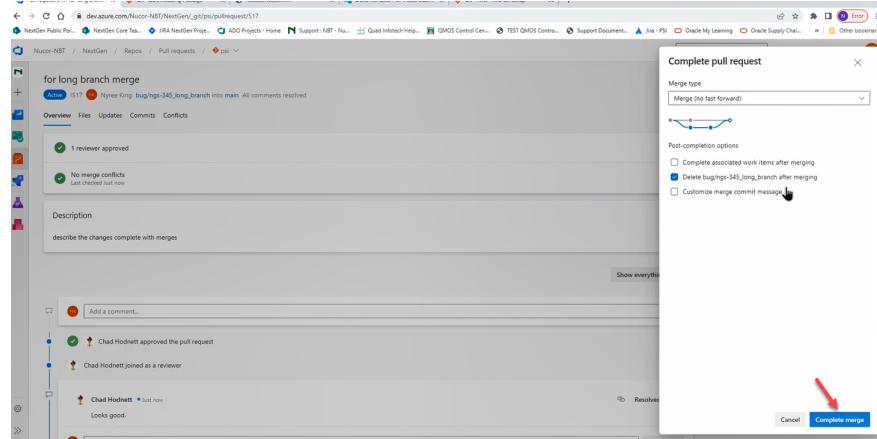
Pull

Requests will be completed as part of code review. Comments and history will be shown as they come in and any corrections or changes can be documented



No. Step Description

III.7 Activity: Completing Pull Request – Merging to repo Merge type defaults to “Merge (no fast forward) For Jira related request, top box should be unchecked – for ADO checked Delete feature is checked (to remove branch after merge) Customize merge commit message optional Once all is ready to merge to main. Click “Complete merge” (1) This merges to the branch in the central repository



VS Code Cleanup should then be done (at least periodically to keep tidy)

