

GIT AND GITHUB

Spring 2018

WITH MS VISUAL STUDIO

- Git is fully integrated into Visual Studio
 - No need to download and install Git separately.
 - No need to do any Git setup
- Check your Visual Studio and install the extension if you do not already have it
 - Program settings-> find Visual Studio-> Modify/change
- Once installed, Git/GitHub options appear in Team Explorer window
- Go to Tools -> Options -> Source Control

HOW TO USE GIT FOR LOCAL PROJECT

- When creating new project in Visual Studio, specify the project folder to local Git repository directory.
 - Local Git repository directory can be found in Team Explorer window of Visual Studio
 - Make sure the source control is set to Git (under Tools/Options)
- Adding source control to existing project
 - Copy the project folder to local Git repository directory
 - Open its solution file.
 - In solution explorer window, right click on the solution, choose "add solution to source control"

MAKE CHANGES AND COMMIT - LOCAL

- When a file under source control is modified, it is automatically checked out.
- In order to keep track of the changes in local repository, commit is needed.
- Right-click on the file that has been modified, choose the option "commit"
- Or, in the team explorer, click Home button, then choose "Changes" which lists all the changes and gives commit option
- Commit requires a message

HOW TO PUBLISH TO GITHUB

- When working with a team, publishing to remote repository (hosting site like GitHub) is needed
 - From Team explorer, click on Home button and choose "Sync"
 - Choose "Publish to GitHub"
 - For the first time, it requires the username and password to GitHub, and comment
 - Publish!
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- Sync is not a Git command
 - Performs a git pull and a git push

HOW TO SHARE WITH THE GROUP

- Repository owner for the group project
 - Go to GitHub Settings under the Repo
 - Collaborators – add other member using email or username
 - All collaborators can push/pull
 - If not a collaborator, send a pull request
- Clone – create a copy on local repo
- Fork – create a copy on remote repo

CLONE – CREATE A LOCAL COPY

- Open the GitHub repository of interest, choose Clone tab
- Choose the option "Open in Visual Studio"
- Or, from Visual studio Team Explorer, choose Manage Connections
- Choose "Connect GitHub" and then "Clone"
- Local repository is created

MAKING A COMMIT AND PUSHING

- Once you made changes to your project, in the Team Explorer window, select Commit for local git.
- For multiple files, Commit all.
- For specific files, select Stage and Commit staged.
- To publish the changes made, **Sync**
- Make sure to be on the correct branch
- In the Outgoing Commits section, Push

RETRIEVING CHANGES

- From the Team Explorer window, **Sync**
 - Make sure to be on the correct branch
- First, in the Incoming Commits section, **Fetch or Pull**
 - This lets you retrieve the other commits made on the remote repo, without merging them
 - To merge the changes into your local files, **Pull**
- Then, in the Outgoing Commits section, **Push**
