**Git Branches**

**Purpose:**

The advantage that git gives is that it allows for multiple people to simultaneously work on a project while also maintaining a full history of the changes on the project. An individual can create a branch off the main project and make modifications without disturbing the main code. After these changes have been vetted a merge can then bring the updated code onto the main branch (merge will be covered in another doc). These changes are automatically tracked, and the code can be reverted at any time. This document will show how to create a new branch and switch between them.

**Setting up a new branch:**

1. Open a PowerShell window inside the folder with your repository (folder with the .git subfolder).
   1. This can be done by just typing PowerShell in file explorer.

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* 1. Or open PowerShell from the windows search bar and using the following command.

Set-Location -Path “your\_path”



1. Once in the folder path if you run the following command, you will see what branches presently exist and which you are currently on.

git branch

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So right now, the only branch that exists is the master and the star next to it tells us we are presently on the master.

1. If I want to create a new branch I just need to run the following command.

git branch <branch\_name>

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So, in this example a new branch was made under my name and when I get the listing of all the branches a new entry has been added. But we are still on the master branch.

1. In order for the changes we make to stay confined to our branch we need to switch to the new branch that is done with the following command.

git switch <branch\_name>

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All changes we now make will be made on the new branch as denoted by the star.

1. For example, if I want to add this word document to the repository, I can save the file into a folder in the repository. If a status is ran a new file is listed.

git status

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These changes can be moved to staging using the add command.

git add -A

git status

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Then commit to officially add them to the branch history. **NOTE** in status it says on branch Seamus, the thing you are most likely to mess up with git is committing to the wrong branch be sure to double check what branch you are on before commits.

git commit -m “commit message”

git status

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1. Now the branches have some differences between them. If I want to switch back to the master, I just run switch command and all the files will be changed in my directory automatically.

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**Prior to running switch**

git switch master



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**After running switch**

The word document was deleted because that file isn’t present in the master branch. If I switch back.

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File comes back.

**Note:** With Git it is very difficult to delete files accidentally that have already been ***committed***. The keyword here is committed when you are working with git if you are on your own branch I would suggest committing every so often think of it as saving all your work. If you run a switch command and you are in the middle of updating code and you haven’t committed your updates there is a chance that you will lose your work. So best practice is before running a switch command run a git status on the branch you are currently on verify that everything you want saved is committed then switch.