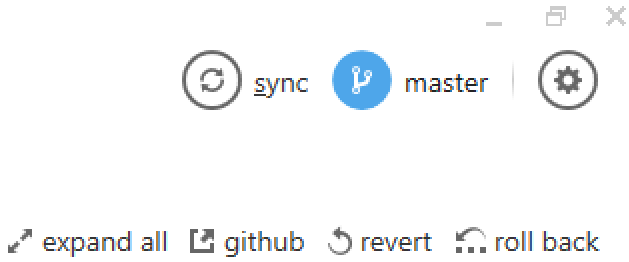
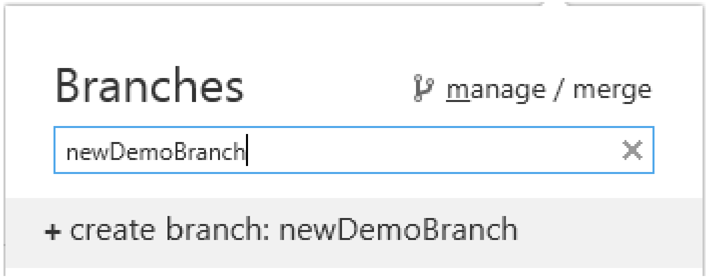
Github: Branch, Merge, Revert and Rollback

First, let's create a new branch. A new branch will give us a complete copy of the master branch so that we can make changes without altering the master branch. Select the highlighted branch button.



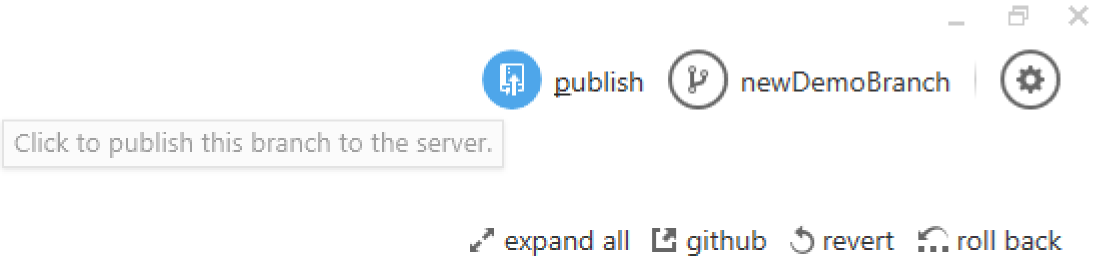
Enter a name for your new branch.



newDemoBranch

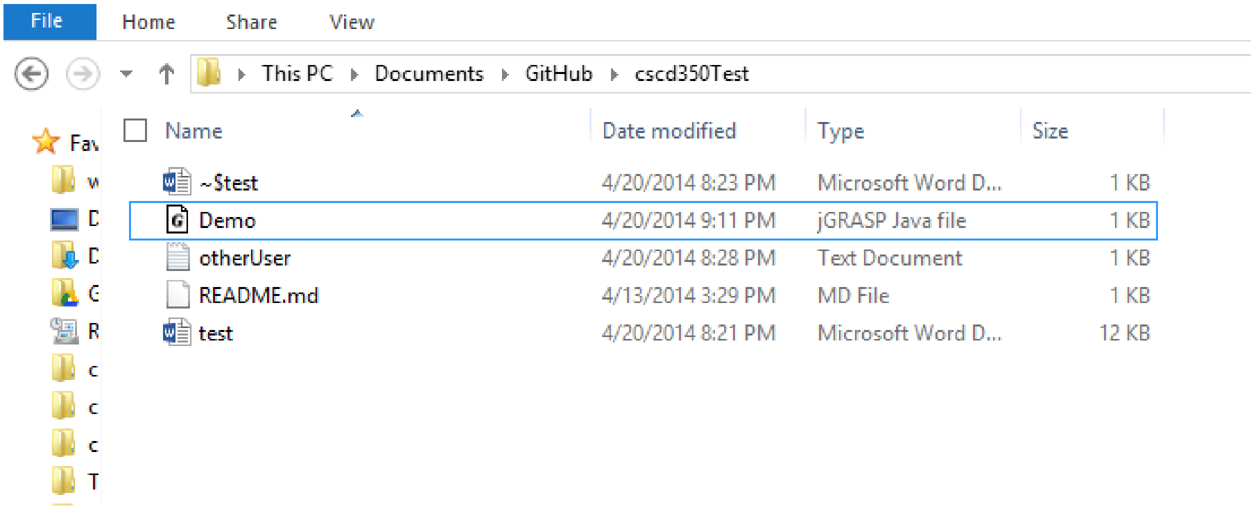
+ create branch: newDemoBranch

Next, click the publish button.



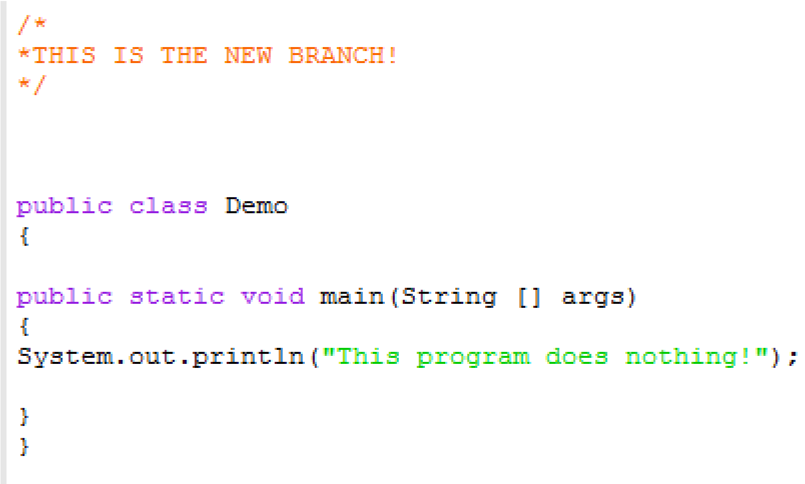
Click to publish this branch to the server.

Now you have created a new branch with a complete copy of the current version. You will notice in your folder that there does not appear to be a new branch…



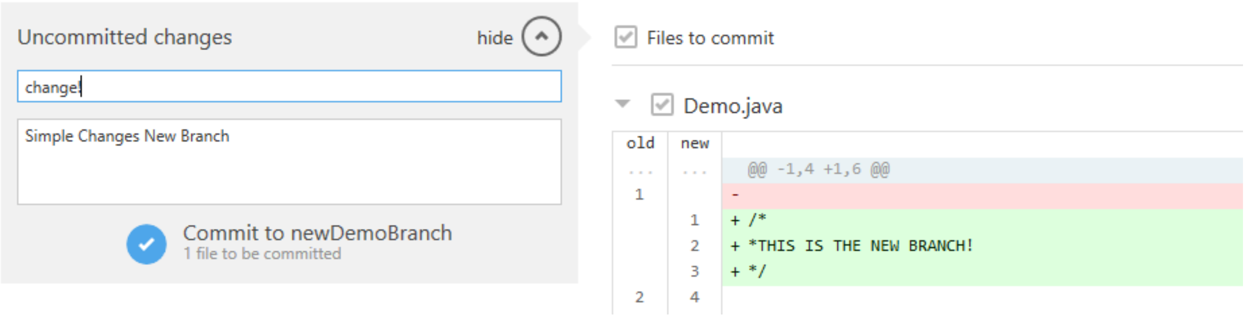
Name	Date modified	Type	Size
~$test	4/20/2014 8:23 PM	Microsoft Word D...	1 KB
Demo	4/20/2014 9:11 PM	jGRASP Java file	1 KB
otherUser	4/20/2014 8:28 PM	Text Document	1 KB
README.md	4/13/2014 3:29 PM	MD File	1 KB
test	4/20/2014 8:21 PM	Microsoft Word D...	12 KB

So this is how it works… When you are on a certain branch (indicated by the highlighted button), that is the branch that is currently represented in your Github folder. Any changes made to something in the folder at that time will be made to the current branch only. Let's go ahead and make a couple of changes to a simple java program. Here is the changes in the new branch.



```
/*
*THIS IS THE NEW BRANCH!
*/



public class Demo
{

public static void main(String [] args)
{
System.out.println("This program does nothing!");

}
}
```

Now go ahead and commit these changes and sync.

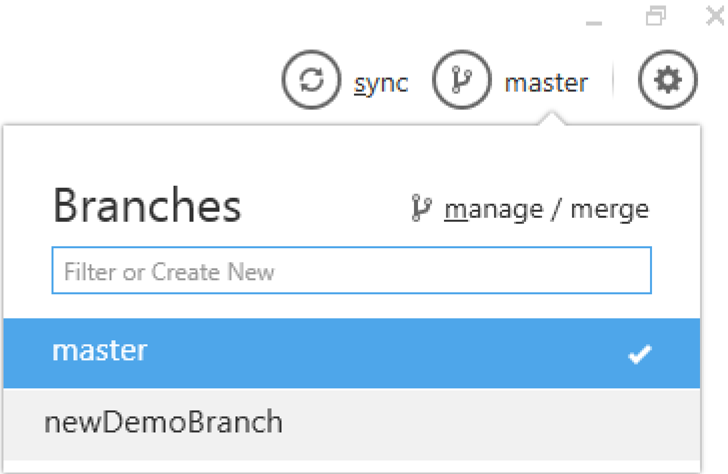


change

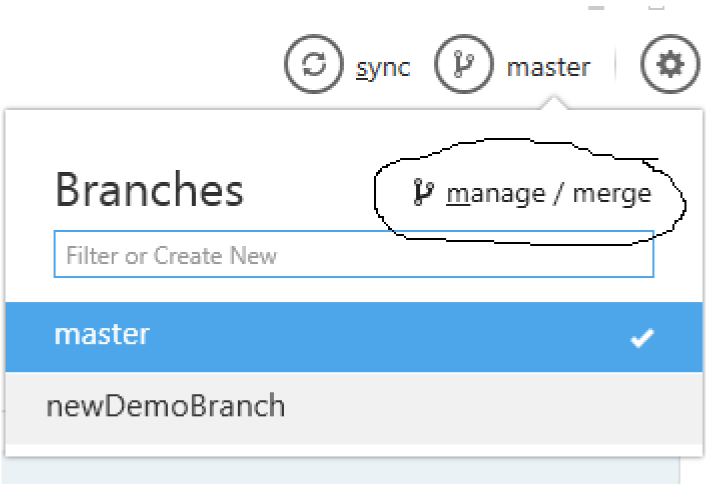
Simple Changes New Branch

```
old  new
...  ...  @@ -1,4 +1,6 @@
 1        -
      1   + /*
      2   + *THIS IS THE NEW BRANCH!
      3   + */
 2    4
```

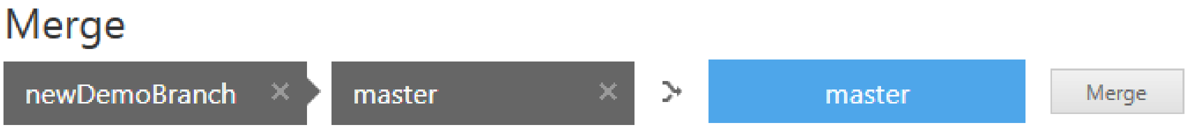
Now switch back to the master branch. Select the master branch from this button.



Now, let’s merge these two java files! Select the branch button and click the circled manage/merge button.

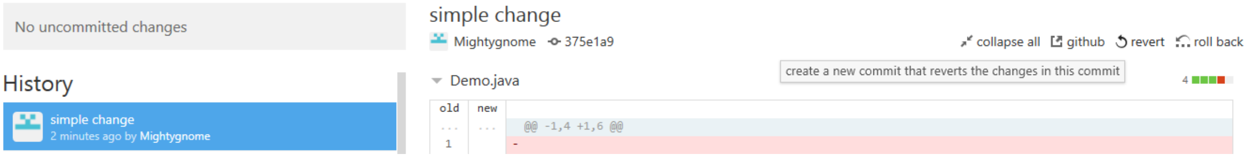


Now go ahead and drag and drop the new branch and master branch to the bottom of the screen, then click the merge button and sync.



Now if you open the java file you should see that they are now merged!

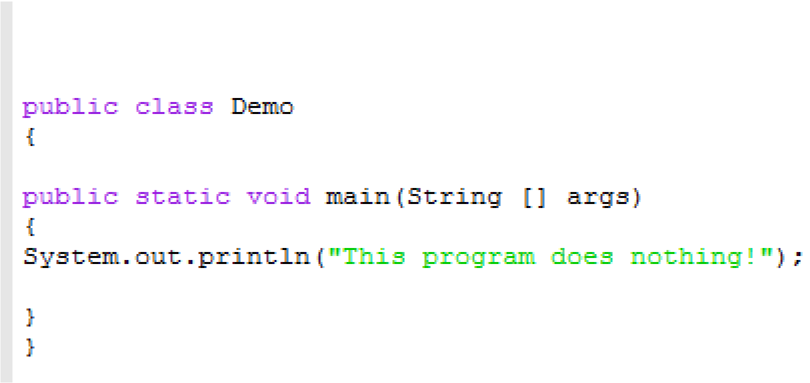
Now let's revert that change. Highlight the change on the left hand side and then select the revert option. Then sync.



create a new commit that reverts the changes in this commit

```
old  new
...  ...   @@ -1,4 +1,6 @@
1          -
```

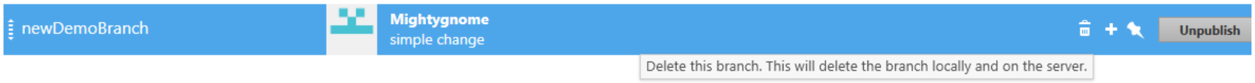
Now if you open the java file, it should be back to how it was before the last commit.



```
public class Demo
{

public static void main(String [] args)
{
System.out.println("This program does nothing!");

}
}
```

Rollback works the same as revert although it leaves the changes in your working copy. This allows you to fix small mistakes and then re-commit.

Now that we are done with the branch we can delete it. Go back into manage/ merge and simply click the garbage can and it is now gone.



Delete this branch. This will delete the branch locally and on the server.