

Suggested BitBucket Workflow

Overview

This document provides suggestions for the team workflow using Bitbucket and GIT. The procedures described in this document are suggestions and not requirements. The instructor will not be grading teams on adherence to these suggestions. You may have a workflow that you prefer.

Bitbucket and GIT Setup

It's assumed that team members already have accounts, teams and a repository configured in Bitbucket. Please see the handout titled, "BitBucket Setup – COSC 4345 Software Engineering II".

- 1) In your repository root directory, I suggest you create subdirectories for each file type. For example, if your repository root directory is named, 'repro', inside 'repro' you should create subdirectories for 'php', 'python', 'java', 'docs' and 'dbscripts' directories.
- 2) In addition to the master branch, teams should create a "features" branch in BitBucket. This branch will be used for development and testing. Once changes are tested and confirmed to be working as expected, the changed code can be merged from the test branch to the master branch. Directions for creating a branch can be found here: <https://confluence.atlassian.com/bitbucket/branching-a-repository-223217999.html>
- 3) On your local machine go to a terminal session and switch to the features branch: git checkout features. To make sure your current branch is features: git branch. master and features should be displayed and an asterisk should appear next to features.
- 4) Make changes to your file and push to the features branch.
- 5) Test your changes. If you need to make fixes, you push those changes to features.
- 6) Once you are satisfied that all of the changes have passed all tests, you should merge the changes to the master branch. First, switch back to the master branch: git checkout master. Then go through the procedures to push the changes.

Reclaim Hosting Setup

On Reclaim Hosting, you should have a production directory named 'master' and a test directory named 'features'. The features directory is used for testing and the master directory is used for tested code or your master branch. So for example, to run a php script named getNextTest.php in the features directory for team 2, the URL would be: <http://cosc4345-team2.com/features/getNextTest.php>.

To run the same script for master:

<http://cosc4345-team2.com/master/getNextTest.php>.

At any time, you should be able to copy the PHP files from your local machine to Reclaim Hosting features or master.

For those of you working on the PHP code, to make it easy to copy files to Reclaim Hosting, it's suggested that you create a batch file or shell script to copy files from your local repository to Reclaim Hosting.

Below is an example script I used on a Mac to copy files from my repository on my laptop to reclaim hosting. Assume I have three files in my repository php directory.

In the php directory, I have two scripts. One to copy from the features branch to the features directory on Reclaim Hosting, and another to copy to the master directory on reclaim hosting.

Create a file called reclaimSendFeatures.sh. Below is an example of a file I used for my cosc4345 directory on Reclaim Hosting. You will need to change the username, URL and directory structure to match your own credentials.

```
#!/bin/bash

echo Uploading the PHP project files to Reclaim Hosting

scp DBConnection.php getNextTest.php AutomationTest.php
jbryancr@jbryan2.create.stedwards.edu:/home/jbryancr/www/cosc4345/projectExampleFiles
```

Be sure to set the file to execute. In the terminal:

```
chmod 755 reclaimSendFeatures.sh
```

To execute this script in the terminal:

```
bash reclaimSendFeatures.sh
```

When you run the script, it will ask you for your password and then upload the files.

If you use a PC instead of a Mac, you should install Putty. Putty has a file transfer program called pscp.exe. Documentation is online. You can create a script to copy files to Reclaim Hosting on a PC.

To download putty:

<https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>

On a Windows machine, with an editor create the file reclaimSendFeatures.cmd. Put the file in your repository where you keep your php files. Below is an example of the contents of the file using the pscp file transfer program:

```
pscp -l jbryancr -pw <your password> myFile.php
jbryan2.create.stedwards.edu:/home/jbryancr/features
```

To run the file, open a terminal session. Go to the search box on your desktop and type in 'cmd'.

Change directories to the location of your php files and the reclaimSendFeatures.cmd file and type in: reclaimSendFeatures