

## CS246

### Working remotely

by David Cooper

**Note:** use *gl.cs.brynmawr.edu* for all hg calls, and use *powerpuff.cs.brynmawr.edu* for compiling and running until further notice.

This document will go through the process of working remotely on the midterm project. The idea is that you will do as much as you can locally, and then just compile and run remotely.

To start, initialize your repository in your local directory. The example below shows a user cs246test creating the repository. It is easiest if you put a file into the repository, add it, and commit it, before you clone it to your local computer. In this case we make an empty README file as our initial file.

```
wc122-dhcp-100:CS246files dcooper$ ssh -X cs246test@powerpuff.cs.brynmawr.edu
cs246test@powerpuff.cs.brynmawr.edu's password:
Last login: Wed Mar  2 10:47:29 2016 from 165.106.122.100
[cs246test@powerpuff ~]$ cd /rd/cs246s2016/cs246test/
[cs246test@powerpuff cs246test]$ mkdir midterm
[cs246test@powerpuff cs246test]$ cd midterm
[cs246test@powerpuff midterm]$ hg init
[cs246test@powerpuff midterm]$ touch README
[cs246test@powerpuff midterm]$ hg add
adding README
[cs246test@powerpuff midterm]$ hg commit -m "initial revision"
[cs246test@powerpuff midterm]$ pwd
/rd/cs246s2016/cs246test/midterm
[cs246test@powerpuff midterm]$ exit
logout
Connection to powerpuff.cs.brynmawr.edu closed.
wc122-dhcp-100:CS246files dcooper$
```

Once we have committed our files on powerpuff, we can clone the repository over ssh as follows (if you want, you can modify your ~/.hgrc file to have the line "ssh = ssh -l <username>" at the bottom under the [ui])

```
wc122-dhcp-100:CS246files dcooper$ hg clone ssh://cs246test@powerpuff.cs.brynmawr.edu/rd/cs246s2016/cs246test/midterm midterm
running ssh -l dgc cs246test@powerpuff.cs.brynmawr.edu 'hg -R /rd/cs246s2016/cs246test/midterm serve --stdio'
cs246test@powerpuff.cs.brynmawr.edu's password:
requesting all changes
adding changesets
adding manifests
adding file changes
added 1 changesets with 1 changes to 1 files
updating to branch default
resolving manifests
getting README
1 files updated, 0 files merged, 0 files removed, 0 files unresolved
wc122-dhcp-100:CS246files dcooper$ cd midterm
wc122-dhcp-100:midterm dcooper$ ls
README
wc122-dhcp-100:midterm dcooper$
```

Continue on next page...



Then we'll do problem 1:

```
wc122-dhcp-100:midterm dcooper$ touch problem1.cpp
wc122-dhcp-100:midterm dcooper$ emacs problem1.cpp
wc122-dhcp-100:midterm dcooper$ hg add
adding problem1.cpp
adding problem1.cpp~
wc122-dhcp-100:midterm dcooper$ hg commit -m "solved first problem"
problem1.cpp
problem1.cpp~
committed changeset 1:648efd774b44
```

Once you commit and push you'll need to ssh to powerpuff to update the files  
(Note: sometimes the push will take some time):

```
wc122-dhcp-100:midterm dcooper$ hg commit -m "fixed formatting"
problem1.cpp
problem1.cpp~
committed changeset 2:6181e9e70d0c
wc122-dhcp-100:midterm dcooper$ hg push
pushing to ssh://cs246test@powerpuff.cs.brynmawr.edu//rd/cs246s2016/cs246test/
midterm
running ssh -l cs246test cs246test@powerpuff.cs.brynmawr.edu 'hg -R /rd/cs246s
2016/cs246test/midterm serve --stdio'
cs246test@powerpuff.cs.brynmawr.edu's password:
searching for changes
1 changesets found
remote: adding changesets
remote: adding manifests
remote: adding file changes
remote: added 1 changesets with 2 changes to 2 files
wc122-dhcp-100:midterm dcooper$ ssh -Y cs246test@powerpuff.cs.brynmawr.edu
cs246test@powerpuff.cs.brynmawr.edu's password:
Permission denied, please try again.
cs246test@powerpuff.cs.brynmawr.edu's password:
Last login: Wed Mar  2 10:47:56 2016 from 165.106.122.100
[cs246test@powerpuff ~]$ cd /rd/cs246s2016/cs246test/midterm
[cs246test@powerpuff midterm]$ hg update
2 files updated, 0 files merged, 0 files removed, 0 files unresolved
[cs246test@powerpuff midterm]$ ls
problem1.cpp  problem1.cpp~  README
[cs246test@powerpuff midterm]$
```

Then you can compile and run the program. Then add and commit the new files:

```
[cs246test@powerpuff midterm]$ g++ -o problem1 problem1.cpp
[cs246test@powerpuff midterm]$ ./problem1
beyisbae
[cs246test@powerpuff midterm]$ ls
problem1  problem1.cpp  problem1.cpp~  README  SecretMessage.png
[cs246test@powerpuff midterm]$ hg add
adding SecretMessage.png
adding problem1
[cs246test@powerpuff midterm]$ hg commit -m "ran problem1"
[cs246test@powerpuff midterm]$
```

Then exit, and locally pull and update the resulting files:

```
[cs246test@powerpuff midterm]$ exit
logout
Connection to powerpuff.cs.brynmawr.edu closed.
wc122-dhcp-100:midterm dcooper$ hg pull
running ssh -l cs246test cs246test@powerpuff.cs.brynmawr.edu 'hg -R /rd/cs246s
2016/cs246test/midterm serve --stdio'
cs246test@powerpuff.cs.brynmawr.edu's password:
pulling from ssh://cs246test@powerpuff.cs.brynmawr.edu//rd/cs246s2016/cs246tes
t/midterm
searching for changes
all local heads known remotely
adding changesets
adding manifests
adding file changes
added 1 changesets with 3 changes to 3 files
(run 'hg update' to get a working copy)
wc122-dhcp-100:midterm dcooper$ hg update
resolving manifests
getting SecretMessage.png
getting problem1
getting problem1.cpp
3 files updated, 0 files merged, 0 files removed, 0 files unresolved
wc122-dhcp-100:midterm dcooper$ ls
README                problem1                problem1.cpp~
SecretMessage.png     problem1.cpp
wc122-dhcp-100:midterm dcooper$
wc122-dhcp-100:midterm dcooper$
```

now you can view the Secret Message.png file locally.