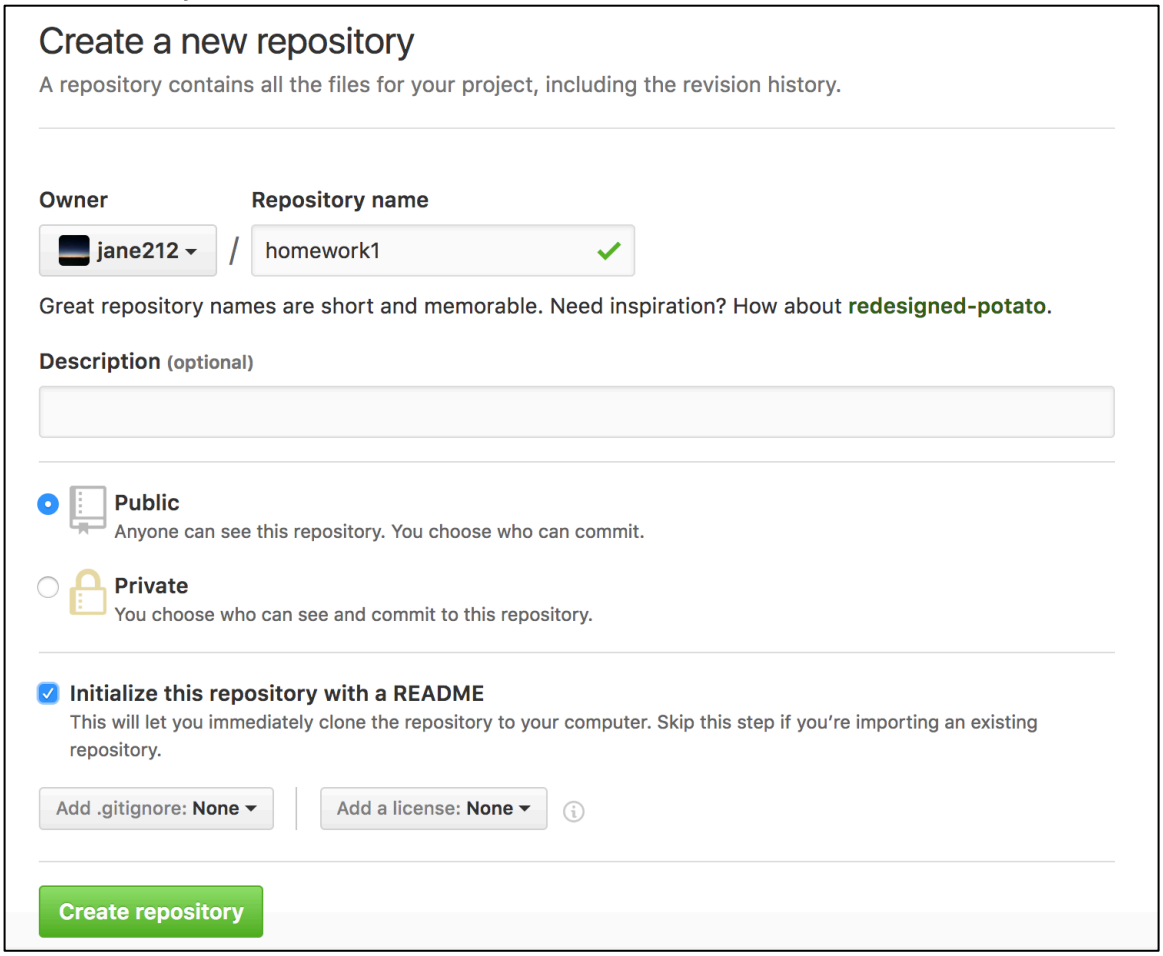
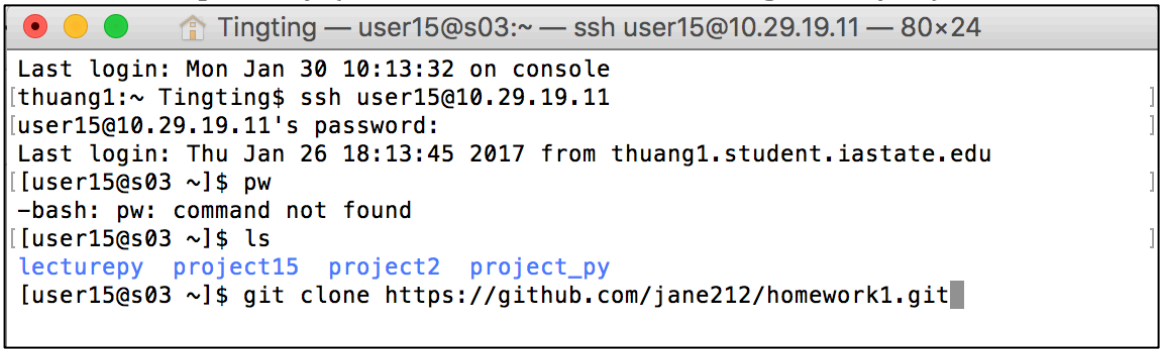
CE 650C **Assignment 1** **Tingting Huang (ISU ID:036220212)**

Part 1

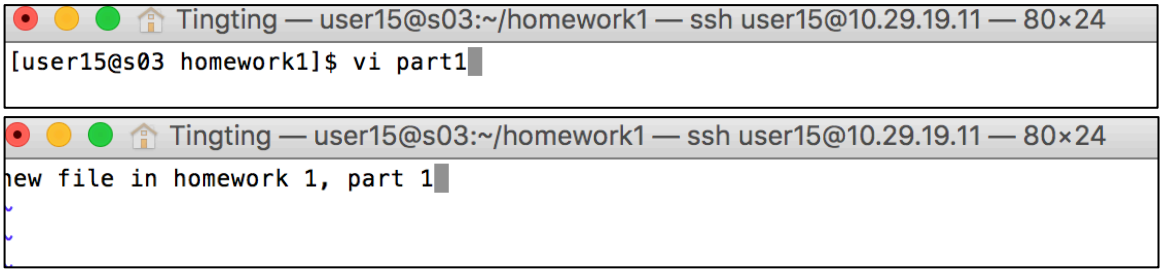
• Create a new repository on GitHub (make it public and initiate it with the README.md)



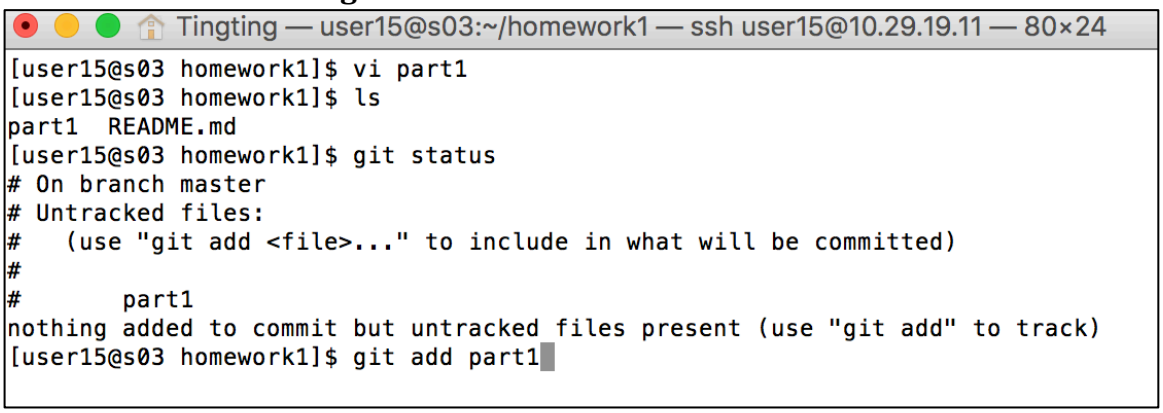
• Clone the repository (on the machine that was assigned to you)



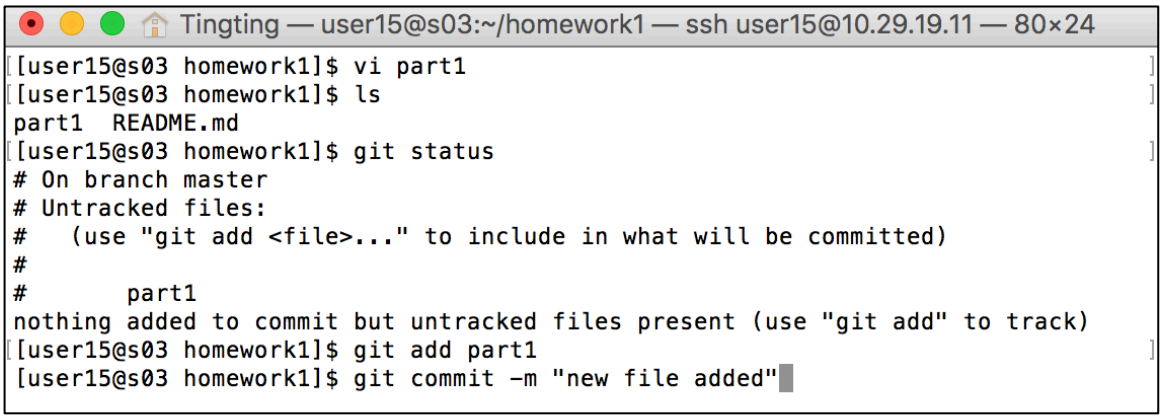
• **Add a new file to this repository using the "vi editor"**



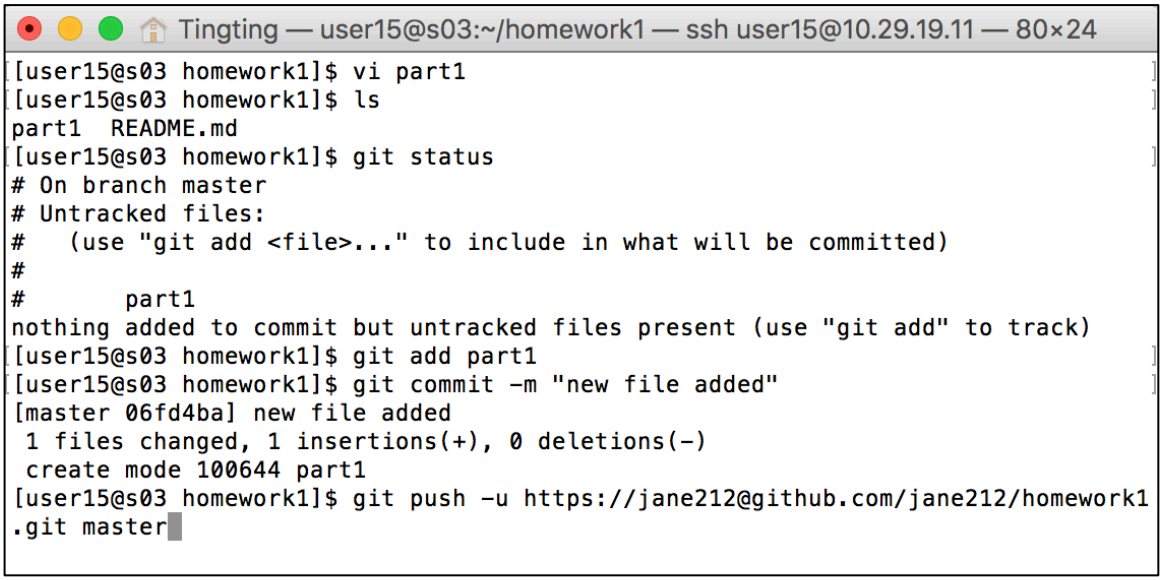
• **Add the file to tracking**



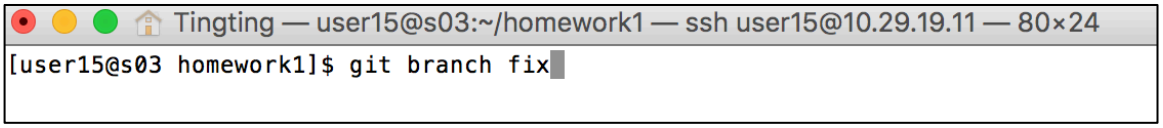
• **Do a commit**

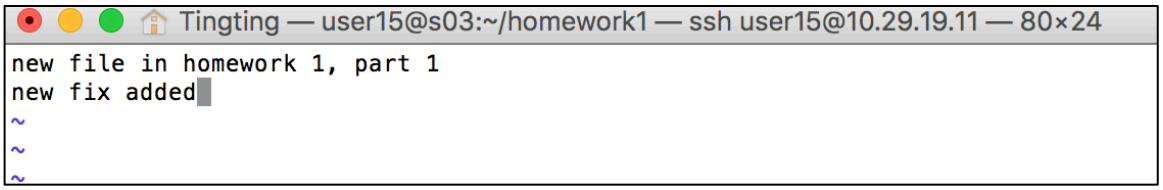


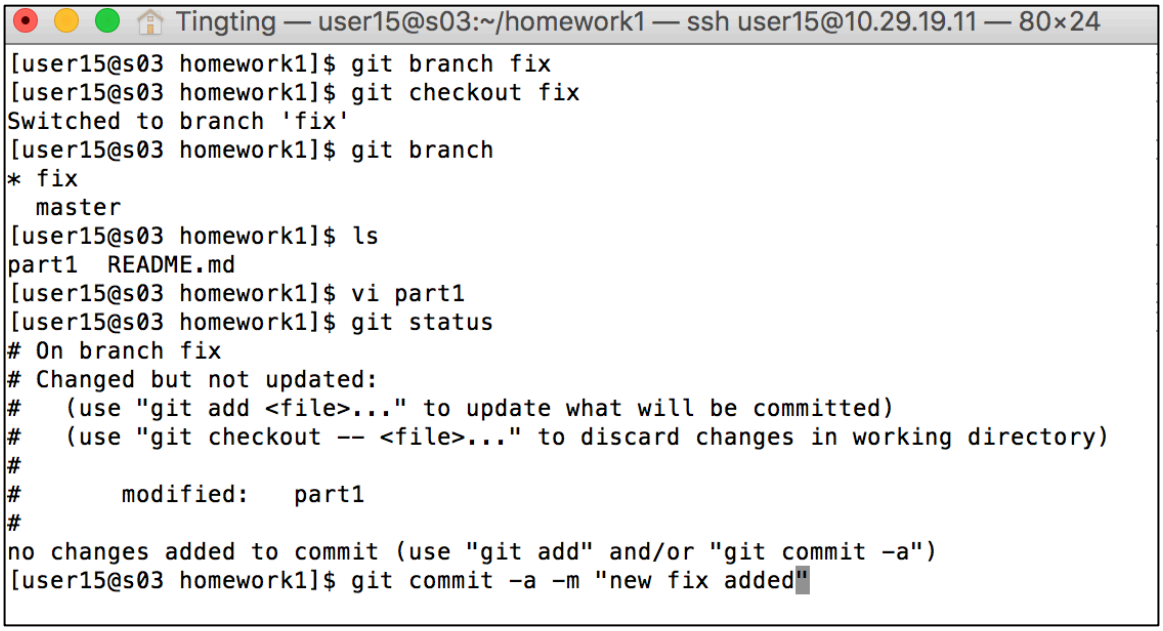
• **Do a push to your GitHub account**

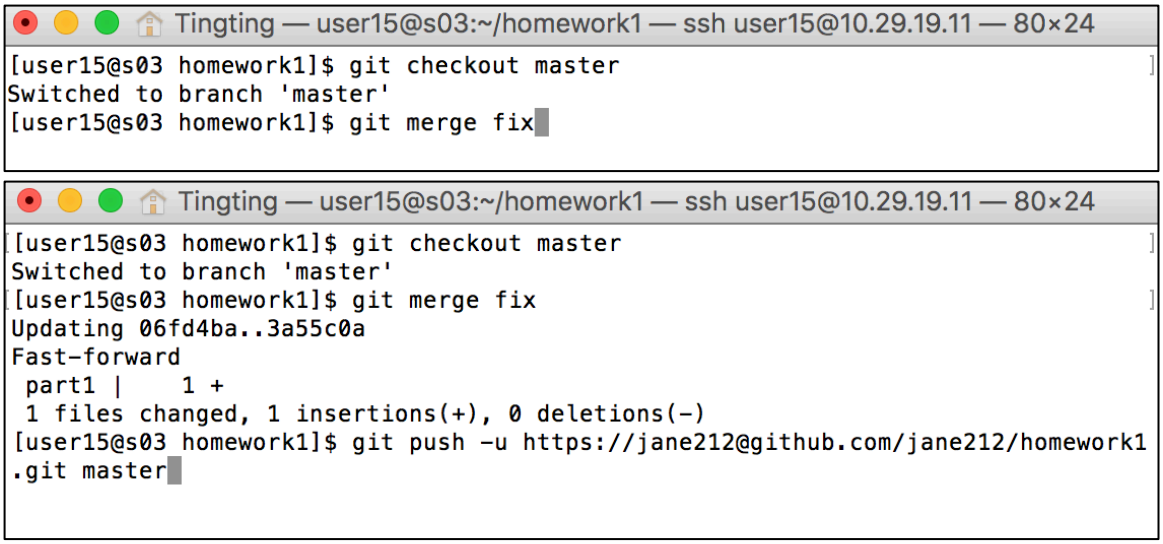


• **Create a fix (add some lines) to some file in your local repository and do a git merge operation**








Tingting — user15@s03:~/homework1 — ssh user15@10.29.19.11 — 80×24
[user15@s03 homework1]$ git checkout master
Switched to branch 'master'
[user15@s03 homework1]$ git merge fix

Tingting — user15@s03:~/homework1 — ssh user15@10.29.19.11 — 80×24
[user15@s03 homework1]$ git checkout master
Switched to branch 'master'
[user15@s03 homework1]$ git merge fix
Updating 06fd4ba..3a55c0a
Fast-forward
part1 | 1 +
1 files changed, 1 insertions(+), 0 deletions(-)
[user15@s03 homework1]$ git push -u https://jane212@github.com/jane212/homework1
.git master

Part 2

• Create a new folder named python_project for this project and cd into the python_project folder

```
Tingting — user15@s03:~/homework1/python_project — ssh user15@10.29.19....
[user15@s03 homework1]$ mkdir python_project
[user15@s03 homework1]$ cd python_project
[user15@s03 python_project]$ vi capture.py
```

• Write python code (name this file capture.py) to read the XML from the URL provided on GitHub (check README.md of Lecture 3) and Write the contents to a file named 'stream.xml' (this step is mentioned in the presentation)

```
Tingting — user15@s03:~/homework1/python_project — ssh user15@10.29.19....
import os
import sys
import time
import urllib2
import xml.etree.ElementTree as ET

url_str = "http://205.221.97.102/Iowa.Sims.AllSites.C2C/IADOT_SIMS_AllSites_C2C.
asmx/OP_ShareTrafficDetectorData?MSG_TrafficDetectorDataRequest=string%20HTTP/1.
1"

request = urllib2.Request(url_str, headers = {"Accept":"text/xml"})

content = urllib2.urlopen(request).read()

f = open("stream.xml",'w')

f.write(content)

f.close()
~
~
~
~
-- INSERT --                                              17,10         All
```

```
Tingting — user15@s03:~/homework1/python_project — ssh user15@10.29.19....
[user15@s03 homework1]$ mkdir python_project
[user15@s03 homework1]$ cd python_project
[user15@s03 python_project]$ vi capture.py
[user15@s03 python_project]$ python capture.py
[user15@s03 python_project]$ ls
capture.py  stream.xml
[user15@s03 python_project]$
```

• **Write python code (name this file parser.py) to parse the XML(stream.xml) and print the Detector-ID and Status (mentioned in presentation)**

Tingting — user15@s03:~/homework1/python_project — ssh user15@10.29.19....

```
[user15@s03 python_project]$ vi parser.py
```

Tingting — user15@s03:~/homework1/python_project — ssh user15@10.29.19.11...

```
import os
import sys
import time
import urllib2
import xml.etree.ElementTree as ET

tree = ET.parse("stream.xml")

root = tree.getroot()

z = root.getchildren()[2].getchildren()[0].getchildren()[3].getchildren()

length = len(z)

# get all detectors

for i in range (1,length):
        x = root.getchildren()[2].getchildren()[0].getchildren()[3].getchildren(
)[i]
        print x.getchildren()[0].text, "|", x.getchildren()[1].text

~
~
"parser.py" 20L, 418C                                         16,0-1        All
```

Tingting — user15@s03:~/homework1/python_project — ssh user15@10.29.19....

```
I-380 CRDS04 NB | operational
I-380 CRDS04 SB | operational
I-380 CRDS04 NB Ramp | operational
I-380 CRDS05 NB | operational
I-380 CRDS05 SB | operational
I-380 CRDS06 NB | operational
I-380 CRDS06 SB | operational
I-380 CRDS07 Ramp RL | operational
I-380 CRDS08 NB | operational
I-380 CRDS08 SB | operational
I-380 CRDS08 SB Ramp | operational
I-380 CRDS09 NB | operational
I-380 CRDS09 SB | operational
I-380 CRDS09 NB Ramp | operational
I-380 CRDS09 SB Ramp | operational
I-380 CRDS10 NB | operational
I-380 CRDS10 SB | operational
I-380 CRDS10 NB Ramp | operational
I-380 CRDS10 SB Ramp | operational
I-380 CRDS11 NB | operational
I-380 CRDS11 SB | operational
I-380 CRDS11 NB Ramp | operational
I-380 CRDS11 SB Ramp | operational
[user15@s03 python_project]$
```

Part 3

• Write the parsed output (and only the parsed output i.e. the Detector-ID and Status) from the previous step to a file named streamdata.csv or streamdata.xml

Tingting — user15@s03:~/homework1/python_project — ssh user15@10.29.19.11...

```
[user15@s03 python_project]$ vi parser3.py
[user15@s03 python_project]$
```

Tingting — user15@s03:~/homework1/python_project — ssh user15@10.29.19.11...

```
import os
import sys
import time
import urllib2
import xml.etree.ElementTree as ET

tree = ET.parse("stream.xml")

root = tree.getroot()

z = root.getchildren()[2].getchildren()[0].getchildren()[3].getchildren()

length = len(z)

f = open('streamdata.csv','w')

for i in range (1,length):
        x = root.getchildren()[2].getchildren()[0].getchildren()[3].getchildren(
)[i]
        content = x.getchildren()[0].text+","+x.getchildren()[1].text+"\n"
        f.write(content)


"parser3.py" 23L, 465C                                        1,1           Top
```

Tingting — user15@s03:~/homework1/python_project — ssh user15@10.29.19.11...

```
[user15@s03 python_project]$ ls
capture.py  parser3.py  parser.py  streamdata.csv  stream.xml
[user15@s03 python_project]$
```

Tingting — user15@s03:~/homework1/python_project — ssh user15@10.29.19....

```
[user15@s03 python_project]$ cat streamdata.csv | head
I-74 NB from 12th Ave to 7th Ave,operational
I-74 NB from 7th Ave to 4th Ave,operational
I-74 NB from 4th Ave to 1st Ave,operational
I-74 NB from 1st Ave to Toll Pla,operational
I-74 NB from Toll Plaza to South,operational
I-74 NB from South Tower to Nort,failed
I-74 NB from North Tower to Isle,operational
I-74 NB from Isle Park to Holmes,operational
I-74 NB from Lincoln to Middle,operational
I-74 NB from Spruce Hills to Cro,operational
[user15@s03 python_project]$
```