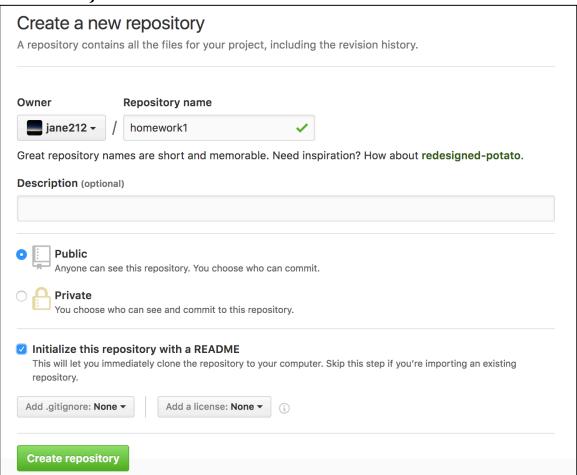
Part 1

• 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)

```
Tingting — user15@s03:~ — ssh user15@10.29.19.11 — 80×24

Last login: Mon Jan 30 10:13:32 on console
[thuang1:~ Tingting$ ssh user15@10.29.19.11

[user15@10.29.19.11's password:

Last login: Thu Jan 26 18:13:45 2017 from thuang1.student.iastate.edu
[[user15@s03 ~]$ pw

-bash: pw: command not found
[[user15@s03 ~]$ ls

lecturepy project15 project2 project_py
[user15@s03 ~]$ git clone https://github.com/jane212/homework1.git
```

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

Add the file to tracking

```
Tingting — user15@s03:~/homework1 — ssh user15@10.29.19.11 — 80×24

[user15@s03 homework1]$ vi part1

[user15@s03 homework1]$ ls

part1 README.md

[user15@s03 homework1]$ git status

# On branch master

# Untracked files:

# (use "git add <file>..." to include in what will be committed)

#

# part1

nothing added to commit but untracked files present (use "git add" to track)

[user15@s03 homework1]$ git add part1
```

• Do a commit

```
Tingting — user15@s03:~/homework1 — ssh user15@10.29.19.11 — 80×24

[[user15@s03 homework1]$ vi part1
[[user15@s03 homework1]$ ls
part1 README.md
[[user15@s03 homework1]$ git status

# On branch master

# Untracked files:

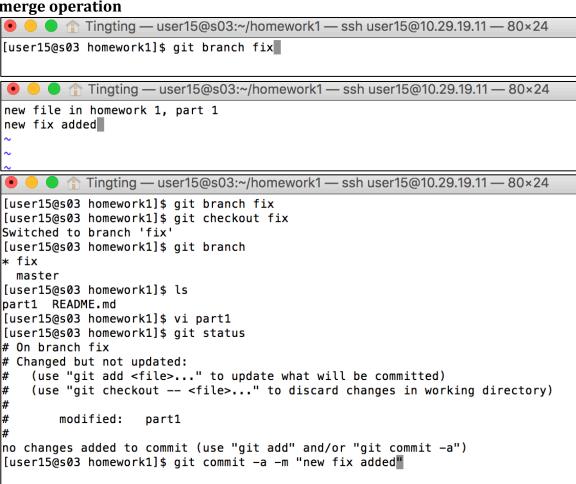
# (use "git add <file>..." to include in what will be committed)

#
# part1
nothing added to commit but untracked files present (use "git add" to track)
[[user15@s03 homework1]$ git add part1
[user15@s03 homework1]$ git commit —m "new file added"
```

• Do a push to your GitHub account

```
💿 🔵 🌘 👚 Tingting — user15@s03:~/homework1 — ssh user15@10.29.19.11 — 80×24
[user15@s03 homework1]$ vi part1
[user15@s03 homework1]$ ls
part1 README.md
[user15@s03 homework1]$ git status
# On branch master
# Untracked files:
    (use "git add <file>..." to include in what will be committed)
        part1
nothing added to commit but untracked files present (use "git add" to track)
[user15@s03 homework1]$ git add part1
[user15@s03 homework1]$ git commit -m "new file added"
[master 06fd4ba] new file added
1 files changed, 1 insertions(+), 0 deletions(-)
create mode 100644 part1
[user15@s03 homework1]$ git push -u https://jane212@github.com/jane212/homework1
.git master
```

• 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.
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....

import os
```

```
● ● ↑ 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....
[user15@s03 python_project]$ vi parser.py
💿 🥚 🌑 🏫 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
tree = ET.parse("stream.xml")
root = tree.getroot()
f = open('streamdata.csv','w')
for i in range (1,100):
        z = root.getchildren()[2].getchildren()[0].getchildren()[3].getchildren(
)[i]
        content = z.getchildren()[0].text+","+z.getchildren()[1].text
        f.write(content)
        f.write('\n')
f.close()
"parser.py" 19L, 379C
                                                               17,2-9
                                                                             All
🔸 🕒 🌘 🁚 Tingting — user15@s03:~/homework1/python_project — ssh user15@10.29.19....
[user15@s03 python_project]$ vi parser.py
[user15@s03 python_project]$ python parser.py
[user15@s03 python_project]$ ls
capture.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]$
```