Linux Commands
Stats 202A
BHARGAV PARSI(804945591)

1) mkdir

```
bhargav265@DESKTOP-HUD7V3B:~$ ls
unixstuff
bhargav265@DESKTOP-HUD7V3B:~$ mkdir sample
bhargav265@DESKTOP-HUD7V3B:~$ ls
sample   unixstuff
bhargav265@DESKTOP-HUD7V3B:~$ la -a
.  ..  .bash_history  .bash_logout  .bashrc  .profile  sample   unixstuff
bhargav265@DESKTOP-HUD7V3B:~$ ls -a
.  ..  .bash_history  .bash_logout  .bashrc  .profile  sample   unixstuff
bhargav265@DESKTOP-HUD7V3B:~$  ls -lrt
total 0
drwxrwxrwx 2 bhargav265 bhargav265 0 Nov 25 21:36 unixstuff
drwxrwxrwx 2 bhargav265 bhargav265 0 Nov 29 10:30 sample
bhargav265@DESKTOP-HUD7V3B:~$
```

2) cd

```
bhargav265@DESKTOP-HUD7V3B:~$ ls
unixstuff
bhargav265@DESKTOP-HUD7V3B:~$ mkdir sample
bhargav265@DESKTOP-HUD7V3B:~$ ls
sample   unixstuff
bhargav265@DESKTOP-HUD7V3B:~$ la -a
.  ..  .bash_history  .bash_logout  .bashrc  .profile  sample   unixstuff
bhargav265@DESKTOP-HUD7V3B:~$ ls -a
.  ..  .bash_history  .bash_logout  .bashrc  .profile  sample   unixstuff
bhargav265@DESKTOP-HUD7V3B:~$  ls -lrt
total 0
drwxrwxrwx 2 bhargav265 bhargav265 0 Nov 25 21:36 unixstuff
drwxrwxrwx 2 bhargav265 bhargav265 0 Nov 29 10:30 sample
bhargav265@DESKTOP-HUD7V3B:~$ cd sample
bhargav265@DESKTOP-HUD7V3B:~/sample$ ls -a
.   ..
bhargav265@DESKTOP-HUD7V3B:~/sample$ cd .
bhargav265@DESKTOP-HUD7V3B:~/sample$ cd ..
bhargav265@DESKTOP-HUD7V3B:~$ cd unixstuff/
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls
backups   sample.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls -a
.   ..   backups   sample.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cd .
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cd ..
bhargav265@DESKTOP-HUD7V3B:~$
```

3) ls path

```
bhargav265@DESKTOP-HUD7V3B:~$ ls unixstuff/
backups   sample.txt
bhargav265@DESKTOP-HUD7V3B:~$ ls unixstuff/backups/ -a
.  ..    sample.bak
bhargav265@DESKTOP-HUD7V3B:~$ pwd
/home/bhargav265
bhargav265@DESKTOP-HUD7V3B:~$
bhargav265@DESKTOP-HUD7V3B:~$
```

4) copy, move, rmdir

```
bhargav265@DESKTOP-HUD7V3B:~$ cd unixstuff
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cp ~/sample.txt
cp: missing destination file operand after '/home/bhargav265/sample.txt'
Try 'cp --help' for more information.
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cp ~/sample.txt .
cp: cannot stat '/home/bhargav265/sample.txt': No such file or directory
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls
backups   sample.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cp ~/sample.txt sample2.bak
cp: cannot stat '/home/bhargav265/sample.txt': No such file or directory
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cp sample.txt sample2.bak
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls -a
.  ..  backups   sample2.bak   sample.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ mv sample2.bak backups/.
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls backups
sample2.bak   sample.bak
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cp sample.txt temp.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls
backups   sample.txt  temp.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ rm temp.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls
backups   sample.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ mkdir temp
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls
backups   sample.txt   temp
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ rmdir temp
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls
backups   sample.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$
```

```
bhargav265@DESKTOP-HUD7V3B:~$ cd unixstuff
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cp ~/sample.txt
cp: missing destination file operand after '/home/bhargav265/sample.txt'
Try 'cp --help' for more information.
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cp ~/sample.txt .
cp: cannot stat '/home/bhargav265/sample.txt': No such file or directory
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls
backups   sample.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cp ~/sample.txt sample2.bak
cp: cannot stat '/home/bhargav265/sample.txt': No such file or directory
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cp sample.txt sample2.bak
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls -a
.  ..  backups   sample2.bak   sample.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ mv sample2.bak backups/.
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls backups
sample2.bak   sample.bak
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cp sample.txt temp.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls
backups   sample.txt   temp.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ rm temp.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls
backups   sample.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ mkdir temp
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls
backups   sample.txt   temp
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ rmdir temp
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls
backups   sample.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$
```

5) cat, less, head, tail

```
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cat sample2.txt
hello
1
2
3
3
4

4
4
4

453453
53
53
53w
53w53453


bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ less sample2
sample2: No such file or directory
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ less sample2.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ head sample2.txt
hello
1
2
3
3
4

4
4
4
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ head - 2 sample2.txt
==> standard input <==

ds
ds
sfs
sfs
^C
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ head -4 sample.txt
The Electronic Telegraph  Thursday 28 September 1995   Science

This summer the Royal Observatory at Herstmonceux
found new life as a science centre. Andro Linklater
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ tail -5 sample.txt
nearest stations Battle and Polgate. The International Study Centre offers
```

```
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ tail -5 sample.txt
nearest stations Battle and Polgate. The International Study Centre offers
limited accommodation (01323-834444).
```

6) grep

```
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ grep science sample.txt
found new life as a science centre. Andro Linklater
exhibitors from science centres all over Europe arriving to demonstrate
perception, the challenge presented by the encounter of science with a child's
the Exploratory, Britain's first hands-on science centre housed in Temple Meads
"The point about a science centre is that the exhibits should be fun," he said.
making science enjoyable. Both the Exploratory, which attracts 150,000 visitors
attempt at cortex tickling. This time he aims not only to make science
light-sensitive acoustic chimes, its success as a science centre is not in
That's the sort of cortickling thing you learn at science centres - a Swiss
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ grep Science sample.txt
The Electronic Telegraph  Thursday 28 September 1995  Science
But this was Fabricators' Week at the Herstmonceux Science Centre, with
on Science" exhibition, all betray the same puckish outlook.
director, Steve Pizzey, whose Science Projects company devised the exhibits,
*  Herstmonceux Science Centre is open daily 10am-6pm (tel 01323-832731),
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ grep -i science sample.txt
The Electronic Telegraph  Thursday 28 September 1995  Science
found new life as a science centre. Andro Linklater
But this was Fabricators' Week at the Herstmonceux Science Centre, with
exhibitors from science centres all over Europe arriving to demonstrate
perception, the challenge presented by the encounter of science with a child's
the Exploratory, Britain's first hands-on science centre housed in Temple Meads
"The point about a science centre is that the exhibits should be fun," he said.
making science enjoyable. Both the Exploratory, which attracts 150,000 visitors
on Science" exhibition, all betray the same puckish outlook.
attempt at cortex tickling. This time he aims not only to make science
light-sensitive acoustic chimes, its success as a science centre is not in
director, Steve Pizzey, whose Science Projects company devised the exhibits,
That's the sort of cortickling thing you learn at science centres - a Swiss
*  Herstmonceux Science Centre is open daily 10am-6pm (tel 01323-832731),
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ grep -i 'spinning top' sample.txt
spinning top, invented by Bill Hones of Seattle, for the scientific journal
the spinning top had potential if it could be made more surprising.
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ grep -ivc science sample.txt
131
```

7) word count

```
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ wc -w science.txt
wc: science.txt: No such file or directory
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ wc -w sample.txt
1251 sample.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ wc -l sample.txt
145 sample.txt
```

8) concatenate to list

```
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cat
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cat > list1
pear
apple
mango
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cat list
cat: list: No such file or directory
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cat list1
pear
apple
mango
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cat > list2
orange
plum
mango
grapefruit
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cat list2
orange
plum
mango
grapefruit
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$
```

```
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cat >> list1
peach
grape
orangebhargav265@DESKTOP-HUD7V3B:~/unixstuff$
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cat list1
pear
apple
mango
peach
grape
orangebhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cat list1 list2 > biglist
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cat biglist
pear
apple
mango
peach
grape
orangeorange
plum
mango
grapefruit
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$
```

9) sort

```
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ sort
dog
cat
bird
ape
ape
bird
cat
dog
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ sort < biglist
apple
grape
grapefruit
mango
mango
orangeorange
peach
pear
plum
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ sort < biglist > slist
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$
```

10) who, cat + grep

```
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ who
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ who > names.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ sort < names.txt
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ who ! sort
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ who | wc -l
0
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ cat list1 list2 | grep p | sort
apple
grape
grapefruit
peach
pear
plum
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$
```

11)wildcard

```
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls list*
list1  list2
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls *list
biglist  slist
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ ls ?list
slist
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$
```

12) man, aprpos

```
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ man wc
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ whatis wc
wc (1)               - print newline, word, and byte counts for each file
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ apropos aprpos
aprpos: nothing appropriate.
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ apropos apro
apropos (1)          - search the manual page names and descriptions
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ aprpos copy
No command 'aprpos' found, did you mean:
 Command 'apropos' from package 'man-db' (main)
aprpos: command not found
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$ apropos copy
cp (1)               - copy files and directories
cpgr (8)             - copy with locking the given file to the password or group file
cpio (1)             - copy files to and from archives
cppw (8)             - copy with locking the given file to the password or group file
dd (1)               - convert and copy a file
debconf-copydb (1)   - copy a debconf database
install (1)          - copy files and set attributes
ntfscp (8)           - copy file to an NTFS volume.
rcp (1)              - secure copy (remote file copy program)
rsync (1)            - a fast, versatile, remote (and local) file-copying tool
scp (1)              - secure copy (remote file copy program)
ssh-copy-id (1)      - use locally available keys to authorise logins on a remote machine
bhargav265@DESKTOP-HUD7V3B:~/unixstuff$
```

Git Commands
Stats202A
Bhargav Parsi(804945591)

1) Setting up github

```
Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /
$ ssh-keygen -t rsa -C "bhargav265@gmail.com"
Generating public/private rsa key pair.
Enter file in which to save the key (/c/Users/Bhargav Parsi/.ssh/id_rsa):
/c/Users/Bhargav Parsi/.ssh/id_rsa already exists.
Overwrite (y/n)? y
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /c/Users/Bhargav Parsi/.ssh/id_rsa.
Your public key has been saved in /c/Users/Bhargav Parsi/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:1zeto6Fgc8jQqcfrI5V4Mv1MfEfPc2cgd47aNFsNm+U bhargav265@gmail.com
The key's randomart image is:
+---[RSA 2048]----+
|                 |
|                 |
|                 |
|      . . .. =.o|
|     .oSo. .+o&o|
|     +==oo ..B+E|
|     .=O+...=o=+|
|     .o.=o..oo. |
|       oo.. .   |
+----[SHA256]-----+

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /
$ ssh -T git@github.com
The authenticity of host 'github.com (192.30.255.112)' can't be established.
RSA key fingerprint is SHA256:nThbg6kXUpJWGl7E1IGOCspRomTxdCARLviKw6E5SY8.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'github.com,192.30.255.112' (RSA) to the list of know
n hosts.
Enter passphrase for key '/c/Users/Bhargav Parsi/.ssh/id_rsa':
Hi bhargav265! You've successfully authenticated, but GitHub does not provide sh
ell access.
```

2) Git init and commit

```
Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /
$ git init
Initialized empty Git repository in D:/Git/.git/

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 / (master)
$ ls
bin/  dev/  git-bash.exe*  hello.py     mingw64/  ReleaseNotes.html  unins000.dat  unins000.msg
cmd/  etc/  git-cmd.exe*   LICENSE.txt  proc/     tmp/                unins000.exe*  usr/

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 / (master)
$ git add hello.py

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 / (master)
$ git commit
error: cannot spawn emacs: No such file or directory
error: unable to start editor 'emacs'
Please supply the message using either -m or -F option.

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 / (master)
$ git commit -m "Commit Message"
[master (root-commit) 2180905] Commit Message
 1 file changed, 1 insertion(+)
 create mode 100644 hello.py

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 / (master)
$ git remote add origin git@github.com:bhargav265/SampleRepo.git

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 / (master)
$ git push -u origin master
Enter passphrase for key '/c/Users/Bhargav Parsi/.ssh/id_rsa':
Counting objects: 3, done.
Writing objects: 100% (3/3), 231 bytes | 231.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To github.com:bhargav265/SampleRepo.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
```

3) Push

4) Git status

```
Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 / (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   hello.py

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

        LICENSE.txt
        ReleaseNotes.html
        bin/
        cmd/
        dev/
        etc/
        git-bash.exe
        git-cmd.exe
        mingw64/
        unins000.dat
        unins000.exe
        unins000.msg
        usr/

no changes added to commit (use "git add" and/or "git commit -a")

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 / (master)
```

5) Clone

```
Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 / (master)
$ git clone git@github.com:bhargav265/hello-world
Cloning into 'hello-world'...
Enter passphrase for key '/c/Users/Bhargav Parsi/.ssh/id_rsa':
remote: Counting objects: 7, done.
remote: Total 7 (delta 0), reused 0 (delta 0), pack-reused 7
Receiving objects: 100% (7/7), done.
Resolving deltas: 100% (1/1), done.

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 / (master)
$ cd hello-world

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /hello-world (master)
$ git add hello.py
fatal: pathspec 'hello.py' did not match any files

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /hello-world (master)
$ git add hello.py
warning: LF will be replaced by CRLF in hello.py.
The file will have its original line endings in your working directory.

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /hello-world (master)
$ git commit -a -m 'Added new file'
[master c66952d] Added new file
 1 file changed, 2 insertions(+)
 create mode 100644 hello.py

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /hello-world (master)
$ git push
Enter passphrase for key '/c/Users/Bhargav Parsi/.ssh/id_rsa':
Counting objects: 3, done.
Delta compression using up to 8 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 326 bytes | 326.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To github.com:bhargav265/hello-world
   304d6f9..c66952d  master -> master
```
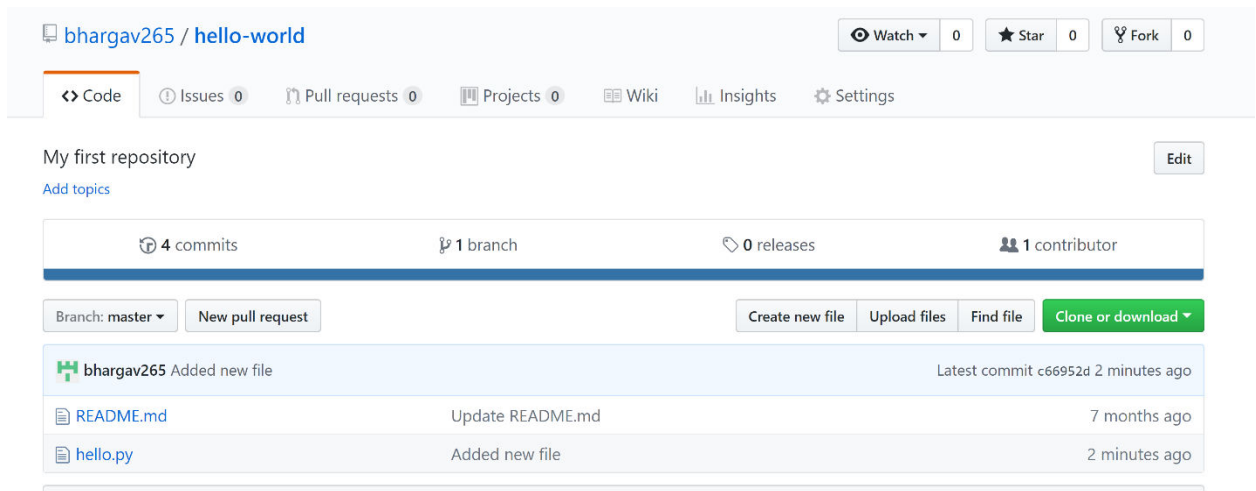
6) Git Remote


```
Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /hello-world (master)
$ git remote -v
bhargav2        git://github.com/bhargav265/hello-world (fetch)
bhargav2        git://github.com/bhargav265/hello-world (push)
origin  git@github.com:bhargav265/hello-world (fetch)
origin  git@github.com:bhargav265/hello-world (push)

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /hello-world (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.

nothing to commit, working tree clean

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /hello-world (master)
$ git pull bhargav2 master
From git://github.com/bhargav265/hello-world
 * branch            master     -> FETCH_HEAD
   c66952d..23bfbac  master     -> bhargav2/master
Already up to date.

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /hello-world (master)
$
```

7) Handling Pull Request

```
Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /hello-world (master)
$ git pull
Enter passphrase for key '/c/Users/Bhargav Parsi/.ssh/id_rsa':
remote: Counting objects: 4, done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (4/4), done.
From github.com:bhargav265/hello-world
   23bfbac..98a8efc  master     -> origin/master
Updating 23bfbac..98a8efc
Fast-forward
 Yo.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 Yo.txt

Bhargav Parsi@DESKTOP-HUD7V3B MINGW64 /hello-world (master)
$
```