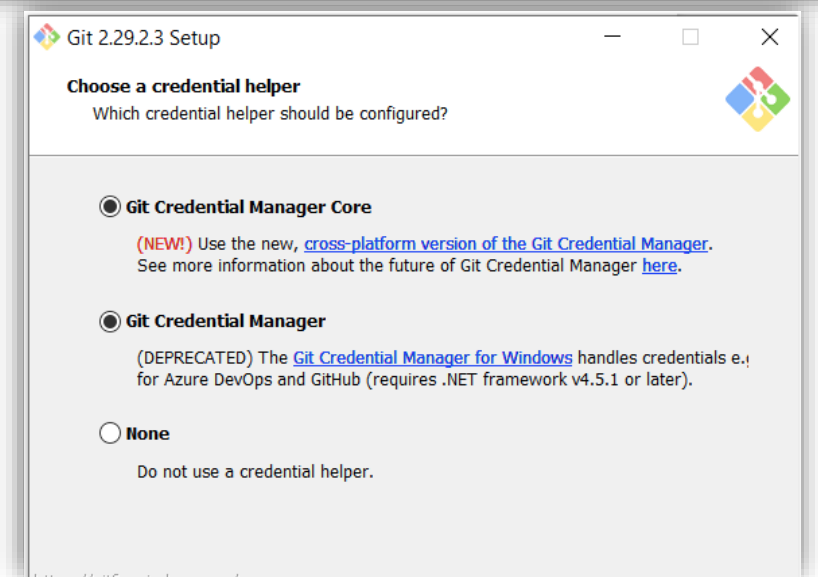
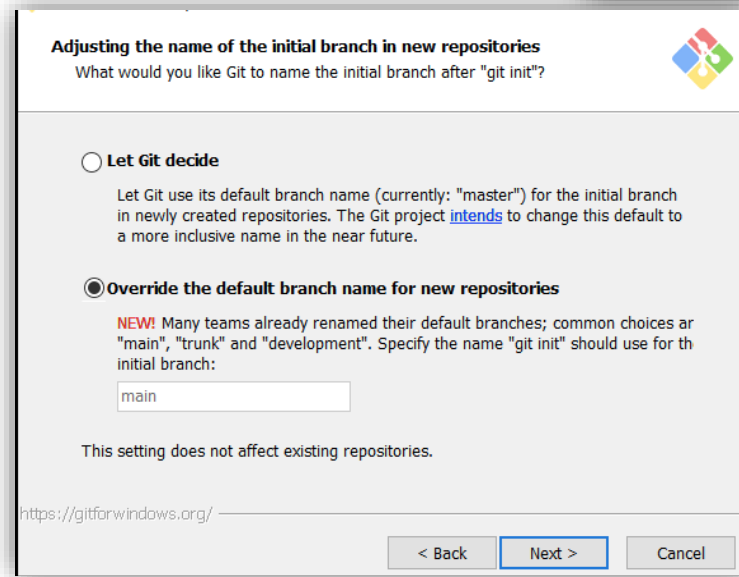
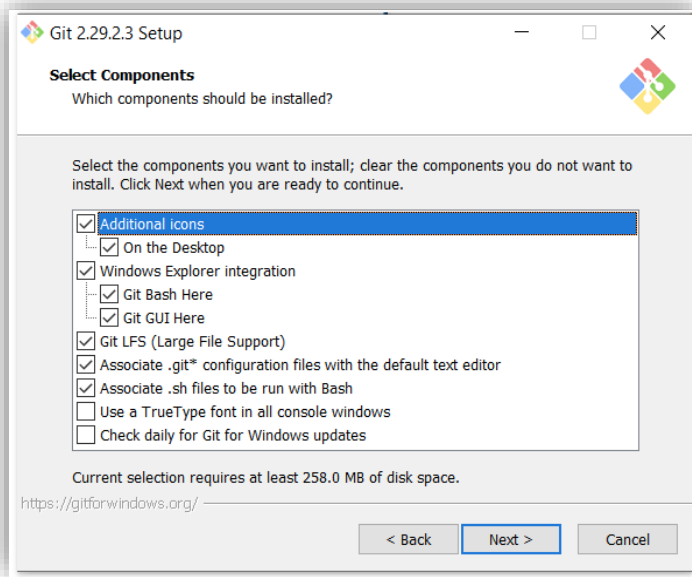


GIT HUB SET-UP & BASIC COMMANDS



INSTALLING GIT


- Open the link <https://git-scm.com/>
- Click on “Download for Windows”
- Run the setup file and follow the instructions to install



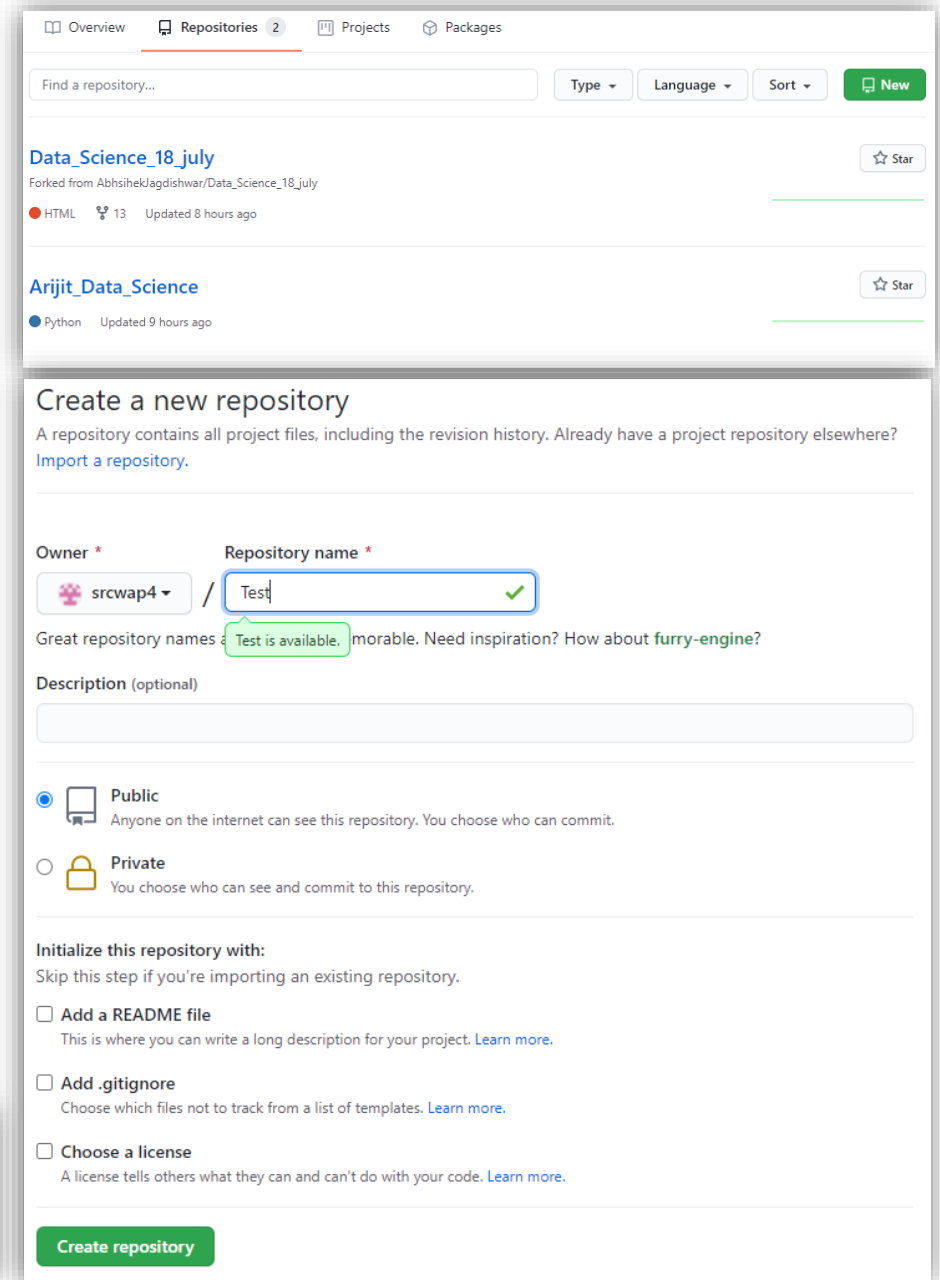
GIT HUB ACCOUNT

- Log in to <https://github.com/> (create an account if not already created)
- Switch to “Repositories” tab
- Check if the required repository already exists
- If not, Click on “New” to create a new repository
 - Key in a Repository Name
 - Select “Public”
 - Click on “Create Repository”

Quick setup — if you’ve done this kind of thing before

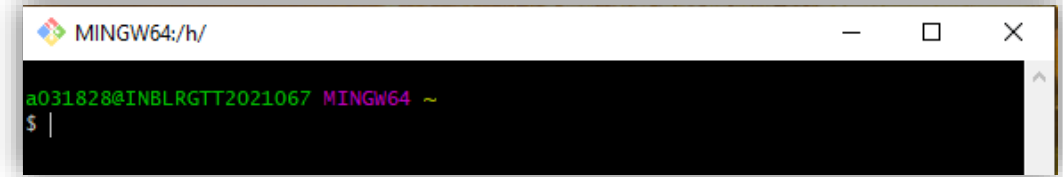
 Set up in Desktop or

Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

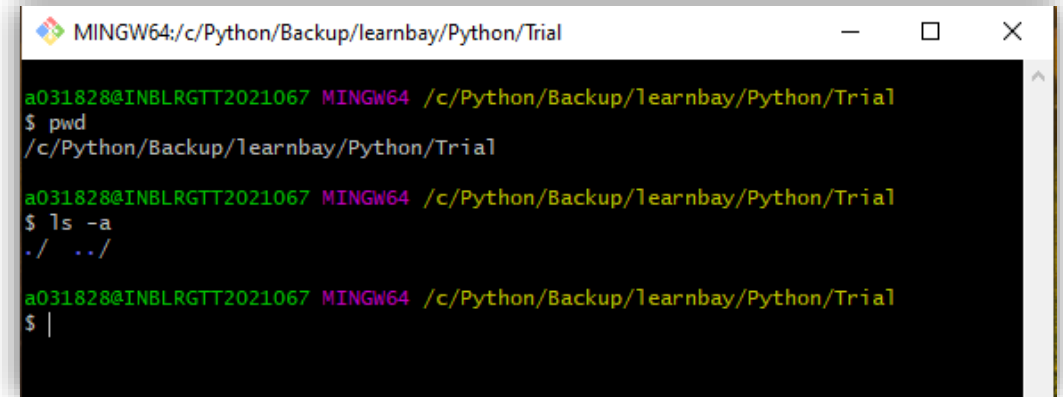


SET UP GIT BASH AND PWD LOCALLY

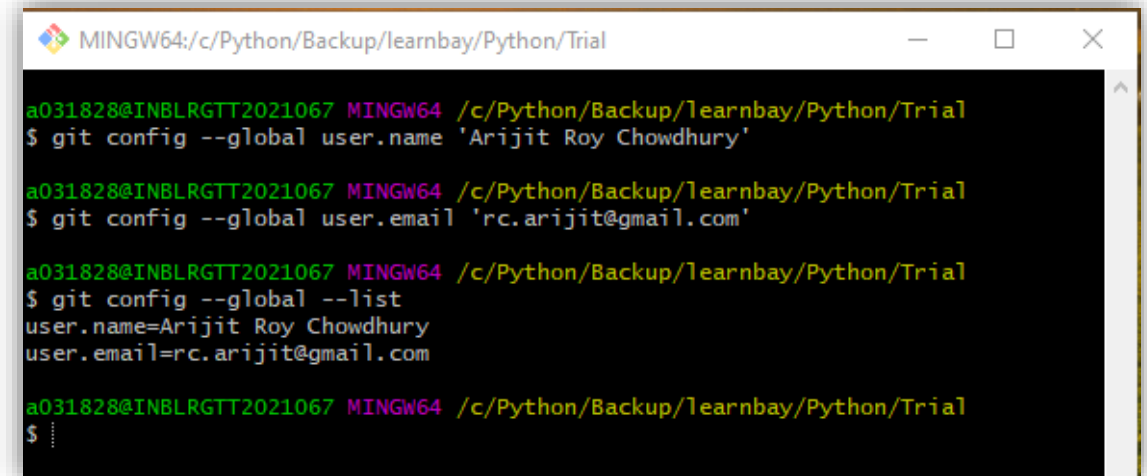
- Launch “Git Bash” from Windows Start Menu
- Check Present Working Directory
 - Command: ***pwd***
- Change Directory to your respective one using ***cd***, ***ls*** and ***mkdir*** commands
 - Command: ***cd*** (for change directory)
 - Command: ***ls*** (to check contents of directory)
 - Command: ***mkdir*** (to create a new directory in PWD)
 - Command: ***clear*** (to clear the screen)
- Configure Username and Email ID
 - Command: ***git config --global user.name 'Arijit Roy Chowdhury'***
 - Command: ***git config --global user.email 'rc.arijit@gmail.com'***
 - Command: ***git config --global --list***



```
MINGW64:/h/
a031828@INBLRGTT2021067 MINGW64 ~
$ |
```



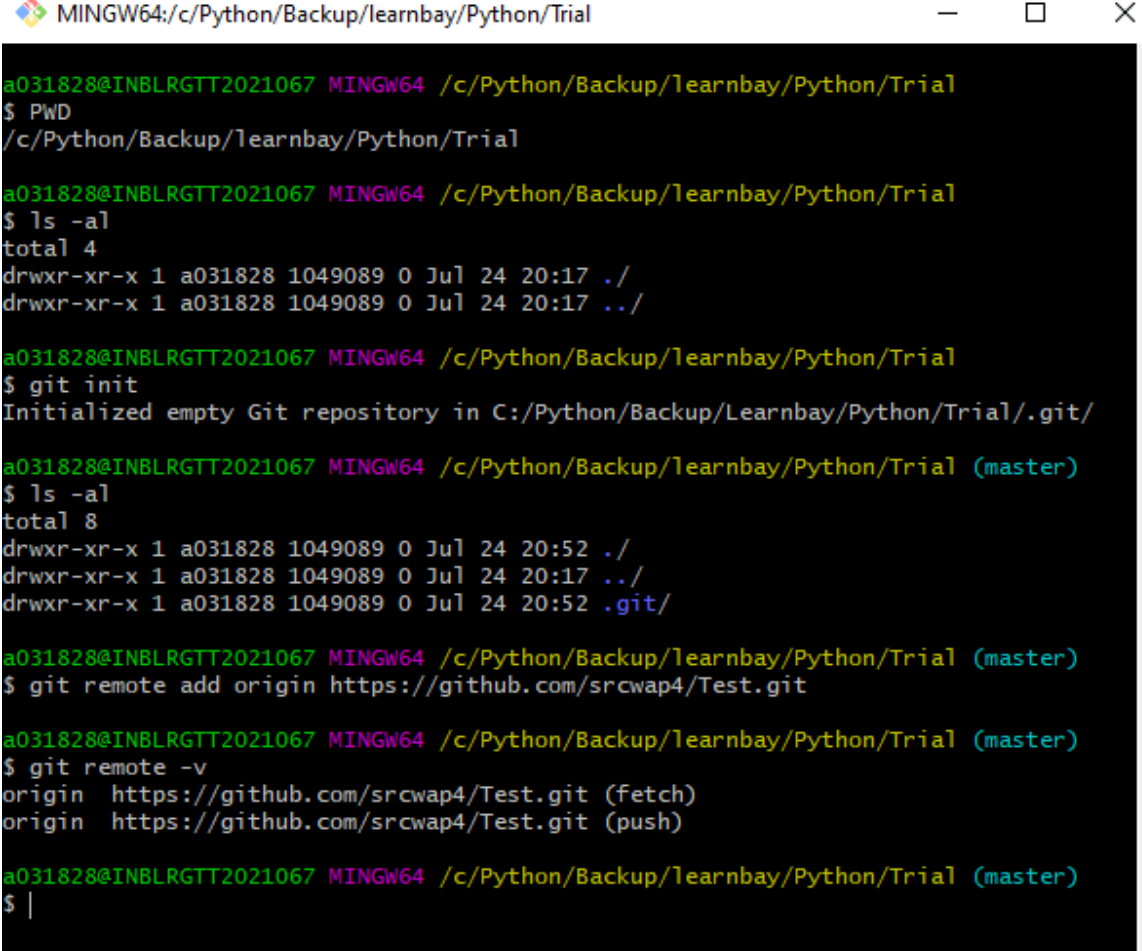
```
MINGW64:/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial
$ pwd
/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial
$ ls -a
./ ../
```



```
MINGW64:/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial
$ git config --global user.name 'Arijit Roy Chowdhury'
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial
$ git config --global user.email 'rc.arijit@gmail.com'
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial
$ git config --global --list
user.name=Arijit Roy Chowdhury
user.email=rc.arijit@gmail.com
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial
$ .....
```

INITIALIZE PWD AS REMOTE GIT REPOSITORY

- Verify PWD using the command ***pwd***
- Use Command ***ls -al*** (show all hidden files and folders in PWD)
- If there is no file by name “.git” (hidden) we need to initialize using command ***git init***
- Use Command:
git remote add origin
<https://github.com/srcwap4/Test.git> to link your local repository to Git Hub Cloud
- Use Command: ***git remote -v*** to verify the connection to cloud repository



```
MINGW64:/c/Python/Backup/learnbay/Python/Trial

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial
$ pwd
/c/Python/Backup/learnbay/Python/Trial

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial
$ ls -al
total 4
drwxr-xr-x 1 a031828 1049089 0 Jul 24 20:17 ./
drwxr-xr-x 1 a031828 1049089 0 Jul 24 20:17 ../

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial
$ git init
Initialized empty Git repository in C:/Python/Backup/Learnbay/Python/Trial/.git/

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ ls -al
total 8
drwxr-xr-x 1 a031828 1049089 0 Jul 24 20:52 ./
drwxr-xr-x 1 a031828 1049089 0 Jul 24 20:17 ../
drwxr-xr-x 1 a031828 1049089 0 Jul 24 20:52 .git/

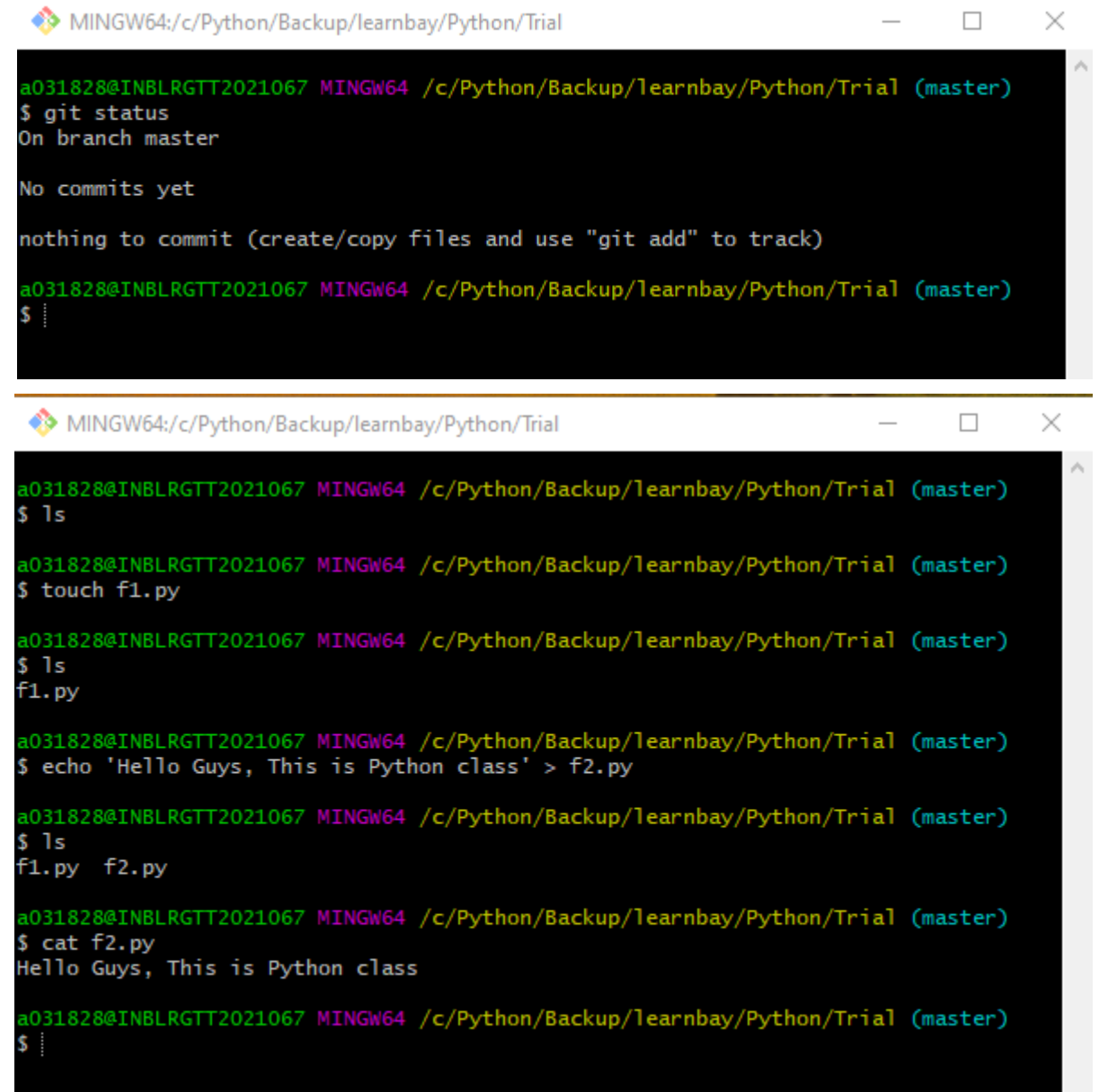
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ git remote add origin https://github.com/srcwap4/Test.git

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ git remote -v
origin https://github.com/srcwap4/Test.git (fetch)
origin https://github.com/srcwap4/Test.git (push)

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ |
```

CREATE FILES

- Use Command ***git status*** to get a list of past commits.
- Use Command ***touch f1.py*** to create a new empty file
- Use Command ***echo 'Hello Guys, This is Python class' > f2.py*** to create a new file with 1 line of text



```
MINGW64:/c/Python/Backup/learnbay/Python/Trial

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ git status
On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ ls

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ touch f1.py

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ ls
f1.py

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ echo 'Hello Guys, This is Python class' > f2.py

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ ls
f1.py  f2.py

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ cat f2.py
Hello Guys, This is Python class

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$
```


CREATE AND WRITE TO FILES

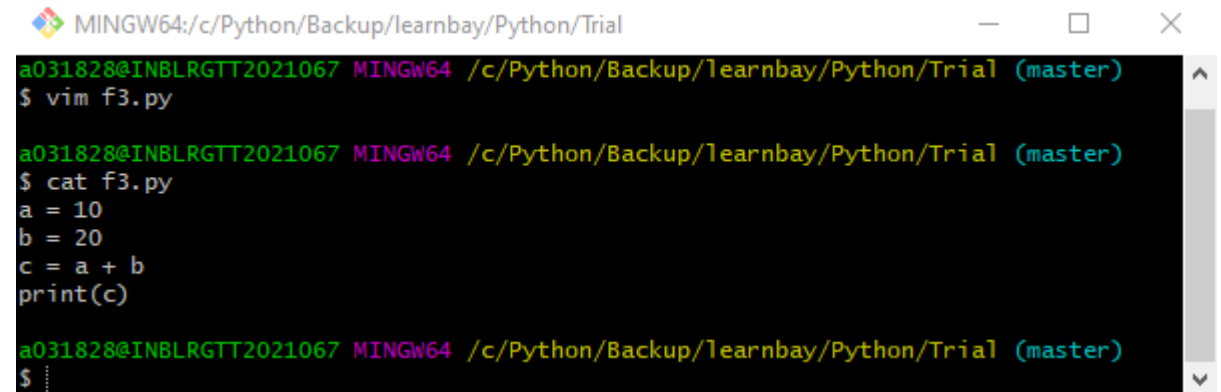
- Use Command ***vim f3.py*** to create a file and open it to write multiple lines.
- Press 'i' to insert lines to the file
- Once done typing, press 'ESC' key
- Type ':wq' to save and close
- Type ***cat f3.py*** to view the contents of the file

- Create some sample files using command:

***touch f4.py f1.html f2.html f3.html f4.html
f1.txt f2.txt f3.txt f4.txt***



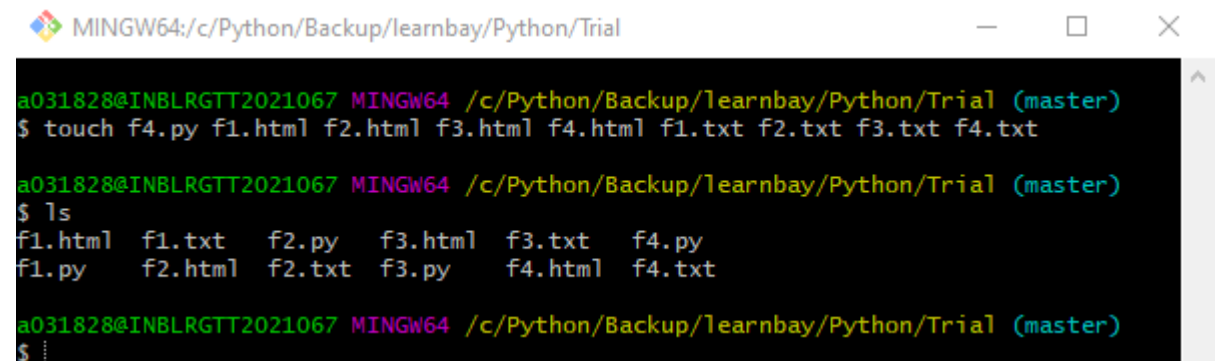
```
MINGW64:/c/Python/Backup/learnbay/Python/Trial
a = 10
b = 20
c = a + b
print(c)
~
~
~
f3.py[+] [unix] (05:29 01/01/1970) 4,8 All
:wq
```



```
MINGW64:/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ vim f3.py

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ cat f3.py
a = 10
b = 20
c = a + b
print(c)

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$
```



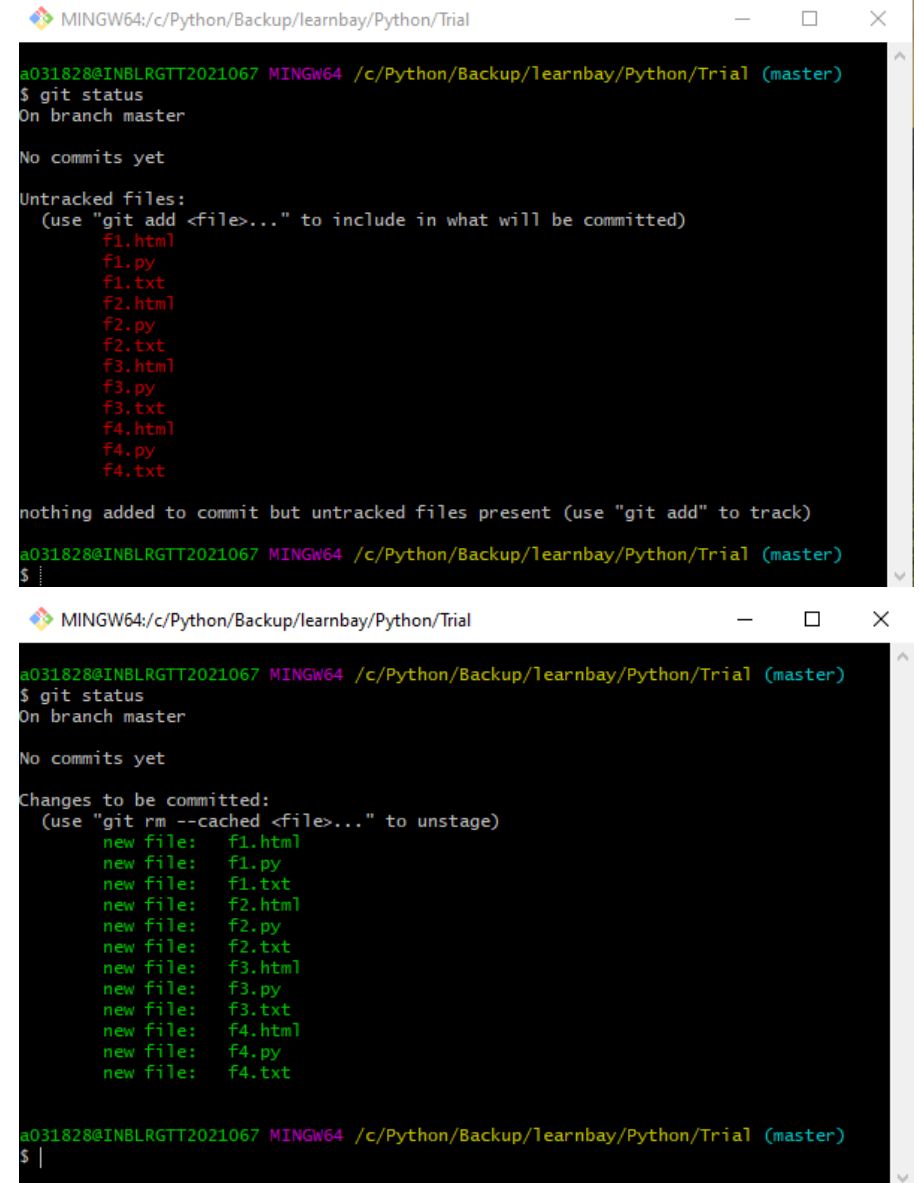
```
MINGW64:/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ touch f4.py f1.html f2.html f3.html f4.html f1.txt f2.txt f3.txt f4.txt

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ ls
f1.html  f1.txt  f2.py   f3.html  f3.txt  f4.py
f1.py   f2.html  f2.txt  f3.py   f4.html  f4.txt

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$
```

SEND FILES TO STAGING AREA

- Use Command **git status** to know the status of files newly created / modified
- Use Command **git add f1.py** to move the file to Staging Area
- Use Command **git add f2.py f3.html** to move multiple files to Staging Area
- Use Command **git add *.txt** to move all files of a particular type to Staging Area
- Use Command **git add .** to move all files to Staging Area



The image shows two screenshots of a terminal window. The top screenshot shows the output of the 'git status' command, indicating that there are untracked files (f1.html, f1.py, f1.txt, f2.html, f2.py, f2.txt, f3.html, f3.py, f3.txt, f4.html, f4.py, f4.txt) and that no commits have been made yet. The bottom screenshot shows the output of the 'git add .' command, which has staged all files in the current directory. The terminal output shows 'Changes to be committed:' followed by a list of new files: f1.html, f1.py, f1.txt, f2.html, f2.py, f2.txt, f3.html, f3.py, f3.txt, f4.html, f4.py, and f4.txt.

```
MINGW64:/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    f1.html
    f1.py
    f1.txt
    f2.html
    f2.py
    f2.txt
    f3.html
    f3.py
    f3.txt
    f4.html
    f4.py
    f4.txt

nothing added to commit but untracked files present (use "git add" to track)
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$

MINGW64:/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ git status
On branch master

No commits yet

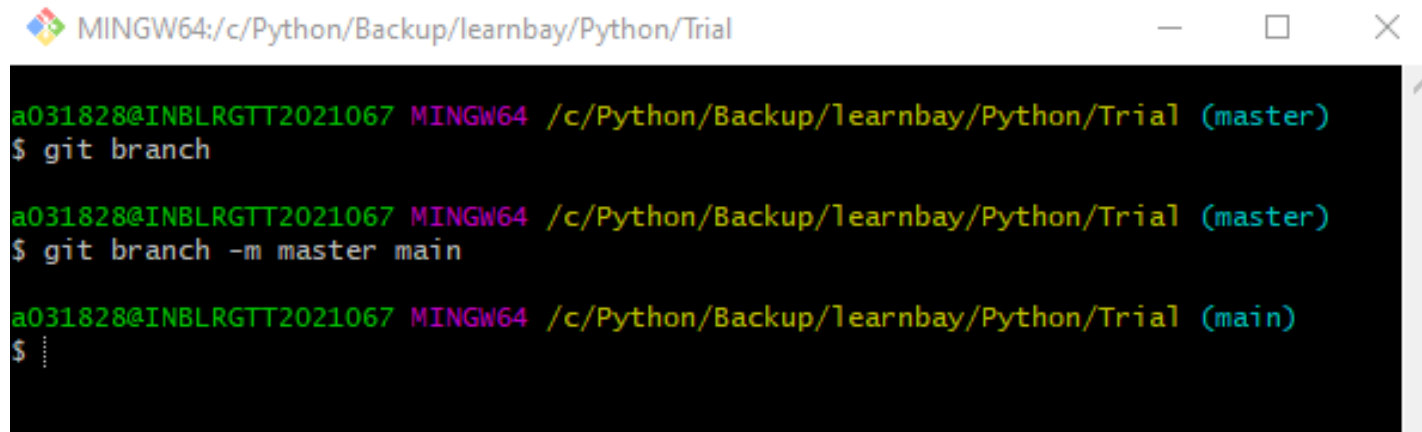
Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   f1.html
    new file:   f1.py
    new file:   f1.txt
    new file:   f2.html
    new file:   f2.py
    new file:   f2.txt
    new file:   f3.html
    new file:   f3.py
    new file:   f3.txt
    new file:   f4.html
    new file:   f4.py
    new file:   f4.txt
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$
```


RENAME GIT BRANCH NAME FROM MASTER TO MAIN

- GIT Branch name in Git Hub is Main but in local system it is Master. Hence we need to rename the Branch from Master to Main locally

** Git Hub has renamed Master to Main as the word Master comes from the concept of Master – Slave. But Locally installed GIT is yet to rename it. Hence it is renamed manually*

- Use Command ***git branch -m master main*** to rename the branch from master to main



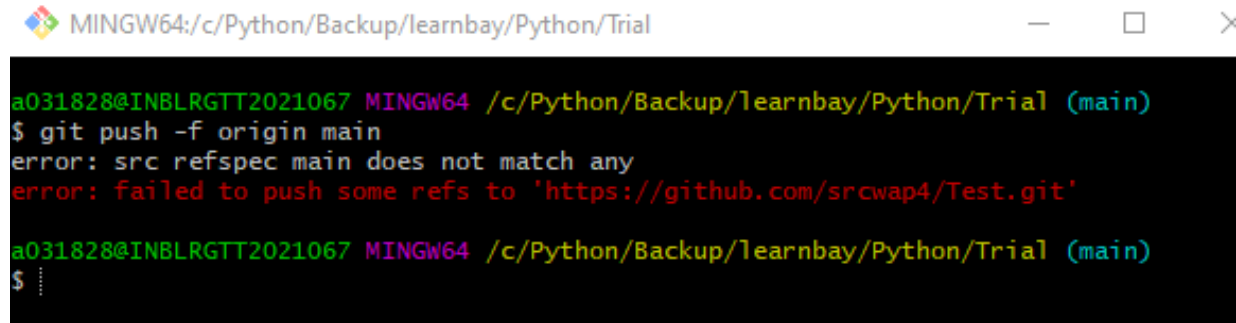
```
MINGW64:/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ git branch

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (master)
$ git branch -m master main

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$
```

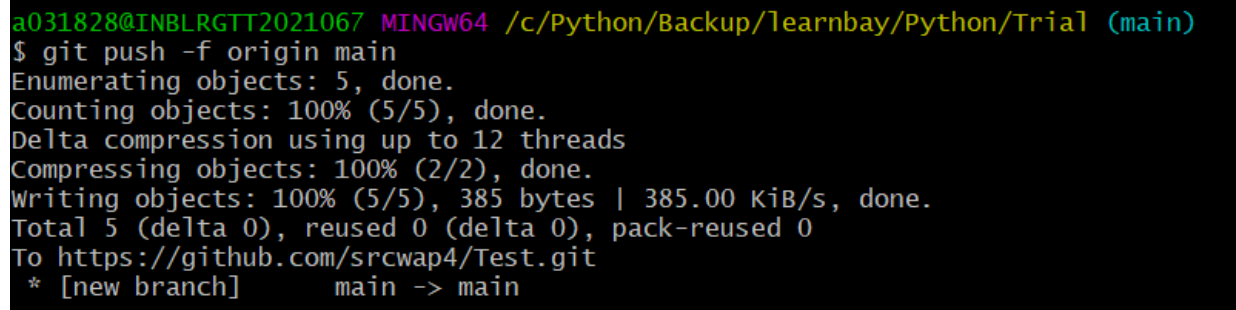
PUSH FILES TO GIT HUB

- Use Command ***git push -f origin main*** to push files to Git Hub Cloud Repository
- If you get SSL error as shown in the screenshot, use command ***git config --global http.sslVerify false***
- Re-check User Name and Email ID assigned initially using command ***git config --global --list***
- If all OK, re-execute the command ***git push -f origin main*** and enter Git Hub credentials if required



```
MINGW64:/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git push -f origin main
error: src refspec main does not match any
error: failed to push some refs to 'https://github.com/srcwap4/Test.git'

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$
```



```
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git push -f origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (5/5), 385 bytes | 385.00 KiB/s, done.
Total 5 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/srcwap4/Test.git
 * [new branch]      main -> main
```

PULL FILES FROM GIT HUB

- Use Command ***git pull origin main*** to pull files from Git Hub Cloud Repository to PWD
- Use Command ***git config --global http.sslVerify false*** if you get ssl error

```
MINGW64:/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git pull origin main
fatal: unable to access 'https://github.com/srcwap4/Test.git/': SSL certificate problem: self signed certificate in certificate chain

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git config --global http.sslVerify false

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git pull origin main
remote: Enumerating objects: 4, done.
remote: Counting objects: 100% (4/4), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 643 bytes | 107.00 KiB/s, done.
From https://github.com/srcwap4/Test
 * branch            main       -> FETCH_HEAD
    ef9c08c..d1cba63  main       -> origin/main
Updating ef9c08c..d1cba63
Fast-forward
 abc.exe | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 abc.exe

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ ls
abc.exe*  f1.py  f2.html  f2.txt  f3.py  f4.html  f4.txt
f1.html  f1.txt  f2.py   f3.html  f3.txt  f4.py

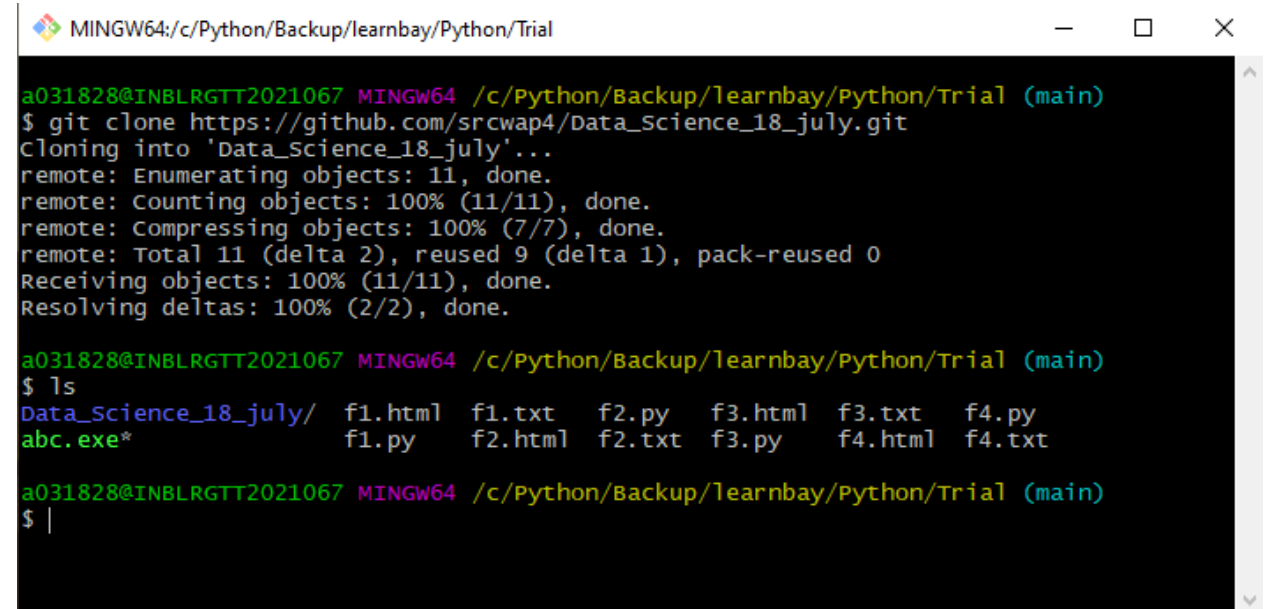
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ |
```

CLONE

- Use Command

git clone
https://github.com/srcwap4/Data_Science_18_july.git to clone another repository to local system in PWD

- Use Command ***git config --global http.sslVerify false*** if you get ssl error



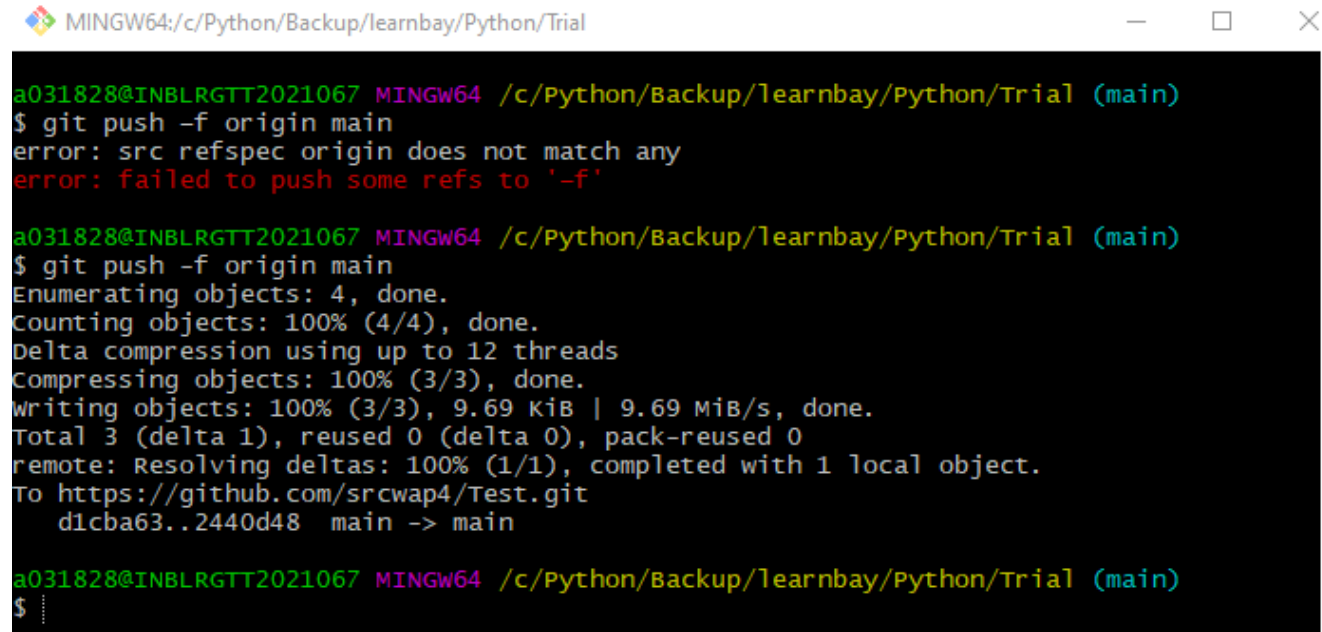
```
MINGW64:/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git clone https://github.com/srcwap4/Data_Science_18_july.git
Cloning into 'Data_Science_18_july'...
remote: Enumerating objects: 11, done.
remote: Counting objects: 100% (11/11), done.
remote: Compressing objects: 100% (7/7), done.
remote: Total 11 (delta 2), reused 9 (delta 1), pack-reused 0
Receiving objects: 100% (11/11), done.
Resolving deltas: 100% (2/2), done.

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ ls
Data_Science_18_july/  f1.html  f1.txt  f2.py  f3.html  f3.txt  f4.py
abc.exe*              f1.py    f2.html  f2.txt  f3.py    f4.html  f4.txt

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ |
```

ADD A NEW FILE TO CLOUD REPOSITORY

- Copy the file to PWD
- Use command ***git add <filename>*** to add the file to Staging Area
- Use Command ***git commit -m 'second commit'*** to add the file to Commit Area
- Use Command ***git push -f origin main*** to add the file to Cloud Repository



```
MINGW64:/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git push -f origin main
error: src refspec origin does not match any
error: failed to push some refs to '-f'

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git push -f origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 9.69 KiB | 9.69 MiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/srcwap4/Test.git
   d1c6a63..2440d48  main -> main

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$
```

UPDATE A FILE AND PUSH IT TO CLOUD REPOSITORY

- Use Command ***pwd*** to verify Present Working Directory
- Use Command ***ls*** to list the files in PWD
- Use Command ***vim f4.py*** to open the file to be updated
- Update the file and save it (mentioned in slide #7)
- Use Command ***git add .*** to add the file to staging area
- Use Command ***git commit -m 'third commit'*** to add the file to commit
- In case of error, try configuring your user name and email id again
 - Command: ***git config --global user.name 'Arijit Roy Chowdhury'***
 - Command: ***git config --global user.email 'rc.arijit@gmail.com'***
 - Command: ***git config --global --list***

```
MINGW64:/c/Python/Backup/learnbay/Python/Trial
a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git status
On branch main
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   f4.py

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git commit -m 'third commit'
[main 6318fef] third commit
Committer: Arijit Roy Chowdhury'git config --global user.email rc.arijit@gmail.com' <
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly:

    git config --global user.name "Your Name"
    git config --global user.email you@example.com

After doing this, you may fix the identity used for this commit with:

    git commit --amend --reset-author

1 file changed, 29 insertions(+)

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git push origin main
fatal: unable to access 'https://github.com/srcwap4/Test.git/': SSL certificate proble

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git config --global http.sslverify false

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ git push -f origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 613 bytes | 613.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/srcwap4/Test.git
   2440d48..6318fef  main -> main

a031828@INBLRGTT2021067 MINGW64 /c/Python/Backup/learnbay/Python/Trial (main)
$ |
```


FREQUENTLY USED COMMANDS

Sl No	Command	Purpose
1	pwd	Check Present Working Directory
2	cd	change directory
3	ls	check contents of directory
4	ls -al	show all hidden files and folders in PWD
5	mkdir	create a new directory in PWD
6	clear	clear the screen
7	git config --global user.name 'Arijit Roy Chowdhury'	Configure User Name
8	git config --global user.email 'rc.arijit@gmail.com'	Configure Email ID
9	git config --global --list	View Username and Email ID
10	git init	Initialize a folder as Local GIT Repository
11	git remote add origin https://github.com/srcwap4/Test.git	Add a remote URL in Git Hub Cloud to sync with
12	git remote -v	verify the connection to cloud repository
13	git status	get a list of past commits and current commit status
14	touch f1.py	create a new empty file with name f1.py locally
15	touch f4.py f1.html f2.html f3.html f4.html f1.txt f2.txt f3.txt f4.txt	create multiple empty files locally
16	echo 'Hello Guys, This is Python class' > f2.py	to create a new file with 1 line of text
17	vim f3.py	create a file and open it to write multiple lines
18	cat f3.py	view the contents of a file
19	git status	know the status of files newly created / modified
20	git add f1.py	move the file to Staging Area
21	git add f2.py f3.html	move multiple files to Staging
22	git add *.txt	move all files of a particular type to Staging Area
23	git add .	move all files to Staging Area
24	git branch -m master main	rename the branch from master to main
25	git push -f origin main	push files to Git Hub Cloud Repository
26	git config --global http.sslVerify false	to ignore ssl error
27	git pull origin main	pull files from Git Hub Cloud Repository to PWD
28	git clone https://github.com/srcwap4/Data_Science_18_july.git	clone another repository to local system in PWD
29	git commit -m 'second commit'	add a new / updated file to Commit Area